

MORTAL KOMBAT  
MANIA PAGE 98

# Personal Computer World

December 1995 £2.95

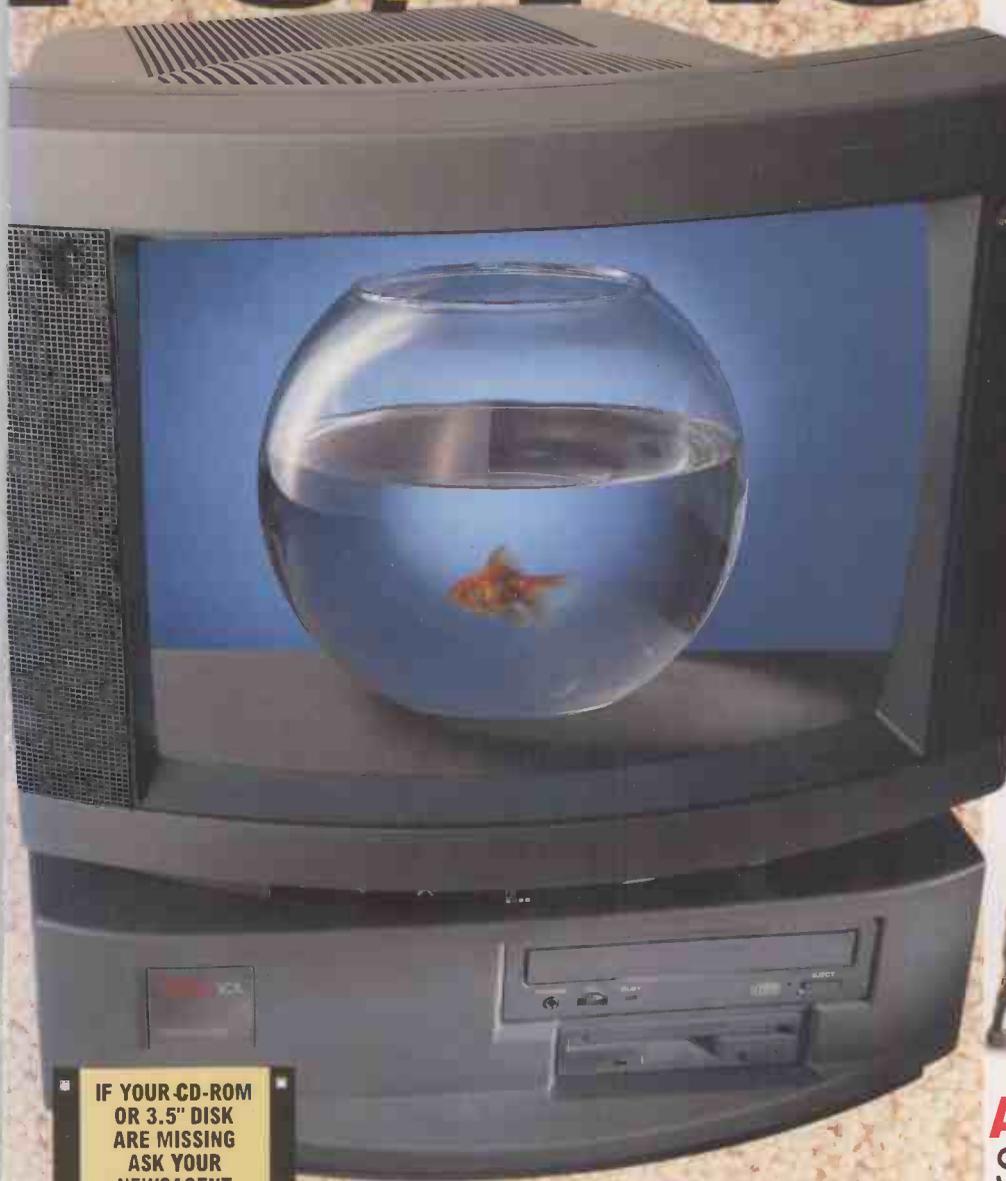
Overseas Price £3.95  
France 110 FF Germany DM 20,00  
Italy 18,000 Lire Spain 1,225 PTS Malta Lm 2.85c  
Netherlands MFL 17,95 Belgium 364.00 BFr  
Finland FIM 49.50 Canada CANS\$12.95

VNU Business Publications

WIN a Pentium  
Notebook p.266

## PC/TVs

### At home with your computer

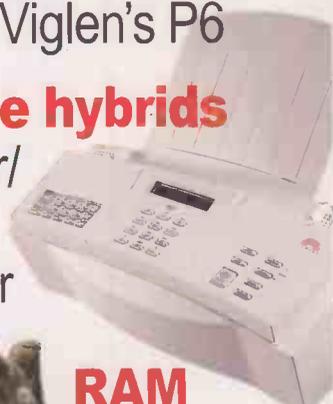


**Pentium Pro  
arrives**

First glimpse of  
Viglen's P6

**Office hybrids**

Printer/  
fax/  
scanner



**RAM  
Doublers**  
Memory  
for less?

**Anti-Virus packages**  
Seven of the best tested

IF YOUR CD-ROM  
OR 3.5" DISK  
ARE MISSING  
ASK YOUR  
NEWSAGENT



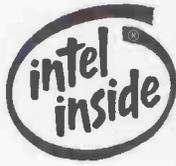
**Group Test** All sorts of storage stuff

## POWER PLATFORMS

## POWER PLATFORMS

## POWER PLATFORMS

### DIMENSION DESKTOP PCs



pentium  
PROCESSOR

Designed for



Microsoft®  
Windows® 95

#### DELL DIMENSION P75†

- Intel® 75MHz Pentium Processor
- 8Mb EDO RAM
- 3.5" Diskette Drive
- 525Mb Hard Drive
- Integrated 64-bit PCI Local Bus Video with 1Mb Video Memory
- 14" Colour SVGA Monitor
- 4 PCI and 3 ISA Expansion Slots (1 shared)
- Mid-sized Desktop Chassis

Dell Finance 3 year rental: £9.81 per system, per week, excluding delivery and VAT.

#### DELL DIMENSION P100†

- Intel 100MHz Pentium Processor
- 8Mb RAM
- 256Kb Secondary Pipeline Burst Cache
- 3.5" Diskette Drive
- 525Mb Hard Drive
- Integrated 64-bit PCI Local Bus Video with 1Mb Video Memory
- 15" Colour SVGA Monitor
- 4 PCI and 3 ISA Expansion Slots (1 shared)
- Mid-Sized Desktop Chassis

Dell Finance 3 year rental: £11.11 per system, per week, excluding delivery and VAT. (P 100†)

#### DELL DIMENSION XPS

- Intel 120MHz Pentium Processor
- 8Mb EDO RAM
- 256Kb Secondary Pipeline Burst Cache
- 3.5" Diskette Drive
- 525Mb Hard Drive
- 9FX Vision 330 64-bit PCI Graphics with 2Mb Video Memory
- 15" Colour SVGA Monitor
- 4 PCI and 4 ISA Expansion Slots (1 shared)
- Mid-Sized Desktop Chassis

Dell Finance 3 year rental: £11.97 per system, per week, excluding delivery and VAT (P120†)

#### DELL DIMENSION P75†

**£899**

excl. delivery, handling & VAT

#### DELL DIMENSION P100†

**£1,049**

excl. delivery, handling & VAT

#### DELL DIMENSION XPS P120†

**£1,199**

#### DELL DIMENSION P90† (P90† with 14" Super VGA Monitor)

**£999**

excl. delivery, handling & VAT

#### DELL DIMENSION XPS P133c (P133c with 1Gb Hard Drive and Quad Speed CD-ROM Drive)

**£1,499**



ALL DIMENSION SYSTEMS INCLUDE : MICROSOFT WINDOWS 95

### ENHANCEMENT PACKS

#### CONNECTIVITY UPGRADES

Ready installed Internal data/fax modem

#### MULTIMEDIA UPGRADES

Fast Quad speed multi-session CD-ROM drive

### LATITUDE MOBILE PCs

#### DELL LATITUDE LX 4100D

- Intel 100MHz 486 DX4 Processor
- 10.4" Dual Scan STN Colour Display
- 4Mb RAM Upgradeable to 20Mb
- 2 PCMCIA type II slots
- 420Mb Hard Drive
- 19mm trackball mouse
- Local Bus Video with 1Mb Video Memory
- NiMH battery pack with second battery option
- 3.5" removable Diskette Drive
- Easily upgradeable Hard Drive
- Microsoft Windows 95

Dell Finance 3 year rental: £13.98 per system, per week, excluding delivery and VAT.

#### DELL LATITUDE XP 475D

- Intel 75MHz 486 DX4 Processor
- 10.4" Dual Scan STN Colour Display
- 8Mb RAM Upgradeable to 40Mb
- 2 PCMCIA type II slots
- 420Mb removable Hard Drive
- 19mm trackball mouse
- Extra High performance Local Bus Video with 1Mb Video Memory
- Advanced intelligent Lithium Ion battery pack
- 3.5" Diskette Drive
- Microsoft Windows 95
- Advanced Port Replicator options

Dell Finance 3 year rental: £17.43 per system, per week, excluding delivery and VAT.

#### DELL LATITUDE XPI P75D

- Intel 75MHz Pentium LM Processor
- 10.4" Dual Scan STN Colour Display
- 8Mb RAM Upgradeable to 40Mb
- 2 PCMCIA type II slots
- 420Mb removable Hard Drive
- 19mm trackball mouse
- Extra High performance Local Bus Video with 1Mb Video Memory
- Advanced Intelligent Lithium Ion battery pack
- 3.5" Diskette Drive
- Microsoft Windows 95
- Advanced Port Replicator options

Dell Finance 3 year rental: £20.02 per system, per week, excluding delivery and VAT.

Designed for



Microsoft®  
Windows® 95

#### DELL LATITUDE LX 4100D

**£1,299**

excl. delivery, handling & VAT

#### DELL LATITUDE XP 475D

**£1,699**

excl. delivery, handling & VAT

#### DELL LATITUDE XPI P75D

**£1,999**

excl. delivery, handling & VAT

Dell and the Dell logo are registered trademarks, Dimension and Latitude are trademarks of the Dell Computer Corporation. Intel, Intel Inside, Intel 486, and Pentium are trademarks or registered trademarks of Intel Corporation. Delivery is charged at £25 + VAT per system. Prices correct at 1.11.95. Dell Rental is offered (subject to status) to businesses trading 1 year or more. Rental examples shown include extension kit. Specifications are subject to change without notice or obligation. The photographed product may not always match the specifications in this advert. Prices quoted refer to specification descriptions or configurations as shown. Actual viewing area may be up to 1 inch less. Office Professional manuals supplied on CD in hypertext format for Dimension PCs. Price does not include VAT & is only valid until 31.12.95. The Latitude offers are available for a limited period only.

EVEN EASIER TO ORDER. **1** YOU MAKE THE CALL TO OUR EXPERIENCED FRIENDLY SALES STAFF. **2** YOU SELECT AND ORDER THE SYSTEM.

**RMS**

**READY-TO-RUN**

**READY-TO-RUN**

**READY-TO-RUN**

**P120c** **DELL DIMENSION P75t**

- Intel 75MHz Pentium Processor
- 8Mb EDO RAM
- 3.5" Diskette Drive
- 525Mb Hard Drive
- Integrated 64-bit PCI Local Bus Video with 1Mb Video Memory
- 15" Colour SVGA Monitor
- 4 PCI and 3 ISA Expansion Slots (1 shared)
- Mid-Sized Desktop Chassis
- Quad Speed CD-ROM Drive
- Microsoft® Office 95

Dell Finance 3 year rental: £11.54 per system, per week, excluding delivery and VAT. (P75t)

**DELL DIMENSION P75t** **£1,099**  
excl. delivery, handling & VAT

**DELL DIMENSION XPS P120c**

- Intel 120MHz Pentium Processor
- 8Mb EDO RAM
- 256Kb Secondary Pipeline Burst Cache
- 3.5" Diskette Drive
- 525Mb Hard Drive
- 9FX Vision 330 64-bit PCI Graphics Card with 1Mb Video Memory
- 15" Colour SVGA Monitor
- 4 PCI and 4 ISA Expansion Slots (1 shared)
- Mid-Sized Desktop Chassis
- Quad Speed CD-ROM Drive
- Microsoft Office 95

Dell Finance 3 year rental: £13.27 per system, per week, excluding delivery and VAT. (P120c)

**DELL DIMENSION XPS P120c** **£1,299**  
excl. delivery, handling & VAT

**DELL DIMENSION XPS P133c**

- Intel 133MHz Pentium Processor
- 16Mb EDO RAM
- 512Kb Secondary Pipeline Burst Cache
- 3.5" Diskette Drive
- 1.6Gb Hard Drive
- 9FX Motion 771 64-bit PCI Graphics Card with 2Mb Video Memory
- 17" Colour SVGA Monitor
- 4 PCI and 4 ISA Expansion Slots (1 shared)
- Mid-Sized Tower Chassis
- Quad Speed CD-ROM Drive
- AWE 32 Sound Card plus Altec Lansing ACS31 speakers with subwoofer
- Microsoft Office 95

Dell Finance 3 year rental: £21.04 per system, per week, excluding delivery and VAT. (P133c)

**DELL DIMENSION XPS P133c** **£2,199**  
excl. delivery, handling & VAT

**£1,149**  
excl. delivery, handling & VAT

**DELL DIMENSION P90t** **£1,149**  
excl. delivery, handling & VAT

**DELL DIMENSION XPS P133c** **£1,399**  
excl. delivery, handling & VAT

**DELL DIMENSION XPS P120c (XPS P120c with 1Gb Hard Drive)** **£1,999**  
excl. delivery, handling & VAT

**£1,399**  
excl. delivery, handling & VAT

**DELL DIMENSION P100t** **£1,199**  
excl. delivery, handling & VAT

**SOFT WINDOWS 95 • 102 KEY SPACESAVER KEYBOARD • DELL MOUSE**

modem **£95 + VAT** 3COM 3C509 network card **£89 + VAT**

CD-ROM drive, 16-bit Sound Card and Altec Lansing ACS5 stereo speakers **£189 + VAT** 16-Bit Sound Card and Altec Lansing ACS5 stereo speakers **£90 + VAT**

**DELL LATITUDE XPI P90D**

- Intel 90MHz Pentium LM Processor
- 10.4" Dual Scan STN Colour Display
- 8Mb RAM Upgradeable to 40Mb
- 2 PCMCIA type II slots
- 810Mb removable Hard Drive
- 19mm trackball mouse
- Extra High performance Local Bus Video with 1Mb Video Memory
- Advanced intelligent Lithium Ion battery pack
- 3.5" Diskette Drive
- Microsoft Windows 95
- Advanced Port Replicator options

Dell Finance 3 year rental: £23.48 per system, per week, excluding delivery and VAT.

**DELL LATITUDE XPI P90D** **£2,399**  
excl. delivery, handling & VAT

**LATITUDE ENHANCEMENT PACKS**

**LX UPGRADES**

**Road Warrior Communications Pack**

PCMCIA V32bis Data/Fax Modem, 4Mb RAM upgrade and attaché carrying case

**£349 + VAT**

**Dell Desktop Conversion Pack**

Dell Ultrascan 14XE monitor, notebook monitor stand, keyboard & desktop mouse

**£179 + VAT**

**XP & XPI UPGRADES**

**Road Warrior Communications Pack**

PCMCIA V32bis Data/Fax Modem, spare battery and attaché carrying case

**£275 + VAT**

**Dell Desktop Ready**

Dell UltraScan 15TE monitor, DeskDock, 102-key keyboard and desktop mouse, 10 base T advanced port Replicator and attaché carrying case

**£549 + VAT**

**Mobile Multimedia**

16-bit PCMCIA Sound Card and Altec Lansing ACS5 Stereo Speakers

**£149 + VAT**

**EXTENDED SERVICE PACKS**

Extension to 3 year 'Collect & Return' service

**£99 + VAT**

Extension to 3 year on-site next business day service

**£119 + VAT**

Registered trademarks of Intel Corporation. Microsoft, Windows and the Windows Logo are registered trademarks of the Microsoft Corporation. 3 year On-Site Service. The prices listed reflect the information available at time of going to press. Prices change frequently. All prices and specifications. The picture is not intended to be representative of the actual screen image quality. In common with other manufacturers, monitors are measured by delivery. Dell Computer Corporation Ltd, Milbanke House, Western Road, Bracknell, Berkshire, RG12 1RW. The Dimension offers detailed are

**SYSTEMS THAT BEST SUIT YOUR BUSINESS REQUIREMENTS. 3 WE DELIVER TO YOUR DOOR.**

**01344 720000**

Please quote PCW 12 when calling Dell Sales.

## The **sharp** end of technology.

Just as you'd expect from one of the world's leading computer companies, Dell offers a range of powerful Pentium® Processor based PCs. In both desktops and notebooks, Pentium chip performance gives you the power you need to work with greater productivity.

## Prices **carved** to the bone.

There's no simpler, more cost efficient way to buy one of these advanced computers than by talking to Dell. Because we deal direct we can keep our overheads down, develop a fast, responsive relationship with our customers and continue to supply PCs at very competitive prices. And we do it without sacrificing the inherent high quality of our computers or our award-winning service and support.

## Desktop choice that's a **cut** above.

Turn over the page to find examples of the Dell Dimension range, a pick of 'Power Platform and 'Ready-to-Run' PC packages. All come with Microsoft Windows® 95, designed to speed up everyday tasks and make complex ones easier. At Dell, we make it as easy as possible for

you to tailor your system to suit your requirements. So we've also included Dell enhancement packs for both desktops and notebooks. And while you pick up on better choice we just pick up the odd quote or two. Here's what the August issue of PC Pro had to say on the XPS P133c: *"the fastest Pentium 133 on test, the Dell (XPS P133c) handled everything thrown at it with ease"*.

**Keen performance.  
Prices with an edge.  
You have a clear cut  
decision with Dell.**

## Notebooks with a leading **edge**.

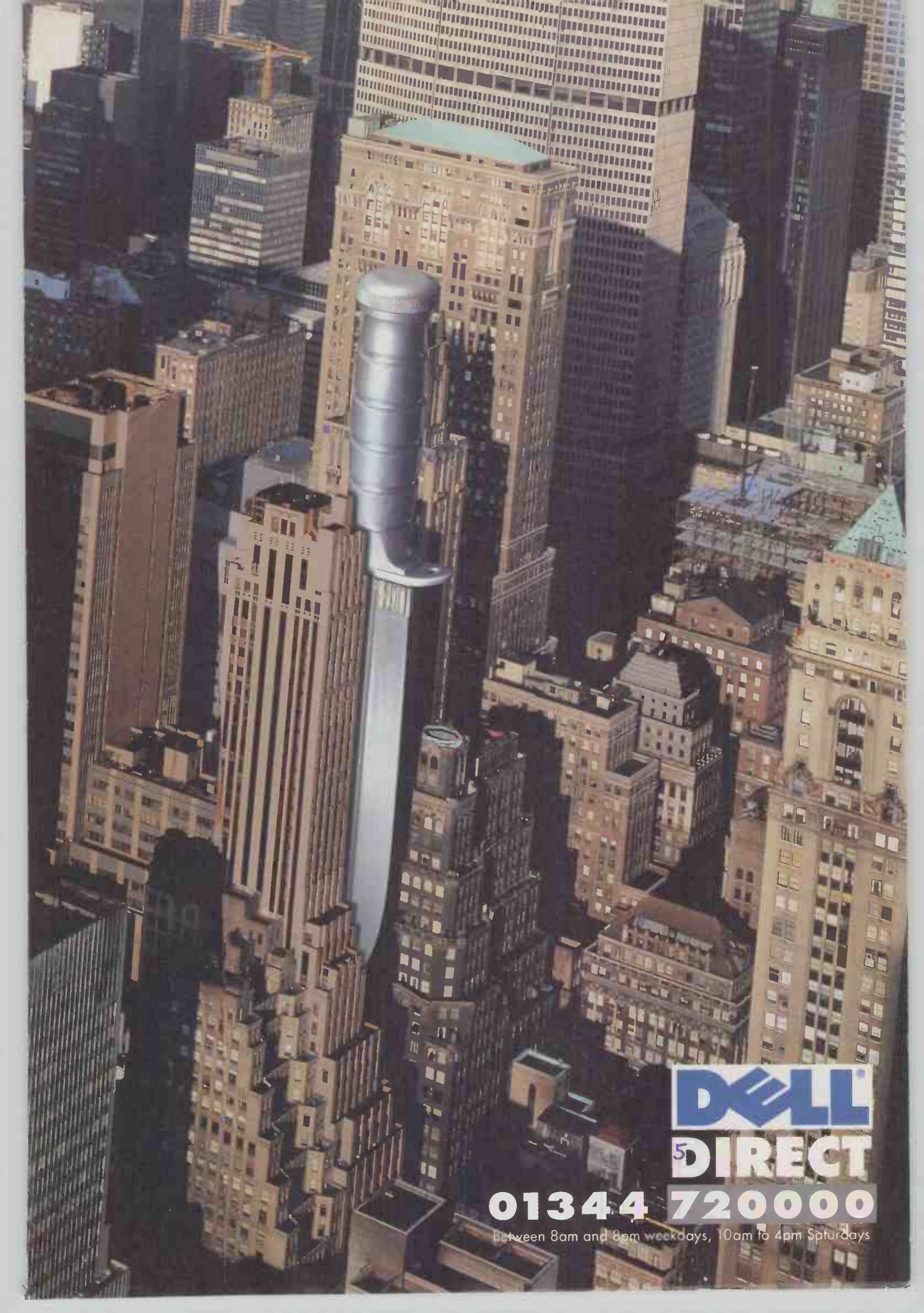


Have a look at the specifications for the Dell Latitude™ XPs and see how cleverly the best has got better. Or just take a look at what the July issue of PC User had to say on the XPi P90T *"...Wins a gold award." "a superb price/performance ratio." "...Very impressive..."*. And like our Dimension range, Dell Latitudes now come with Microsoft Windows® 95 making mobile computing even easier. The benefits of our long life Lithium Ion batteries also give you the freedom to work, travel and communicate like never before. Add to this bigger, brighter, clearer displays, more storage and, in the case of the XPi, Pentium Processor power and the result is Dell has the pick of the crop.



## The finer **points** of service.

It's not only our computing systems that are designed to suit your requirements, our legendary Openline™ Hardware Technical Support is available to all our customers. Our 'Collect and Return Service' is also included for 1 year giving you added peace of mind. In fact, for all your computer needs, no other company can match our commitment to customer satisfaction. Maybe that's why we've grown since 1984 into one of the World's leading personal computer companies. Because we've always made quality service and innovation a priority. Given the choice shouldn't you choose Dell?



**DELL**

**5 DIRECT**

**01344 720000**

Between 8am and 8pm weekdays, 10am to 4pm Saturdays

# Contents

## PCTVs 110

Cited as the next big growth area for PCs, the home computing market is all set to explode. *PCW* tries out five housetrained systems from IBM, Apple, Packard Bell, Olivetti and ICL/Fujitsu, to see who's top dog.



## Cover Disk or CD-ROM

- **Cover Disk** 8  
**EXCLUSIVE!** This month we bring you **PhotoPlus Intro**, the latest from Serif — it provides all the features you need to get the best from your bitmaps.
- **PCW Interactive CD-ROM** 9  
650Mb of software, shareware, features, demos, music and more.

## Group Tests

### 134 Storage and Backup Hardware

● Often a secondary concern, storage and backup devices play an important part in computing. As technology improves, prices fall and data expands. Gordon Laing tries 11 SCSI-based removable and rewritable hardware solutions.

### 166 Network Lasers

● Following on from November's test of low cost and mid range lases, Nick Lawrence and the *PCW* Labs share their findings on nine network printers.

### 210 Anti-Virus Software

● Prevention is always better than cure. Adrian Mars tells you how to diagnose a problem and tests the latest anti-virus software designed to maintain your PC as a picture of health.



## Features

### Office Hybrids 86

by SIMON ROCKMAN

When is a scanner not a scanner? When it's a printer-cum-photocopier-cum-fax. Why have one of each when a hybrid product will do all these jobs *and* connect to your PC?

### Mortal Kombat 98

by TIM GREEN

What began as a violent but enjoyable arcade game has turned into a multi-million pound marketing success. We investigate its fatal attraction.

### Pentium Pro (P6) 104

by NICK LAWRENCE

We examine the technology behind the P6 and check out the first prototype next-generation PC from Viglen.

### CorelDraw 6 122

by ALEX GRAY

The Windows 95 compatible version of CorelDraw is here, along with enhanced photo editing, animation and 3D facilities.

### Case Study: OS/2 160

by GEORGE COLE

Not everyone with a PC uses DOS and Windows: find out why Panasonic's IT R&D manager likes staff to be Warped.

### RAM Doublers 182

by TIM NOTT

Hot on the heels of Connectix RAMDoublers are two more software utilities designed to increase your PC's memory. Do they really offer an alternative to extra hardware, or is it just a bit of woolly thinking?

### Language Learning Software 188

by ADELE DYER

*Parlez-vous PC?* Always wanted to learn a foreign language? We look at the latest Windows releases to help you brush up on your French, German and Spanish.

### How 'The Program' Was Made 199

by MALCOLM SUTHERLAND

"The Program" is a new consumer-orientated TV show, for Granada, about computers. Find out from its director how digital graphics editing made a serious series fun to watch.

### Delphi Tutorial: Part 2 202

by TIM ANDERSON

Part two of our Delphi programming tutorial beefs up last month's free disk space utility.

## First Impressions 55

### 56 Gadgets

#### 60 HP Omnibook 600 CT

The latest model in Hewlett-Packard's Omnibook range will give your desktop a run for its money.



#### 61 Intel Pentium Overdrive

Intel's Pentium Overdrive chip could give your flagging 486 the extra push you desire.

#### 62 OfficeBlox for Windows 95

The first Windows 95 and Office 95 compliant component package.

#### 64 Gateway Solo and Hi-Grade Notino

Top notebooks boasting Pentium processors and multimedia, including amplified sound and CD-ROM drive.

#### 66 Evesham Platinum 133MHz

This top of the range Pentium 133MHz PC is super-fast and feature packed.



#### 68 Cubasis Audio

Go digital with the latest in the Cubase family of sequencers.

#### 72 ImageAXS

Keep track of your graphics files, and those pesky audio and video clips.

#### 74 Xerox 4920

This low-cost colour laser printer will keep a mixed platform office workgroup happy whether or not the job's colour.

#### 77 Teleshares 2.0

Show some flair with those stocks and shares.



#### 78 Autoroute Express for Psion Series 3a

Turn your trusty Psion 3a into a portable routeplanner with this remarkably good PC conversion.

## Long Term Tests

82 Epson Gti-8000

83 Logitech Scanman 32

## Regulars

### 18 Newsprint

Macro virus sweeps the world. Intel launches the (P6) Pentium Pro. First look at "Pentium class" chip for handhelds. Eight-speed CD drives. New print system sprouts cheap lasers. Sony MD Data drive arrives. More on cheap CD recorder. Palmtops beat new notebooks for novelty. Novell tries to plug into the world. New Netscape browser. Nokia shows mobile video link. PowerPC maverick launched.

### 31 News Analysis

- Tim Bjarin on the crisis at Apple
- Wendy M Grossman on Frontier
- Clive Akass questions notebook design

### 39 Sounding Off by Michael Hewitt

### 41 Homefront by Tim Nott

### 43 Straight Talking by Barry Fox

### 45 Business Matters by Nick Beard

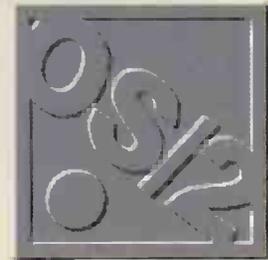
### 46 Letters

### 357 PCW Marketplace The best place to compare hardware and software prices.

### 358 Buyer's Charter

### 679 ChipChat

## Hands On



273 Introduction

274 Windows 95

276 Windows

282 OS/2

284 DOS

286 32-Bit

291 Word Processing

296 Spreadsheets

302 Databases

308 Graphics & DTP

314 Multimedia

318 Sound

324 Visual Programming

328 Low Level

335 Numbers Count

338 Networks

342 Comms

346 Macintosh

349 Computer Answers

352 Beginners

## CUTTING EDGE

### 2 2 9 Introduction

#### PCW Online

2 3 1 Focus: Net-nanny software

2 3 6 Net.answers

2 4 0 Net.news

(incorporating Net.surf)

2 4 7 Net.newbies

#### PCW Futures

2 4 9 Innovations

2 5 1 Horizons

2 5 2 Bluesky

2 5 3 Retro Computing

#### PCW Media

2 5 4 Books

2 5 6 CD-ROMs

#### PCW Fun

2 6 1 Kids' Stuff

2 6 6 Competition: Win a high-end Hi-Grade notebook or a new Nokia monitor

2 6 7 Screenplay (with Leisure Lines, page 270)

Screenplay: Fury<sup>3</sup>



Screenplay:  
A new Pitfall

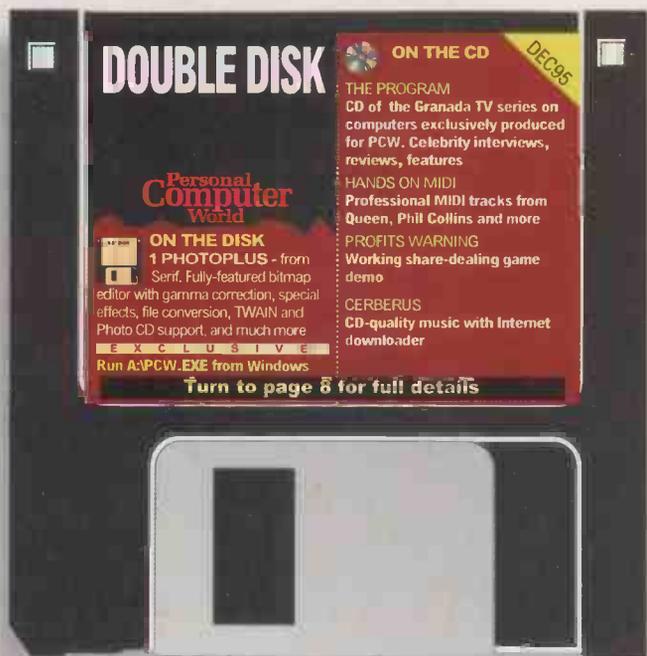


CD-ROMs: Apollo 13

Books:  
Interactive  
Internet

Interactive  
Internet

The Reader's Guide to BOOKS,  
MUSIC, and PC  
WILLIAM J. SHEPHERD



# PCW Cover Disk

**EXCLUSIVE!** This month we're proud to bring you PhotoPlus Intro, the latest in a line of top-selling software from Serif. Robin Nixon explains what it does and how to use it.

## Installing and running the PCW Cover Disk

To install the programs, insert the disk in drive A: or B:, and from Windows run the file INSTALL.EXE in the root directory of that drive. All the files will then be installed onto your PC.

### PhotoPlus Intro

[Minimum Requirements: Windows 3.1+, 256 colour graphics, mouse, 4Mb RAM (swapfile can be used)]

PhotoPlus Intro provides all the features you need to get the best out of your bitmap pictures. It has all the basic tools for gamma correction, adjusting colour balance, brightness and contrast, rotating, flipping and cropping. It also has a range of special effects and patterns, including emboss, posterise, pixellise your pictures, solarise, enhance shadows and highlights, and make pictures look hand drawn. It also has a selection of digital processing filters. PhotoPlus supports TWAIN scanners and Kodak PhotoCD directly. It can load and save pictures in a wide variety of formats, and convert between them. It also works as an OLE applet.

## MAIN FEATURES

### Preview Window

Most of the PhotoPlus window is taken up by the Preview window. This is the workspace where you see the results of your manipulation. If the picture is too big to fit all at once, you can use the scroll bars to see different parts. You can zoom into the picture by dragging the mouse cursor over the area you want to look at, or by clicking on the Zoom buttons.

### HintLine

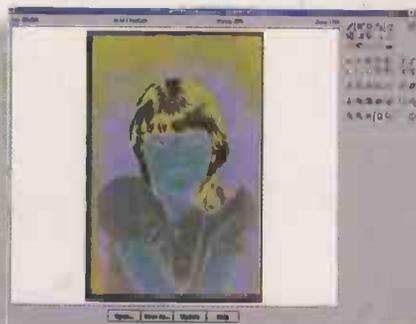
If you can't remember what a particular part of the screen does, check out the HintLine which tells you the purpose of the screen item under the mouse cursor. If it contains ">>" when over a button, this means that double-clicking on that button will bring up a dialogue.

### Front Panel

All the other controls are placed on the Front Panel. The controls in the top group produce special effects. The second group manipulate colour, the controls in the third group perform geometric operations, and the next line of controls support the clipboard. The bottom group of controls manage the Preview Window's Zoom percentage. The final button displays information about the picture, including its colour histogram which shows how its colours are distributed.

### Undo

PhotoPlus supports multi-level undo. This is useful when you are not sure how to get the effect you want. You can try a button, and if you don't like the result, click on the Undo button and try again. Undo needs lots of memory to store old copies of a picture. To get more levels (or to turn it off altogether), double-click on the Undo button. There is also a button to reload the original picture from disk. This is like a "Super Undo" which undoes everything you did since the last load or save.



PhotoPlus brings your bitmaps to life

### Status bar...

The Status Bar shows information about the current picture which includes: The width and height of the picture in pixels; the picture's colour depth, which is the number of bits used to store the colour of each pixel; the amount of memory the

**CONTINUES  
ON PAGE 131**

### IMPORTANT

PhotoPlus Intro is a fully working application. However, when you install it you will be asked to call a freephone (0800) number in order to be given an access code to use the program. This can be done any time during office hours, it only takes a few seconds and costs you nothing at all.

### PLEASE READ THIS!

If you have problems with the Cover Disk such as receiving a "Cannot read from drive A:" error, please return the disk to the duplicator: TIB PLC (PCW), TIB House, 11 Edward Street, Bradford BD4 7BH (who may be contacted on 01274 736990) together with a stamped addressed envelope and two 25p stamps. Where it is a duplication fault, the postage will be returned along with the replacement disk.

However, you should note that if your problem is not due to a faulty disk, and a phone number is shown for the publisher of the program in question, then it will probably be quicker for you to call them first as they will be able to provide direct assistance on their own programs faster than might otherwise be possible. Alternatively, ring our hotline on weekdays between 10:30am and 4:30pm on 0891 715929. Calls are charged at 39p per minute cheap rate and 49p at all other times.

The PCW cover disk is virus checked at every stage of production. However, neither VNU nor PCW will accept liability for any problems arising from the use of the disk. Installing or running any of the programs on the disk indicates your agreement to this condition.

You are advised not to install any software on a networked PC before checking the disk. While PCW maintains a high standard of quality control, disks may be damaged in transportation. Check the disk's shutter before inserting it in the drive by sliding it to the left and allowing it to spring back.

# PCW Interactive CD-ROM

David Price introduces this month's CD-ROM which includes a fabulous 400Mb+ program from Granada TV, called The Program, packed with videos, music and much more. There's also the best of the latest DOS and Windows demos, shareware, utilities, games, applications and drivers. And that's just the tip of the iceberg...

[Minimum requirements: 8Mb RAM (4Mb of this can be in a permanent swapfile), 386SX/33 processor, Windows 3.1. Users with less than this should still be able to run all the DOS programs on the CD-ROM directly from DOS or Windows (rather than using the front-end). For best performance we recommend: 8Mb installed RAM, 486DX/50 processor, Windows 3.11 or Windows 95]

## PCW INTERACTIVE: Entire Contents List



### FEATURES

- Granada TV** — Superlative demo from the Weatherfield wizards.
- UK Online** — A bright new electronic info system.
- Biblos** — Another selection of plays from Shakespeare.
- Cerberus** — Ground-breaking CD quality chart music by modem.
- Cover Disk** — The superb Serif Photo Plus. Midi Collection — 15 popular rock n'roll raves.

### DEMOS

- Avery Label Pro** — Create your own labels.
- Deadlock** — Complete data protection system.
- Invoice 90** — New improved invoicing system.
- Macromedia Freehand** — Try out this excellent graphics program.
- Modelling the Dream** — Amazing animations.
- Profit Warning** — Superb stocks and shares game.

## DECEMBER 1995

### MAGAZINE

- Access** — Your flexible tutorial friend.
- Delphi** — Drive space monitor.
- PCW Index** — Reviews index.
- Sound** — Superb sound files.
- Visual Basic Hands On** — Get your hands on it.

### SHAREWARE

- Anagram Genius** — Generate fiendish anagrams.
- Breakfree** — 3D version of Breakout.
- Canasta** — Music, sound effects... cards
- CD Audio** — A handy CD player.
- CDI** — CD-ROM performance tester.
- Chameleon** — Image manipulation.
- Music Master** — Catalogue your collection.
- Roxie's Reading Fish** — Fish + feline = Edutainment.
- Samplitude Studio** — Hard disk-recording multimedia program.
- Stereograms** — Their fun secrets revealed.
- Thunderbyte** — Reliable and fast virus checker.
- WinImage** — Invaluable floppy handling.

### EXTRAS

- Super VGA Graphics Drivers** — Microsoft (Not for Win95).
- Video For Windows Version 1.1e** — the latest (Not for Win95).
- MSCDEX** — Microsoft's latest CD-ROM extensions (Not for Win95).
- Quicktime For Windows** — The latest version.
- CD Test** — Test your CDs for duplication errors, scratches or other damage.

CUT OUT THIS LABEL AND KEEP WITH YOUR CD-ROM



Because Granada TV's demo is so comprehensive we have set the CD-ROM up so that it boots directly into it under Windows 95. You can then choose to enter PCW Interactive from inside The Program.

To run the program using Windows 3.x, from File Manager double click on the program THEPROG.EXE in the root directory of the CD-ROM. If you have Windows 95, just insert the CD-ROM and the program will automatically load.

To run PCW Interactive immediately use either Program Manager or File Manager to select your CD-ROM drive and run the file PCWI.EXE in the root directory of the CD-ROM. Or, if you are using Windows 95, just insert the CD into your CD-ROM drive and wait for it to load.

### Using PCW Interactive

Throughout PCW Interactive you'll have the opportunity to run or install programs, get further details on a particular program, try out demonstrations of programs, play

videos, listen to audio files and much, much more. When any of these options is available an icon will be displayed indicating the fact. All you need to do is click once on it to activate the choice.

## MAIN FEATURES

### Granada TV

The producers of GranadaTV's The Program have got together with Personal Computer World Interactive to amaze, absorb and entertain you with a multimedia roller coaster. It contains a mixture of video clips, celebrity interviews, reviews and more. To find out how The Program CD-ROM was made, turn to page 199.

### UK Online

UK Online offers a comprehensive online service. From Windows run the file UKONLINE.EXE to view a chance to try out the system for yourself, the username is pcw and the password is freetrial. You can also call up the UK Online demo from within PCW Interactive.

### Cerberus

Pioneering work from the company that aims to pipe the entire contents of a high

**CONTINUES  
ON PAGE 132**



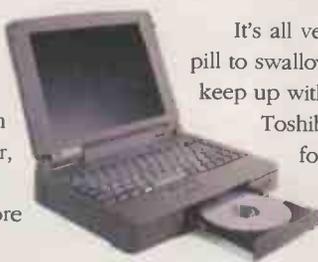


## NOTHING ACTS FASTER THAN THE NEW TOSHIBA.

Tense, nervous headache? With portables that don't have enough power to keep up with you and your work, it's a common complaint.

Now there's a remedy, the new Toshiba Tecra 700CT with the fastest ever processor available on a portable computer, bringing lasting relief in seconds.

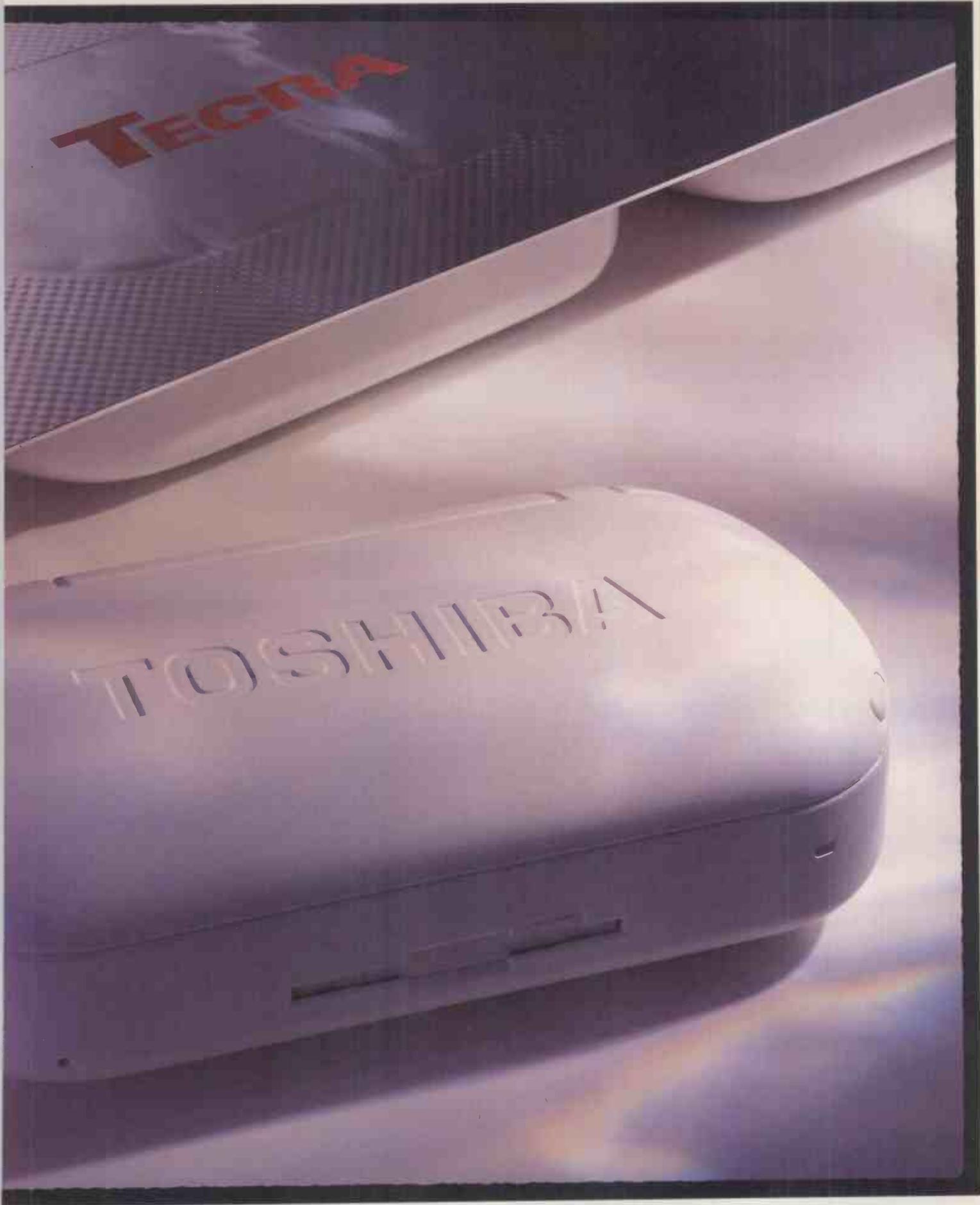
As computer applications become more and more advanced so should the processors that deal with them.



It's all very well having the latest applications but it's a bitter pill to swallow if your portable hasn't got the processing speed to keep up with them.

Toshiba, the world leader in portables, are always at the forefront of the latest technological advances and Pentium technology is no exception.

The new Tecra 700CT is the first Toshiba portable to boast a 120 MHz Pentium processor.



So however advanced the application is, you won't get any hiccups. And with PCI expansion via a docking station you'll get expansion capabilities super fast too.

The Tecra 700CT also benefits from the biggest and best Toshiba screens ever, 11.3" TFT and 800 x 600 resolution. Which means no matter how complex the work is in front of you, you won't be seeing dots. The new Tecra 700CT is an all round painkiller. If you'd like more information call us on 01932 828 828.

We'll be only too pleased to prescribe you with the new Tecra 700CT portable PC. Toshiba - anything else just doesn't compute.

In Touch with Tomorrow  
**TOSHIBA**

Toshiba Response Dept., PCD Marketing, Freepost, KT4625, Addlestone, Surrey KT15 2BR.

# Personal Computer World



## Editorial

**Editor** Ben Tisdall  
**Associate Editor** Simon Rockman  
**News Editor** Clive Akass  
**Cutting Edge Editor** PJ Fisher  
**Features Editor** Chris Cain  
**Reviews Editor** Gordon Laing  
**Technical Writer** Eleanor Turton-Hill  
**Staff Writers** Adele Dyer  
Dylan Armbrust

**Columnists** Nick Beard / Barry Fox  
Michael Hewitt / Tim Nott

**International Correspondent** Tim Bajarin

## Contributors

Jake Abrams ● Tim Anderson ● Nick Beard ● Paul Begg ● Chris Bidmead ● Stephen Caplin ● Doug Chapman ● Stephen Cobb ● George Cole ● Simon Collin ● JJ Clessa ● Michael Eagleton ● Joanne Evans ● Jeanine Fox ● Tim Frost ● Roger Gann ● Panicos Georgiades ● Terence Green ● Tim Green ● Wendy M Grossman ● Robert Hallam ● Simon Head ● Steven Helstrip ● Michael Hewitt ● Marc Hindley ● Gabriel Jacobs ● Nicola Kingsley ● Nick Lawrence ● Frank Leonhardt ● Mike Liardet ● Ken MacMahon ● Bruce Mackie ● Adrian Mars ● Mark Mather ● Johnny Millar ● Mike Mudge ● Robin Nixon ● Tim Nott ● Tim Phillips ● Stephen Rodda ● Malcolm Sutherland ● Jonathon Thaw ● Andy Webb ● Stephen Wells ● Mark Whitehorn ● Nigel Whitfield ● David Whyte

Editorial Phone **0171 316 9000**  
Editorial Fax **0171 316 9313**  
Editorial Email **first name\_last  
name@pcw.ecmail.compuserve.com**

## Production

**Production Editor** Lauraine Lee  
**Sub-Editors** Patrick Ramus  
Jessica Hodgson

## Design

**Art Editor** Darrell Kingsley  
**Designers** Jeanine Fox/Jonathon Mason

## VNU Labs

**Labs Manager** George MacDonald  
**Labs Technical Director** Julian Evans  
**Labs Editor** Paul Philip  
**Operations Manager** Colin O'Keefe

Lab Phone **0171 316 9067**  
Lab Fax **0171 316 9059**

Enquiries or complaints regarding any advertiser in this magazine should, initially, be presented in writing to: **Anthony George**, 'Customer Relations Department', VNU House, 32-34 Broadwick Street, London W1A 2HG.

## Advertising

**Group Ad Manager** Paula Devine **0171 316 9194**  
**Ad Manager** Pranav J Oza **0171 316 9466**  
**Assistant Ad Manager** Kevin Elderfield **0171 316 9303**

**Senior Sales Executives**  
Catherine J Russell **0171 316 9461**  
Jon Miles **0171 316 9302**

**PC Consumer Sales**  
Nick O'Connor **0171 316 9304**  
Matt Rigney **0171 316 9306**  
Beccy Carr **0171 316 9307**  
Fran Taylor **0171 316 9309**

**Micromart Sales Executives** Ben Hedges **0171 316 9308**  
Robert Miskin **0171 316 9305**

**Sales Support Executive** Susie Ross **0171 316 9465**  
**Credit Control Manager** Tosh Bruce-Morgan **0171 316 9667**

**US Sales Representative** Global Media Representatives, Inc **0101 415 306 0880**

**Taiwan Sales Representatives** Grace Chu/Kent Lai **010 886 2717 7663**

## Production

**Production Controller** Melanie Thomson **0171 316 9481**  
**Production Manager** Adrian Brown **0171 316 9484**  
**Micromart Production Assistant** Susie Ross **0171 316 9306**

## Circulation

**Subscriptions Manager** Leisha Bulley **0171 316 9712**  
**Subscriptions Supervisor** Joanne Nicholls **0171 316 9713**

## Publishing

**Founder** Angelo Zgorelec  
**Marketing Manager** Juliet Parker **0171 316 9191**  
**Marketing & Sales Co-ordinator** Timothy Mickelborough **0171 316 9820**  
**Portfolio Administrator** Janaya Warren **0171 316 9462**  
**Publisher** Jon Ross **0171 316 9187**

Test Results are based wholly or in part on methodologies provided by National Software Testing Laboratories, a division of McGraw-Hill Inc, and licensed to Personal Computer World. Neither NSTL nor the Publisher guarantees the accuracy or adequacy of its testing activities and makes no representations or warranties regarding tested products. Articles or portions of articles translated and reprinted (or adapted) in this issue from PC Digest or Software Digest Copyright (c) 1994, by National Software Testing Laboratories (NSTL), a division of McGraw-Hill, Inc, 625 Ridge Pike, Conshohocken, Pennsylvania 19428, USA. Reproduction of the NSTL material in any manner or language in whole or in part without permission of NSTL is prohibited.



154,482  
JAN-JUNE '95



VNU BUSINESS PUBLICATIONS



## REPRINTS

We offer a full reprint service for reproduction of all or part of any current or previous articles. Minimum order 1,000. For details contact Melanie Thomson (0171 316 9000).

## USE OF EXTRACTS

We are delighted for people to use quotations and segments of articles for internal or promotional purposes. For clearance contact Juliet Parker (0171 316 9000).

## SUBSCRIPTIONS

Annual subscription, £24.95. One year Europe only, £30. Rest of World, £60-£80. P&P included.  
Call 0171 316 9715/9716. Credit card orders welcome.

## BACK ISSUES

We keep a stock of past issues and can provide individual copies at a charge of £5. Call Tom Costin (0171 316 9714).

VNU House, 32-34 Broadwick Street, London W1A 2HG.  
Main Switchboard Tel **0171 316 9000**.

No material may be reproduced in whole or in part without written consent from the copyright holder © VNU Business Publications 1995.

Advertisement typesetting by Typematters, London N1.  
Origination by Latent Image, 6 Balmoral Grove, London N7.

Printed and bound in the UK by St Ives plc, Plymouth. Distributed by Comag, Tavistock Road, West Drayton, Middlesex (01895 444055).

## Editorial

The consumer PC/TVs reviewed in this issue (page 110) are the manufacturers' first serious stab at the format. They know that some people are buying PCs for the home, but they're not really sure what they want or where they're going to use them

The result is a hotchpotch of machines. Some have TV tuners or fax/modems, some don't. Olivetti's Envision even lacks a monitor, an echo of the first home computer revolution in the late seventies when home computers routinely plugged into televisions. None of them really exploit the format.

The consumer PC/TVs of the future will have a high-resolution 17in, or larger, monitor, a TV tuner and a fax/modem as a matter of course. They'll be on the Internet and designed to send and receive email as easily as an office mail system. You won't need to dial up manually; your PC will log on and collect your email for you. You'll still need a keyboard though, perhaps an infra-red one like the one with Olivetti's Envision. But your PC will also come with an all-singing all dancing TV remote control, with a built-in trackball (or similar) and designed to make surfing the Web as easy as, but faster than, using Teletext now.

The challenge for the manufacturers is to deliver all this at prices consumers can stomach. Getting home PC/TVs to sell in large numbers will be all about hitting price points. I was recently shown a prototype of the machine described in the last paragraph. It's expected to ship in late '96 for around £2,000 and will sell in small numbers to people with money to burn. The big retailers will sell a few, but won't get too excited: what they want is the same product at £499. For that we'll have to wait.



Ben  
Tisdall  
Editor

# Next Computer Month World

## Superfast PCs

Pentium 120MHz processors, 1Gb hard disks, 16Mb of RAM, quad-speed CD-ROM drives. The ultimate machines for running Windows 95 at speed. And with prices starting from under £1,500



## Accountancy software

David Carter reviews 10 accounting packages, from the latest Windows ones to tried and tested DOS stalwarts.

## Booze round-up

Paul Begg samples some of the beer and wine guides now available on CD-ROM

### January '96 issue

— On sale Thursday 7th  
December

### February '96 issue

— On sale Thursday 4th  
January

- Visual programming tools
- Fax/modems

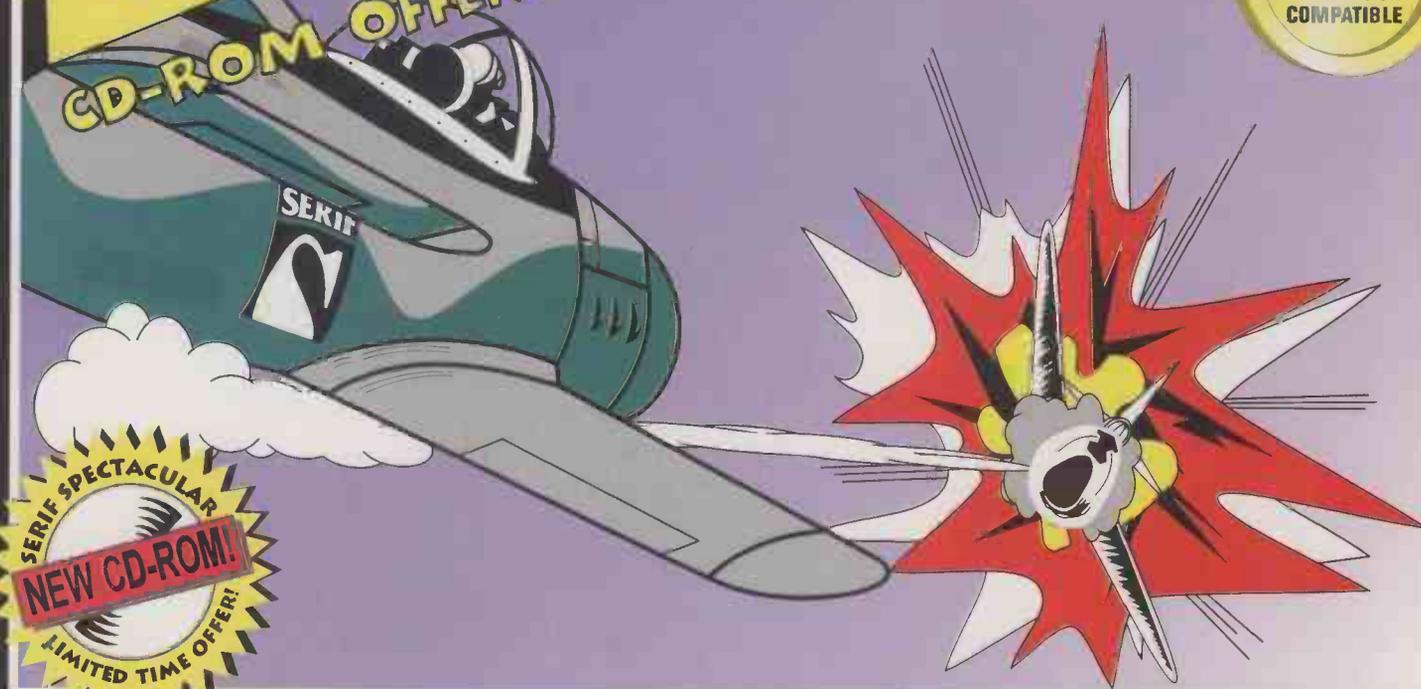
### FREE SUPPLEMENT

## GUIDE TO GETTING ONLINE

The essential guide to comms. All you ever wanted to know about getting online — choosing a service provider, buying a modem, and using the Internet. Plus free trial with CompuServe.

SERIF DRAWPLUS INTRO WAS SO EASY TO USE! IT BLEW OTHER DRAWING PROGRAMS RIGHT OUT OF THE SKY!!

AMAZING  
£6  
CD-ROM OFFER!



# THE WORLD'S EASIEST GRAPHICS & ILLUSTRATION SOFTWARE!

Are you looking for a powerful Windows drawing and illustration program – like CorelDRAW! – but you don't want the complexity and expense? Then you need new Serif DrawPlus Intro. Available on CD-ROM or disk, Serif DrawPlus Intro is incredibly easy for anyone to learn and use, it's packed with powerful drawing features and best of all, it's just £6 all in.

Like all Serif products, DrawPlus Intro has been designed with the first time user in mind. It's based on award-winning DrawPlus 2.0, our £99 power-packed CorelDRAW! rival, so right out of the box you'll be producing stunning logos, perfect diagrams, cool posters and complete works of art in full colour. Get great results on any dot-matrix, ink-jet or laser printer – or place your drawing into any Windows Word-Processor or Desktop Publisher.

You'll be amazed by DrawPlus Intro. Produce attention grabbing colour blends or stretch and distort text to create your own designer lettering. Even

edit and customise clipart pictures to your own unique specification. With Serif DrawPlus Intro you'll have no trouble quickly accessing these powerful features. There are no complex menus to worry about, just use the super-friendly quick-fire, button-based control panel. You'll soon find out that it's great fun too!

What's the catch? There's no catch... DrawPlus Intro is the easiest way to find out all about illustration, drawing and graphics on your PC.

Get DrawPlus Intro today and you'll join nearly 600,000 enthusiastic Serif customers world-wide. Like many others, once you've used one value-packed Serif product you'll want to try the rest!

Call NOW for your copy of amazing DrawPlus Intro! The CD-ROM comes with BOTH DrawPlus Intro and PagePlus Intro DTP - including an incredible 1000 clipart images and 100 TrueType fonts - even better value!

For even better results, use Serif DrawPlus Intro with:

Serif PagePlus 3.0 - £123.45  
Award-Winning, easy & powerful DTP.

Serif DrawPlus 2.0 - £123.45  
Easy drawing, graphics & illustration.

Publishing Suite CD-ROM - £240.94  
The Complete DTP & Graphics Solution.

Mega ArtPack CD-ROM - £76.45  
7000 Colour Clipart images on CD-ROM

All Prices are inclusive of VAT and £6 P&P.

**CALL NOW TO ORDER SERIF DRAWPLUS INTRO:**

**SERIF 0800 924925**

Please Quote Code:

MCD/PCW/V/12



One of the Serif family of Best-Selling, Award-winning Publishing and Graphics applications

★ Don't risk spending £££s on expensive software - DrawPlus Intro is just £6.00 inclusive of VAT and P&P. Please have your credit card ready: Visa, MasterCard, Amex and Switch accepted. Serif and DrawPlus are trademarks of Serif, Inc. CorelDRAW! is a trademark of Corel Corp. All other trademarks acknowledged. Offer limited to the first 150,000 UK callers, one copy per household only. Collect from Serif, Adco Ind Park, Bobbers Mill, Nottingham. NG7 5NR. Disk version contains DrawPlus Intro only.

This ad was designed and produced using new Serif DrawPlus 2.0 & Serif PagePlus 3.0 DTP.

# The Perfect PCs for Home

Multimedia - Modem - FAX - Sound - Business, Education & Games Software

Dan introduces a brand new range of PCs specially designed for use by the whole family. All models come with great features to make them fast, powerful and very reliable, affordable and easy to use. The Home PCs create endless possibilities for everyone

in the family. The younger children can enjoy games and educational programs full of fun graphics and sounds. Older children can do homework, school projects, use an encyclopedia, listen to music or

watch TV (option at extra cost). Adults can use a range of powerful applications including a word processor, spreadsheet and database, send and receive faxes and Email or get connected to the Internet. Family life will never be the same again.



The dan Power Speakers shown in the pictures are available as an upgrade.

## dan Home PC/SMM

- 8MB RAM - Fast 525MB HDD
- 486 DX2/66 CPU
- Fast Graphics card 1MB/32-bit
- 14" Super VGA L/RN/I Monitor
- 14.4 BPS Fax/MODEM
- Sound Blaster 16
- 4x Speed CD-ROM
- 256KB Cache
- Fast EIDE PCi Hard Disk Controller
- Free Slots: 1 PCi, 1 PCi or ISA & 1 ISA
- 1.44MB Floppy disk Drive
- Desktop Case, UK Keyboard
- Microsoft Mouse, Microphone
- Windows 3.11 & MS DOS 6.22 or Windows 95 installed
- 1 Parallel & 2 Fast Serial Ports
- dan Advanced Speakers (10W)
- Microsoft Works, Money, Scenes & ENCARTA Encyclopedia

**486**  
PROCESSOR

£42.79  
per month  
APR 19.9%

**EASY Buy**

£1100  
£1310.13 inc Del & VAT



The dan Power Speakers shown in the pictures are available as an upgrade.

## dantum Home PC/SMM

- 8MB RAM - Fast 525MB HDD
- 75 or 90MHz Pentium® Processor
- Fast Graphics card 1MB/64-bit
- 14" Super VGA L/RN/I Monitor
- 14.4 BPS Fax/MODEM
- Sound Blaster 16
- 4x Speed CD-ROM
- 256KB Cache
- Fast EIDE PCi Hard Disk Controller
- Free Slots: 2 PCi, 1 PCi or ISA
- 1.44MB Floppy disk Drive
- Desktop Case, UK Keyboard
- Microsoft Mouse, Microphone
- Windows 3.11 & MS DOS 6.22 or Windows 95 installed
- 1 Parallel & 2 Fast Serial Ports
- dan Advanced Speakers (10W)
- Microsoft Works, Money, Scenes & ENCARTA Encyclopedia

**pentium**  
PROCESSOR

£48.47  
per month  
APR 19.9%

**EASY Buy**

P5-75 £1248

£1484.03 inc Del & VAT

£51.20  
per month  
APR 19.9%

P5-90 £1319

£1567.45 inc Del & VAT

## The BEST Upgrades

15" 17"

- 15" Monitor Upgrade £ 86
- 17" Shadow Mask Monitor Upgrade £ 360
- 1GB FAST EIDE Hard Disk Upgrade £ 50
- Memory upgrade from 8MB to 16MB £ 216

Delivery cost to most of UK for one system is £15.  
All prices exclude VAT @ 17.5%. E & O.E.

## Ask for the BEST Software Upgrade

Work

Play

Learn



**EASY Buy**

## Personal FINANCE

A monthly payment scheme is available to private purchasers, subject to status & proof of identity. A typical example of a payment calculation for a dan computer costing £914 ex VAT would be: £914 + £15 (delivery) + 17.5% VAT = £1,091.58 total cash price, payable by 10% deposit of £109.16 followed by 36 monthly direct debit payments of £35.65 (19.9% APR). Written quotations available on request. Dan technology plc is a licensed credit broker.

## Watch TV & TELETEXT on your PC & capture video add £167

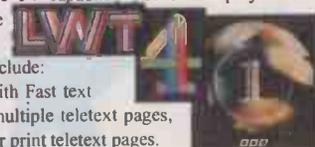
This card combines TV program viewing with video recording on your PC. It enables the PC to receive TV broadcast signals directly from an aerial or cable and display a live TV program on your standard VGA monitor. You can even connect it to a VCR, laser disk player or camcorder. With all these inputs you can then create AVI (additional software required) movies to play back on other Personal Computers. Additional TV features include: Full screen TV, 8 x zoom and channel preview.

**TV on your PC & Teletext**

In addition to the TV capability you can display teletext pages in separate windows.

The functions include:

- Teletext with Fast text
- View multiple teletext pages, save or print teletext pages.
- DDE links can be created between the teletext pages allowing viewing in any Windows program supporting DDE (eg. Microsoft Excel and Word)



London: 0181 830 1100 Leeds: 0113 259 1200

LONDON: Ironbridge Close, Great Central Way, London NW10 0NW.  
LEEDS: 10 Feast Field, Town Street, Horsforth, Leeds LS18 4TJ.  
ISRAEL: S.G.M. Computers Ltd. Tel: +972 (0)9 563536

FAX: 0181-830 1122  
FAX: 0113-239 0652  
FAX: +972 (0)9 563537



Opening Hours/Showroom: Mon-Fri 10am-6pm

**dan**  
technology plc

# The new stars from dan

will take you into the world of the Internet.

You know you can rely on dan

Dan's commitment to continuous improvement and customer satisfaction has already resulted in numerous awards and accolades, both from customers and industry experts.

Dan received over forty awards in 1993 and 1994, including PC Magazine's Overall Satisfaction with Service and Reliability Award for three years running.

New awards are still coming in 1995.




**intel inside**  
**pentium**

**PCi**  
**dantium Value 1/S**  
Entry Level Pentium® Processor System

75-133MHz Pentium® Processor  
8MB RAM - 525MB HDD  
1MB DRAM 32-bit Video Card  
14" FST Low Radiation N/I Monitor

- 256KB Cache Memory
- Free Slots: 2 PCi, 1 PCi or ISA & 2 ISA
- Fast EIDE PCi Hard Disk Controller
- 1.44MB Floppy disk Drive
- 1 Parallel & 2 Fast Serial Ports
- Desktop Case w/200W PSU
- 102 Key UK Keyboard
- New Microsoft Mouse
- Windows 3.11 & MS DOS 6.22 or Windows 95
- Microsoft Works for Windows

75MHz	£ 1024
90MHz	£ 1098
100MHz	£ 1141
120MHz	£ 1193
133MHz	£ 1324

1GB EIDE HDD Upgrade Add £ 50



**Trident** **intel inside**  
**pentium**

**PCi**  
**dantium 1/S**  
The Classic Pentium® Processor System

75-133MHz Pentium® Processor  
8MB RAM - 850MB HDD  
1MB DRAM 64-bit Video Card  
15" FST Low Radiation N/I Monitor

- Trident Chipset w/256KB Cache Memory
- Free Slots: 2 PCi, 1 PCi or ISA & 2 ISA
- Fast EIDE PCi Hard Disk Controller
- 1.44MB Floppy disk Drive
- 1 Parallel & 2 Fast Serial Ports
- Desktop Case w/200W PSU
- 102 Key UK Keyboard
- New Microsoft Mouse
- Windows 3.11 & MS DOS 6.22 or Windows 95
- Microsoft Works for Windows

75MHz	£ 1160
90MHz	£ 1234
100MHz	£ 1277
120MHz	£ 1329
133MHz	£ 1460

1GB EIDE HDD Upgrade Add £ 27



**Trident** **intel inside**  
**pentium**

**PCi**  
**dantium 95/S**  
High Power Pentium® Processor System

75-133MHz Pentium® Processor  
16MB EDORAM - 850MB HDD  
2MB DRAM 64-bit Video Card  
15" FST Low Radiation N/I Monitor

- Trident Chipset w/256KB Cache Memory
- Free Slots: 2 PCi, 1 PCi or ISA & 2 ISA
- Fast PCi EIDE Hard Disk Controller
- 1.44MB Floppy disk Drive
- 1 Parallel & 2 Fast Serial Ports
- Desktop Case w/200W PSU
- 102 Key UK Keyboard
- New Microsoft Mouse
- Windows 3.11 & MS DOS 6.22 or Windows 95
- Microsoft Works for Windows

75MHz	£ 1420
90MHz	£ 1494
100MHz	£ 1537
120MHz	£ 1589
133MHz	£ 1720

2MB VRAM Video Card Upgrade Add £ 73  
1GB EIDE HDD Upgrade Add £ 27

## Configurations

Based on the above specification with 14" SVGA Monitor and your choice of Hard Disk Drive & PENTIUM Processor

Pentium Processor	75	90	100	120
420MB	£1051	£1127	£1172	£1227
850MB	£1090	£1166	£1211	£1266
1GB	£1117	£1193	£1238	£1293
1.6GB	£1237	£1313	£1358	£1413
1.04GB	£1472	£1548	£1593	£1648
2.10GB	£1746	£1822	£1867	£1922

Pentium Processor	75	90	100	120
525MB	£1095	£1171	£1216	£1271
850MB	£1119	£1195	£1240	£1295
1GB	£1146	£1222	£1267	£1322
1.6GB	£1266	£1342	£1387	£1442
1.04GB	£1501	£1577	£1622	£1677
2.10GB	£1775	£1851	£1896	£1951

Pentium Processor	75	90	100	120
525MB	£1366	£1442	£1487	£1542
850MB	£1390	£1466	£1511	£1566
1GB	£1417	£1493	£1538	£1593
1.6GB	£1537	£1613	£1658	£1713
1.04GB	£1772	£1848	£1893	£1948
2.10GB	£2046	£2122	£2167	£2222

All SCSI models use the Adaptec AHA-2940 Controller that uses an extra PCi Slot. 4 GB & 9GB SCSI Hard Disk drives are available

133MHz upgrade from 120MHz add £ 135

dan internal Fax/Modems 14.4BPS £69 28.8BPS £154



Microsoft Office 95 Upgrade £ 169

dan desktop with Multimedia & Power Speakers Option

## dan Multimedia

Choice of Software Bundle (OEM Packages with On-Line Help)

**Microsoft Multimedia Bundle** (on 2 CDs & Disks)

Microsoft Works or Works 95, Money, Scenes & Encyclopedia ENCARTA

**Lotus Multimedia Bundle** (on 8 CDs)

Lotus 1-2-3, Ami Pro, Organizer, Approach, Smart Pics, Scencam  
Games: FIFA International Football, Mega Race, Theme Park & Dragon Lore  
Sage 'Moneywise', Grolier Encyclopedia plus exciting Training Programs



# go direct to dan

# Special Configurations at Special Offer Prices

The configurations of dan /s systems are not variable.



**dan PCI Ultimate PC**  
The PC you always dreamed of

- Intel Triton Chipset
- Pentium Processor
- 16MB EDO RAM - 1GB EIDE HDD
- 2MB VRAM 64-bit Video Card
- 17" Monitor Trinitron LR Monitor
- 4x CD-ROM
- SoundBlaster AWE 32 Value 512K
- dan FAX/Modem

- Triton Chipset w/256KB Cache Memory
- Free Slots: 2 PCI
- Fast PCI EIDE Hard Disk Controller
- Hi-Fi Power dan Speakers (80W PMPO)
- dan Internal 14.4BPS Fax/Modem
- 1.44MB Floppy disk Drive
- Full Size Tower Case w/250W PSU
- 1 Parallel & 2 Fast Serial Ports
- 102 Key UK Keyboard
- New Microsoft Mouse
- Windows 3.11 & MS DOS 6.22 or Windows 95
- Software titles:
  - MS Encarta '95 Encyclopedia,
  - MS Works for Windows
  - MS Money for Windows
  - MS Scenes



## Pentium PROCESSOR

100MHz	£2298
120MHz	£2350
133MHz	£2481

Pipeline Burst Cache Memory Upgrade £48  
1.6GBEIDEHDD Upgrade Add £114

**Windows 95**  
Ready to Run



from **£1024**  
£1220.83 inc Del & VAT

£39.88  
per month  
APR 19.9%  
**EASY BUY**



dan Midi Tower Case Option

## Upgrade Kits



### Dan Multimedia Kit 2

4x Speed CD-ROM	
SoundBlaster 16	
Advanced Speakers 10W PMPO	
Microphone	
with Lotus Bundle	with Microsoft Bundle
£235	£203

6xSpeed IDE CD-ROM upgrade from 4xSpeed add £102

### Dan Multimedia Kit 3

4x Speed CD-ROM	
SoundBlaster AWE 32 Value 512K	
Hi-Fi Power Speakers 80W PMPO	
Microphone	
with Lotus Bundle	with Microsoft Bundle
£308	£276



dan Mini Tower Case Option



## dan Ultimate PC RECOMMENDED

"Recognising the value of a fully-configured system designed with the power user in mind, we can recommend the dan ultimate PC (£3,338). As well as a 100MHz Pentium and 1GB hard disk, you also get a quad-speed CD-ROM, SoundBlaster AWE32, network interface card, data/fax modem & DAT drive. This excellent mix of components earned it the highest feature score in this review, and should largely remove the need for disruptive upgrades." PC Magazine (dan Ultimate100), June '95

Delivery cost to most of UK for one system is £15. E.&O.E. All prices exclude VAT @ 17.5%.

London: 0181 830 1100 Leeds: 0113 259 1200

LONDON: Ironbridge Close, Great Central Way, London NW10 0NW.  
LEEDS: 10 Feast Field, Town Street, Horsforth, Leeds LS18 4TJ.  
ISRAEL: S.G.M. Computers Ltd. Tel: +972 (0)9 563536

FAX: 0181-830 1122  
FAX: 0113-239 0652  
FAX: +972 (0)9 563537



Opening Hours / Showroom: Mon-Fri 10am-6pm

**dan**  
technology plc

# Newsprint

## NEWS Contents

<b>Pro by name</b>	<b>19</b>
Intel names its "P6" chip Pentium Pro. Watch it fly.	
<b>Print things</b>	<b>21</b>
New-generation lasers are cheaper, smaller and smarter.	
<b>CD compromise</b>	<b>21</b>
The row over CD standard ends in compromise.	
<b>Go Internet</b>	<b>22</b>
Jerry Kaplan's Go Corporation gets into interesting Net venture.	
<b>Focus on palmtops</b>	<b>23</b>
New palmtops launched.	
<b>Novell dumps Unix</b>	<b>23</b>
Major realignment in networking world caused shock waves.	
<b>Software bestsellers</b>	<b>30</b>

## Threat to mail as macro viruses sweep the world

Many users have yet to wake up to the danger of the new macro viruses and other email boobytraps, security experts say. The Concept virus, also known as Prank, is close to being the most widespread in the world only weeks after Microsoft circulated it in a Word document on a CD for Win95 technicians, said Graham Cluney, senior consultant at S&S, publishers of Dr Solomon's Anti-Virus Toolkit. "Concept has got to the stage now where it will never go

away. It will always be with us," he said. "It is spreading like a petrol fire. People don't realise documents can be dangerous. They are not used to checking their email."

One effect of the virus may be to delay a long-expected move from fax towards a more general use of email

Lotus and Novell/WordPerfect documents also look vulnerable to Concept-type macros which use Basic-like languages that can perform virtually any task on a PC, like formatting a disk or emailing files (nice for industrial spies). Most dangerous are macros that start automatically when you open a file — whether or not they reproduce to become viruses.

There were no reports of problems with Lotus or Novell products but neither company seemed eager to comment on the threat.

The original Concept is harmless in itself though it can prove costly for companies who

may have to disinfect thousands of files. But it is in effect a virus template: a novice programmer could add a damaging payload.

"It has lowered the threshold of who can be a virus writer," said Andy Campbell, sales director of virus specialist Reflex Magnetix. Raw text, as sent in ordinary email, is safe, but any formatted document received or downloaded — even on Macs, and other platforms — should be checked. Microsoft and S&S have posted Concept detectors and Reflex has a fix.

The absence of major disasters (as we went to press) may explain user complacency. But Cluney warned: "The sort of people who write viruses looked down on Concept because it does not require machine code. But that could change very quickly."

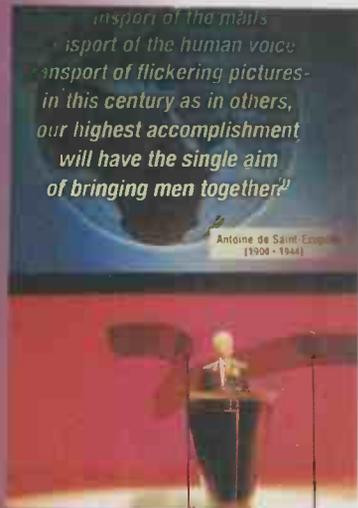
Fixes can be found at [www.microsoft.com](http://www.microsoft.com) and [www.dr Solomon.com](http://www.dr Solomon.com); Microsoft 01734 270000; S&S 01296 318700; Reflex 0171 371 6666; Lotus 01734 455445; WordPerfect 01344 724000

## 120MHz Toshiba notebook

Toshiba announced a portable using a battery-friendly 2.9-volt 120MHz Pentium on the day Intel launched the chip. The Tecra 700CT also boasts a quad speed CD drive and an 11.3in 800 x 600 TFT screen.

● New notebooks — page 23; news analysis — page 34

Toshiba 01932 841600



## Grove makes some smart connections

After the multimedia PC... the communicating PC. This is the latest wheeze of Intel chief Andy Grove, described in his keynote address (left) at Telecom 95 in Geneva and during a London stopover.

He also spoke again of his vision of a computer where the central processor (made by Intel, naturally) does the signal-processing tasks usually offloaded to subsystems such as video boards and modems. The next-generation communicating PC, which Grove called the Smart Connection, will emerge late next year. It

will bundle videoconferencing, fax, voice and data comms, and support virtual reality and Web Page templates.

It will get an extra help from Intel in the form of "multimedia extensions"; Grove declined to elaborate on these. He used Nokia's mobile video system (see page 29) to illustrate his vision of the future.

Meanwhile, a UK company has proposed a neat reversal of Grove's architecture, with a standard based on a general-purpose signal-processing subsystem — see page 22.

## Enter the P6... er, the Pentium Pro, with 32 bits flying under NT

Intel has given the name Pentium Pro to its next-generation 5.5 million-transistor processor, codenamed the P6. The first machines to ship are likely to run Windows NT and Unix.

On Windows 95, which still contains some 16-bit code, the Pentium Pro is not appreciably faster than the equivalent Pentium. Running 32-bit software under Windows NT, the performance is said by Intel to "have exceeded expectations."

First applications will be in

full motion video, 3D graphics and Web authoring. One main feature of the Pentium Pro is 256Kb of built-in cache. This improves the scalability so that performance rises steadily as clock-speed is increased.

First versions will run at 150MHz with a bus speed of 60MHz. The first server implementations, which require high bus bandwidth, will run at 166MHz with a 66MHz system bus.

Two new PCI chipsets, the 82450GX for servers and the

82450KX for workstations, have also been introduced. Both have been optimised for Windows NT and support multiple PCI slots, "glueless" multiprocessing and up to 4Gb of RAM.

The 0.6 micron 150MHz Pentium Pro will cost just under \$1,000 in volume — comparable, Intel says, to the pricing of early Pentiums. The 166MHz 0.35 micron version, slated to ship in the first quarter of 96, will cost \$1,066 in volume.

Website: <http://www.intel.com/>  
See review, page 104

### Short Stories

#### Eight-speed CD drives on the way

Several developers are said to have eight-speed CD-ROM drives in the pipeline. Diamond Multimedia is offering one as part of a £425 multimedia kit including a 16-bit audio card and speakers, but it was not available at the time we went to press.

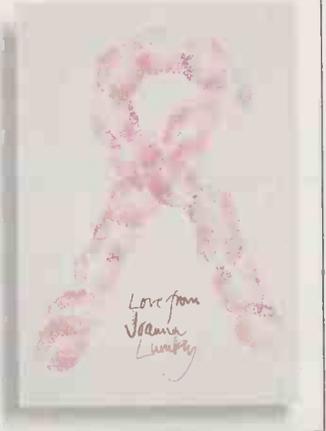
Diamond 01753 501400

#### Site takes flight

Isle of Man airport has announced that it has put up a Web site at [www.enterprise.net/airport/airport.htm](http://www.enterprise.net/airport/airport.htm) "to provide information and support for both passengers and pilots". We hope the pilots have a fast line ...

#### Lips Aid

From the lovely kitsch lips of Joanna Lumley, a plea for Net users to festoon their Web sites and email with red ribbons on 1 December, which is World Aids Day. Ribbons like this, designed by celebrities such as Ms Lumley and Chris Evans, can be downloaded from the Health Education Authority's site at [www.wad.hea.org.uk](http://www.wad.hea.org.uk).



## StrongARM challenge from Digital

Two moves by Digital last month pushed home the message that chipmaker Intel will never regain the domination it had in DOS days.

One opening for Intel rivals lies in the market for handheld organisers which are not so tied to Windows and DOS. A strong contender is the StrongARM chip stemming from a collaboration between Digital and Cambridge-based Advanced Risc Machines.

Digital demonstrated the first StrongARM (SA-1) core, running internally at 160MHz and with a claimed Pentium-class performance, or better. More significant is the fact that it draws only 120 milliwatts — a fraction of the battery power drawn by the Pentium.

ARM spokesman Trent Poltonetti said it would also be much cheaper. ARM chips were used in the Apple Newton, and StrongARMs will power the next generation of organisers and portable video communicators.



The second opportunity for Intel rivals stems from the fact that Microsoft appears to be moving Win95 closer to Windows NT, which has been ported to several platforms including the PowerPC and Digital's fast Alpha chips.

About 100,000

Alpha systems are running in high-end systems worldwide. Now Digital is offering an Alpha workstation (above) priced for the desktop. The XL systems, which offer a choice of 233MHz or 266MHz Alpha 21064 chips, and are also available with Pentiums, cost between £2,000 and £4,244. They are aimed mostly at CAD users.

Intel chief Andy Grove, asked in London (see opposite) if he feared a migration to rival chips as operating systems become platform independent, said: "If we don't keep ahead of the competition, we don't deserve to survive."

Digital 01734 868711; ARM 01223 400400

## HP claims to beat Intel P6 board

Hewlett-Packard has made its own Pentium Pro motherboard which it claims is faster than Intel's.

It has also made its own support chips because Intel's do not support Extended Data Out

(EDO) RAM, said European PC product manager Alison McCallum-Varey.

EDO RAM is up to 60 percent faster than normal DRAM because it allows its output to be read while it is being primed for a

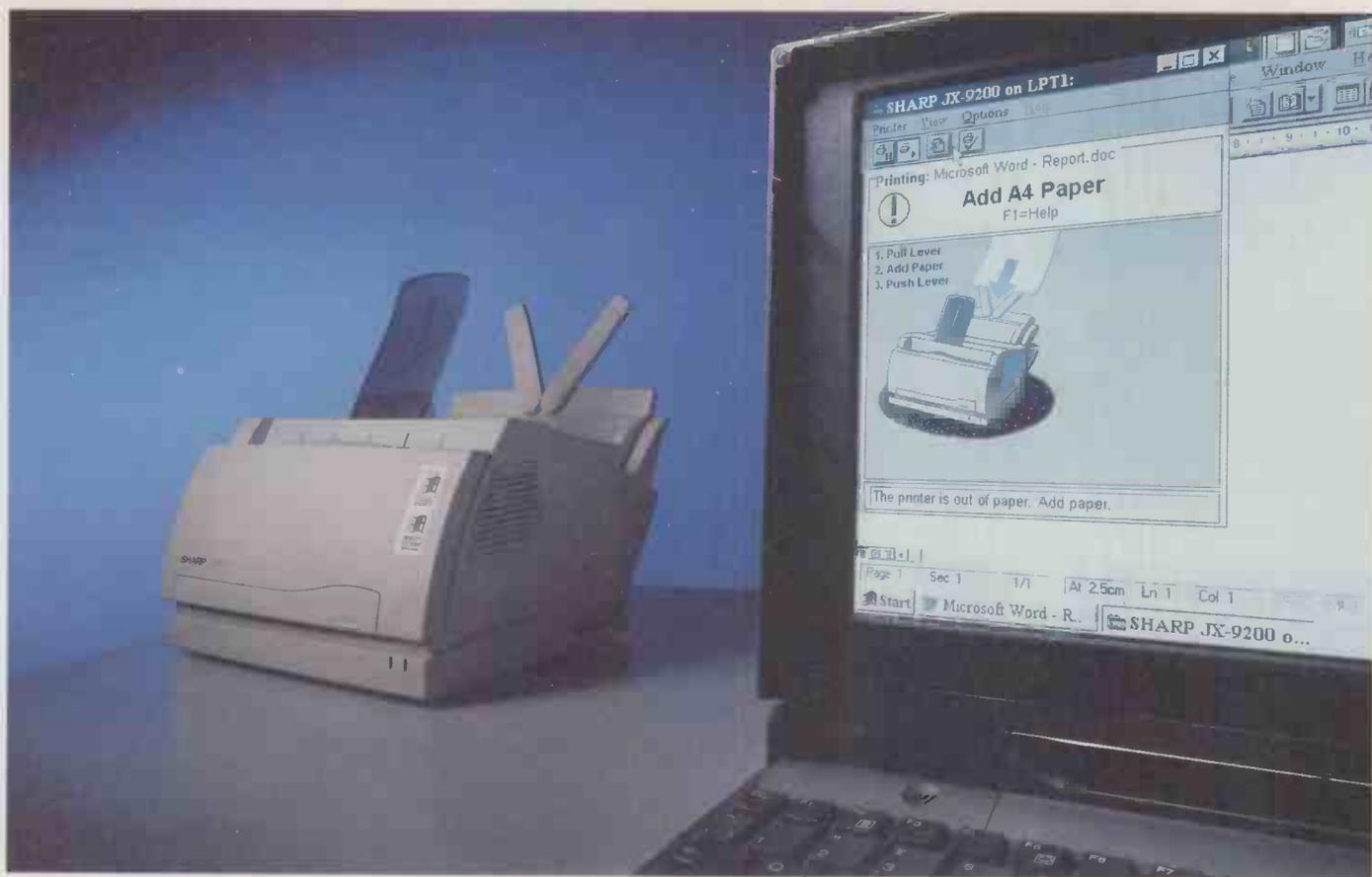
new data fetch (i.e. the data-out time is extended, hence the name).

Third-party chipmakers, and indeed Intel, were expected to produce EDO-friendly support chips but not until at

least next year.

One criticism levelled at the Pentium Pro, with its integrated cache RAM and Orion support chipset, is that it limits the scope of manufacturers to differentiate their machines by offering fast memory to boost data flow.

Hewlett-Packard 01344 360000



## Every Sharp JX-9200 comes with a free printer expert. Itself.

It always happens, doesn't it? You're waiting for the last page of your document to emerge from your printer, and a little orange light starts to flash instead. It could mean anything. It certainly means you'll be late for your meeting.

It won't happen with the new JX-9200 from Sharp. Instead of a warning light, the JX-9200 has an infinitely more helpful 'Graphic User Interface', which actually talks you through the entire printing operation via your PC screen. Even if something goes wrong, you can't, because

your PC not only tells you what the problem is, but how to solve it too.

Our new printer's exceptional abilities don't stop there. The JX-9200 brings you all the benefits of a high quality laser printer for the same price as an inkjet. So you can look forward to higher print quality at a lower cost than you ever imagined.

The JX-9200 won't take too much valuable office space, either. It's so small, it'll not only print on a sheet of A4 but sit on one too.

The printer has been designed with Microsoft®

for total Windows™ compatibility. That means it'll work effortlessly with all versions of Windows™, including Windows™ 95\*. And set up is just as straightforward. You just plug in and print out.

In fact, whichever way you look at it, the JX-9200 is set to revolutionise your printing. Call free on 0800 262 958, quoting reference PCWG1 and get a printer expert working for you.

**SHARP**  
INTELLIGENT THINKING

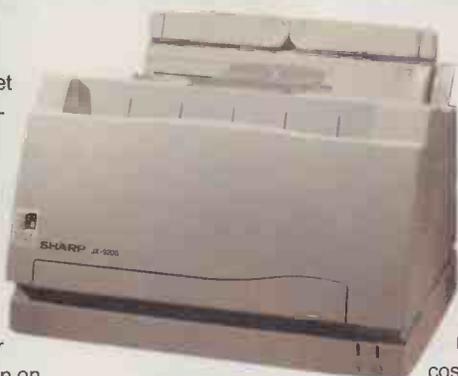
PC World, Comet, Argos, Sunrise Electronics (0171 637 3727). Micro Anvika (0171 636 2547). Alternatives (0500 314314). PrinterLine (01709 530880). Knowledge Tree (01706 832832). Inmac (0990 146622). Elonex (0181 452 4444). Personal Business Centres \*Not compatible with Windows™ NT.

## New print system ushers in cheaper smaller lasers

A new generation of laser printers has hit the market which take advantage of Windows software allowing them to be cheaper, smaller and smarter.

They are bundled with the Microsoft Windows Printing System which, like the so-called GDI printers that became popular under Windows 3.1, cut down on hardware prices by allowing the image processing to be done by the host PC rather than the printer. They have to be used by a Windows machine, but can be used from applications running within a DOS box under Windows 3.x or 95.

The system also means that



printing can be controlled by friendly PC dialogue boxes rather than by the ludicrously complicated system of buttons and tiny LCD screens that printers have sprouted in recent years. If your PC has a sound card, it will even tell you when there is a printing problem.

The first of the WPS range to be launched was the JX-9200 series from Sharp, which claims they are the smallest laser printers on the market. They measure just 299 x 29 x 185mm and print at four pages a minute. The 300dpi JX-200 costs £329 and the 600dpi JX-210 costs £429.

Canon is offering the slightly larger (336x319x249mm) 600dpi LBP-460 for £349. The Windows Printing System addresses only 300dpi, and both 600dpi printers use enhancement technology.

Canon 0181 773 6000

Sharp 0800 262958

### Short Stories

#### 64-bit Win95 accelerator

● Trident has launched what it claims is the first 64-bit Win95 accelerator chip, supporting direct draw and direct video acceleration.

The TGU19682 accelerator also implements Unified Memory Architecture (UMA), using PC system memory rather than extra graphics memory to process images.

This saves up to £70 in video RAM costs and the chip itself will cost about £20 in quantity, which should lead to cheap high-quality graphics acceleration.

Kudos Thame (distributor) 01734 351000

#### Free service boosts sales

● A free after-sales warranty scheme has left a direct reseller claiming sales of more than £1.1 million after just one month of launch. ICL subsidiary Alternatives, which launched the CareFREE warranty in September, is said to be overwhelmed by the response.

CareFREE is on offer to buyers of Compaq, Toshiba, IBM and Fujitsu PCs and provides a full on-site parts and labour warranty for three years at no cost. The success of the scheme may lead rival direct sellers to follow Alternatives which is now expected to extend the scheme into specialised areas.

Alternatives 01925 700007

#### Online share service reopens

● The Stock Exchange has backed down in the row over its blocking of Britain's first stock-dealing service for Web users. The stated reason for the block was a claimed breach of confidentiality by Electronic Share Information in its dealings with the media.

The ESI service is now back online at [www.esi.co.uk](http://www.esi.co.uk)

#### Idealist 4.0

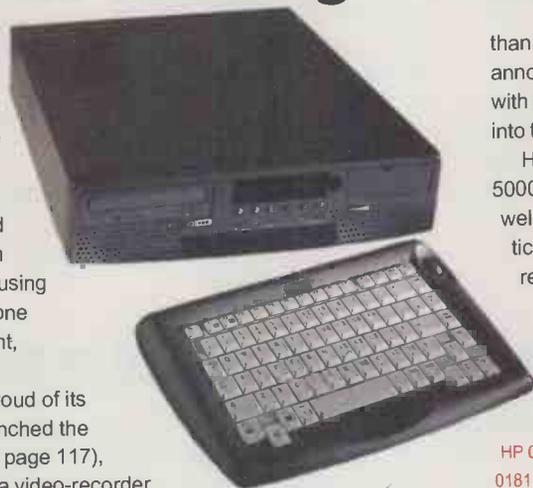
● Idealist 4.0, a Win95 version of the freeform database, will be available this month for £149.50 or £69 for upgraders.

Blackwells 01865 206206

## Home PCs converge in style

More manufacturers have followed the lead of the likes of ICL and Packard-Bell in bringing out novel home and small-office PCs, which are leading the field in using converging TV and phone technologies (Newsprint, November).

Olivetti, which is proud of its Italian styling, has launched the Envision (reviewed on page 117), which looks more like a video-recorder



than a PC. Brother has announced a TV-style PC with the monitor incorporated into the system box.

Hewlett-Packard's Vectra 5000 series are phones as well as PCs, with sophisticated voicemail, fax, and remote access facilities.

MJN announced a range of what it called "futuristic style" models with PC card options.

HP 01344 360000; Olivetti

0181 705 6666; MJN 01262 777555

## Compromise on new CD standard

The row over which standard to use for the next-generation compact disks has ended in compromise.

One contender was the multimedia compact disc (MMCD) backed by Philips and Sony. The rival SD (super density) alliance of Toshiba, Panasonic, Thomson and Time Warner proposed a sandwich of two half-thickness disks.

The compromise is closer to the SD proposal, allowing a slightly reduced 4.7Gb on a single side of the sandwiched disk. The reduction is because

the MMCD method of error checking was adopted, and this uses 16-bit rather than 15-bit packets per 8 bits of raw data. This was at the insistence of companies like Microsoft and IBM, who had favoured the MMCD format.

The SD camp was dominated by entertainment companies who were more concerned with packing an extra eight minutes of video on a disk. Much of the impetus for the change has stemmed from the fact that a full-length film cannot be packed into the standard CD's 650Mb.



**Tim Bjarin  
in the US**

## Go man goes with Net auction

● Lotus co-founder Jerry Kaplan started Go Corporation on the premise that pen computing would be hot and appeal to untapped markets.

Pen computing went bust, and so did Go. But Kaplan learned some lessons and started an interesting Internet venture called OnSale. It is a new type of interactive retailing program that is much more than an online store. It recreates in electronic form the fun and thrill of bidding at an auction.

OnSale (<http://www.onsale.com>) exploits the unique advantages of the online medium to create a new retailing format. It focuses on limited quantity goods, such as collectibles and close-outs, and offers them in a series of fast action formats where prices and availability change in response to demand.

OnSale creates an entertaining and exciting experience. Check it out.

## New Sony link is Magic

● The PIC 1000 Magic Link personal communicator has won only a moderate following since Sony and General Magic launched it a year ago.

But Sony is willing to give it time to evolve and has come up with the PIC 2000, a significant upgrade.

It still uses GM's Magic Cap environment, but boasts a backlight that you can turn off and on. It also includes a built-in speaker phone, as well as two Type II PC card slots.

With a cellular modem it becomes a solid wireless communicator. RAM is boosted from 1Mb to 2Mb — 1.4Mb of it free. The built-in modem now offers speeds up to 14,400kbps.

Software is included for accessing various email programs and the street price is expected to be about \$895 (the P100 price drops to \$499). It will be available worldwide in late November.

# Could LSI's ViPA be Intel's snake in the grass?

A new British-designed Architecture which could lead to cheap do-it-all multimedia comms cards is being backed by major IT companies, the developers claim.

At the heart of the system, from Loughborough Sound Images, is a general-purpose digital signalling processor card which can act as a fax/modem, ISDN interface, SoundBlaster-compatible audio card, MPEG player, and video-conferencing card.

Managing director Simon Yates claims the videoconferencing quality is four times as good as rival systems at a quarter of the cost.

An upper software layer communicates with Windows using standard hooks via a media manager. A second layer consists of server applications for functions such as fax or H3120 videoconferencing.

Extra functions can be created simply by adding software to this layer — limited only by the types of input and output sockets installed.

"The great thing is that if standards change, you can

update through software. You don't have to change the hardware," said LSI business manager Ralph Weir.

LSI has been looking closely at the Firewire and USB communications ports, which may be used to link next-generation peripherals.

LSI calls the architecture ViPA (Video Processing Architecture) and said it would probably eventually be made open standard. ViPA cards will be made under licence by other manufacturers rather than by LSI.

The first ViPA cards are expected to come out early next year for about \$1,000 (ISA) and \$750 (PCI). Yates said prices could be expected to fall dramatically.

The architecture flies in the face of Intel's strategy, which is to concentrate all processing in the main processor.

Asked if LSI was not being optimistic taking on the might of Intel, Yates said: "Wait until you see the companies we have backing us."

Loughborough Sound Images (LSI)  
01509 634300



Meet Adam and Eve, a virtual reality man and woman who live in the extensive clipart library of the latest release of the V-R authoring package, Superscape.

Like their Biblical counterparts, the virtual Adam and Eve can reproduce to populate an entire world. They have collision detection to prevent them crashing into walls. They can walk, run and climb stairs.

Superscape 4.0 supports VRML, the virtual-reality version of the Internet's HTML markup language. Also launched is a software developer's kit, including a new module for designing device drivers, and an authoring tool for applications that can run across networks of up to 25 PCs.

The price of the Visualiser, Superscape's V-R viewer, has been reduced to £99.

Superscape 01256 745745

## First ISDN cards at modem prices

British Telecom was said last month to be reconsidering its much-criticised charge for setting up ISDN lines, as news broke of the cheapest-yet PC interface for the fast digital link.

AVM Telecom is offering an ISDN card, supporting data transfer rates before compression of up to 128 kilobits per second, for just £198. It is the first to approach the price of modems, for which the fastest VFast-plus mode offers just 33.6kbps.

Ken Brown, AVM product development engineer, said the new offering was "bringing ISDN cards down to a realistic price." British Telecom still charges £400 for an ISDN connection — more than ten times the equivalent charge in Germany. Brown agreed this was expensive but said the comparison with France and Germany was unfair because the line charges were higher there. "When you compare the charges, you break even after about two years with British Telecom."

● Dataflex is offering a Plug and Play 14.4kbps fax/modem that also provides hands-free speaker phone and voicemail facilities for £129.

AVM 01504 370370; Dataflex 0181 543 6417

## The Demon millions

Net pioneer Demon Internet has raised £8 million with a private stock issue which values the company at £26.7 million. Chairman Cliff Stanford said £5.5 million of the money would be ploughed back into the company, which he claimed has 45 percent of the UK dial-up market. He admitted that there had been complaints from users about overloaded lines, but he pledged: "We have more than enough modems installed now and we will keep ahead of the game in future."

Demon 0181 371 1234

## Palmtops set the pace for portable innovation

The focus for change in mobile computing has shifted emphatically from laptops to palmtops, judging from the latest round of launches.

The most innovative portable was the new OmniGo 100 organiser from Hewlett-Packard. With the lid open it looks a conventional palmtop with a square LCD screen and a keyboard looking like that on the Psion 3a, arch rival to HP's LX palmtop range.

It uses the GEOS graphical interface and includes all the usual organiser features on 3Mb of ROM. With the lid flipped on its back, it can be pen driven, using a redesigned handwriting (see below) to get around the recognition hassles of previous pen-driven machines.

It will be priced below the market-leading Psion 3a.

At the other end of the scale, multimedia notebooks have bigger screens and there is a drift from nipples to finger pads as pointing devices. Olivetti's new models (of which more next



month), which boast 11.8in TFT colour screens, use pads, and so do the new high-end NECs.

NEC's flagship Versa 4000 uses Intel's frugal 2.9-volt Pentiums running at 7MHz or 90MHz.

NEC launched a complete range, starting with the Versa 500 aimed at private and small-business users and having a 9.5in dual scan colour screen. Prices start at £1295.

The mid-range Versa 2000C use a 75MHz DX4 chip with 8Mb of RAM, upgradable to 40Mb, with prices starting at £1,995.

Hewlett-Packard has launched another Omnibook, the 5000, running a 90MHz Pentium with a choice of 10.4in VGA or SVGA screens.

Compaq showed its new LTE 5000 modular notebooks with a choice of 75MHz and 90MHz Pentium processors. It boasts an IRDA-compatible infra-red port and an MPEG and TV adaptor.

A CD drive, a second hard drive, an extra battery, or a 3.5in floppy drive can be added to a spare bay. Screens can be either an 11.43in STN colour or 10.4in TFT.

IBM has announced a new Thinkpad with a 75MHz DX4 processor and a choice of 10.4in dual-scan or TFT screens.

### Clive Akass

NEC 0181 993 8111; HP 01344 360000; IBM 01256 343000; Compaq 0181 332 3000  
● News analysis — page 34

## New script could be easier than abc

As the fabled Irishman said when asked the way to Dublin: "If I wanted to go there, I would not start from here." Handwriting designed for our brains is not necessarily the best starting point for a script designed to be read by computers.

The problems stemming from similarities like that of the figure 1 and letter I are obvious. Less so is the fact that a computer could distinguish between the two if the meaning depended on the way each was written: up for the number, down for the letter. Computer-readable script thus needs fewer shapes than the alphabet.

The Graffiti script used by the OmniGo 100, and available for Apple's Newton, uses the computer's sense of direction, but otherwise deviates little from alphabetic shapes. Each letter has to start at a particular point, and capitals are marked by a separate symbol. Palm Computing, which licensed the technology to HP, says it can be

learned in 20 minutes.

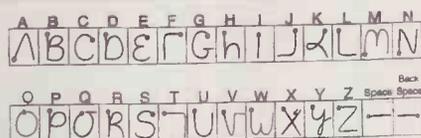
HP seemed rather coy about using Graffiti, as if it expected to be accused of defeatism over handwriting recognition. Yet a new script is not such an outrageous idea: we take for granted the effort required to master a cumbersome keyboard.

The big question is whether Graffiti goes far enough. If we do turn out to need a new script for computers (by no means certain, with speech recognition looking promising) it should be given very serious thought because we could be stuck with it for a long time, just as we are stuck with the inefficient qwerty keyboard.

And why stop at the alphabet? As the computer can make a few symbols go a long way, it should be possible to invent a very efficient PC-readable shorthand.

### Clive Akass

Palm Computing 425 949 9560 (US)



## Short Stories

### Infra-red is in for a boom

● The number of portables sold with infra-red ports will quadruple over the next couple of years, according to IDC figures cited by I-R specialist Extended Systems.

The increase in sales could bring down the price of standalone ports — Extended's JetEye module currently costs £95.

"The price is a function of the volume of sales," said managing director Julie Jones. Sales of JetEyes are split roughly equally between printer and PC connections. But this, too, could change as transfer rates rise from the 115kbps of the older IRDA1 standard, to up to 4Mbps under emerging IRDA2.

David Dack, director of the communications lab at HP's Bristol research centre, where much of the groundwork for IRDA was done, said he believed Windows 95 will drive down prices because it includes an IRDA driver.

"Before Windows 95, each manufacturer had to write a driver as well as build the hardware," he said.

Extended Systems 01705 875075

### Psion palmtops beat the world

● The British company Psion has thrashed the Americans and Japanese to gain the major share of the world market in personal organisers, according to a new Forrester report.

It reckons that world sales of all makes will top 500,000 this year representing an annual growth of 40 percent. Psion tops the league with 32.7 percent of the market, with Hewlett-Packard second at 28 percent. Apple is well behind with 14 percent for its Newton range.

But Psion cannot afford to be complacent. It uses proprietary software and Forrester predicts that the market with shift en masse to standard graphical interfaces such as Geoworks' Geos and Microsoft's Pegasus.

Psion 0171 262 5580

## Short Stories

## Smart switch sorts out the fax

● A new smart box will switch phone calls automatically between a fax/modem, a machine, answering machine or voice phone as appropriate.

The £119 Frontier TrioLine can drive up to five extension telephones, and if a fax or modem is in operation when someone tries to dial out, it will give two warning beeps when the line goes free.

Electronic Frontier 01734 810600

## Remote support in your lap

● Traveling Software is selling a cut-down version of its Laplink software to allow helpdesks running Laplink for Windows to configure PCs remotely. Machines running Laplink Host can be taken over completely by the remote caller.

Compaq already uses Laplink software to provide technical support for Presario users. Hewlett-Packard uses the rival software Carbon Copy. Laplink Host costs £59.95, or ££349.95 for ten users.

Traveling Software 01753 818282

## Scanner puts finger on intruders

● Fujitsu has developed a system for identifying people from 3D scans of their fingerprints. A single Fingerscan box with 512Kb of memory can store reference images for up to 300 people locally. But boxes can be networked together or controlled from a PC network. False acceptances are fewer than one in a million, Fujitsu claims.

Bannerbridge (distributors) 01268 419101

## Sales blip

● Applications software sales in Europe faltered in the run-up to the Win95 launch, according to Software Publishers Association figures. Sales for the three months up to July were \$423 million, an increase of just one percent over the previous year. Sales for the half-year were \$9,390 million, up three percent.

## Novell dumps Unix as system giants redraw battlelines

Shocks waves from the Windows bandwagon caused a major realignment last month in the networking world. Novell announced that it was selling its interests in the Unix operating system to concentrate on developing its Netware software.

The move was widely seen as a bid to stave off the threat of Microsoft Windows NT, which has been gaining support among corporate and academic users and is to get the same look and feel as Win95, allowing organisations to standardise on a single interface.

In a complex deal, Novell passes its interest in Unix to Hewlett-Packard and the Santa Cruz Operation in return for a 17 percent share of SCO and seven years of royalties. SCO will develop a 32-bit version of Unix for Intel machines, and HP will develop a 64-bit version primarily for the RISC chip it is developing



in conjunction with Intel.

SCO and HP have also agreed to incorporate Netware file, print and directory services into their versions of Unix; Novell in turn will merge HP's Distributed Computing Environment into Netware. The deal means Novell will drop its so-called SuperNOS project, by which its

UnixWare and Netware software would be merged into a single net operating system by 1997.

The scheme could remove some of the confusion over different flavours of Unix, though it leaves IBM a little isolated with its AIX dialect.

Novell chief Bob Frankenberg announced a Gates-style grand strategy to provide a billion-node Smart Global Network by 2000AD. A set of programming interfaces called Net2000 will make the network accessible from any major platform including NT, Windows, OS/2 and Unix. Frankenberg said: "We're talking about supporting all clients and all networks. This is anathema to Microsoft."

Novell will launch a Web server suite early next year to provide Netware users with easy access to the Internet.

Novell 01344 724000

## Re-volt over poor power supplies

The developers of software and add-on cards are being unfairly blamed for problems stemming from poor-quality PC power supplies, according to the makers of a new diagnostics board.

The problems occur when the line voltage fluctuates beyond the tolerances of the components on the motherboard or add-on cards, said Adrian White, research and development director with WCD Research. "The first thing an engineer will do when testing a piece of equipment is to measure the voltages. But your average user never thinks of it," he said.

WCD's diagnostics board, called Conflux, was designed primarily to solve memory and IRQ conflicts which still bedevil users despite the advent of the

Plug and Play specification, which many devices do not adhere to.

White said: "We built the card for our own use at first because there is no absolute foolproof way of sorting out

memory conflicts through software. Then we thought we might as well sell the card."

The voltmeter was added to check for power problems.

The Conflux board costs £99. WCD 01734 391225

## Ear it is... the smallest PC

This tiny hearing aid contains what makes Oticon claim is the world's smallest computer. The DigiFocus weighs just 4gms and includes two custom chips capable of 14 million instructions per second — which Oticon claims (some-what misleadingly) to be equivalent to a 486 computer. The advantage is that the devices can be fine tuned to the needs of the individual user.

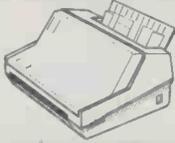
Oticon +45 39 17 71 00 (Denmark)



# SURPLUS COMPUTER STOCKS

**MORGAN COMPUTER CO. DISPOSAL OF BRAND NEW SURPLUS INVENTORY, OVERSTOCK & LIQUIDATED COMPUTER MERCHANDISE**

## SUB £200 LASER



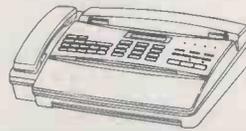
**MT-9104 "WINDOWS" LASER**  
4ppm GDI laser/300 dpi, uses Windows fonts, HP driver for DOS.  
**£199.99**  
prompt, 1 year on-site.

## 586 MULTIMEDIA



**540Mb DRIVE, 4Mb RAM**  
Nx 586 90MHz chip, VESA local bus, 14" SVGA, 16 bit s/card  
**£799.99**  
& CD, DOS/Win/Works.

## FX-9000AT



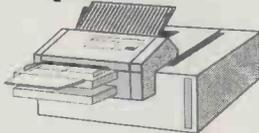
**AMSTRAD FAX/ANSWERPHONE**  
Digital answerphone - uses no tapes, 50 memories, 9 auto dials,  
**£199.99**  
fax switch, paper cutter.

## IBM PS/2 E



**120Mb DRIVE, 4Mb RAM**  
486SLC2 50MHz chip, 3.5" floppy drive, 1Mb video, 14" mono,  
**£399.99**  
IBM kbd, DOS 6/Win 3.1

## QMS 2001



**LASER - COPIER - SCANNER**  
600 dpi GDI laser, 400 dpi scanner and photocopier, plain paper.  
**£499.99**  
Win 95 driver out soon.

## MITAC 486-50



**260Mb DRIVE/4Mb RAM**  
486SX2 50MHz, 1Mb video, digital .28 non-interlaced col SVGA,  
**£499.99**  
DOS/Win, 1 year on-site.

## ICL ERGOLITE



**486SX-33MHz SUB-NOTEBOOK**  
120Mb, 4Mb RAM, external 3.5" floppy, mono screen, trackball,  
**£599.99**  
PCMCIA slot, DOS/Win.

## CA SOFTWARE



**COMPETE! - RRP £395**  
Windows format spreadsheet offering multidimensional modeling and viewing. Ver 4.2, 3.5".  
**£24.99**

## LOGITECH



**PS/2 FITTING TRACKBALL**  
Clamp-on design fits most notebooks, for left or right handed use,  
**£24.99**  
bulk packed so no boxes.

## SOTEC 486 NOTEBOOK DEAL

**BUILT IN JAPAN FOR MAJOR DIRECT VENDORS**  
As manufactured for Gateway 2000 and NEC; 486SX and DX, removable 170Mb drives, 4Mb RAM, 3.5" floppy, PCMCIA expansion, NiMH battery power, SVGA monitor & keyboard ports & pull-out mini trackball. NB US keyboard & plain boxes.

### SOTEC 486SX 25MHz MONO LCD SCREEN

- Hi-res VGA mono screen
- DOS 6 and Windows 3.1 **£499.99**

### SOTEC 486SX 25MHz COLOUR SCREEN

- Dual scan colour LCD
- DOS 6 & Windows 3.1 **£699.99**

### SOTEC 486DX 33MHz COLOUR

- Dual scan colour
- DOS 6 & Win 3.1 **£749.99**



## 24 PIN PRINTER - SUB £70!

### DATAPRODUCTS DOT MATRIX

- DP7034 24 pin dot matrix printer
- 216 CPS draft mode, 80 column
- 78 CPS letter quality mode
- Friction/tractor, paper parking
- Epson & IBM mode, parallel
- Sheetfeeder/colour options **£69.99**



## HUGE OLIVETTI CLEARANCE

**OVER 100 DIFFERENT MODELS 286 TO PENTIUM**  
**1Mb TO 32Mb RAM, 170Mb TO 1Gb HARD DISKS!**

- 486SX 25, 120Mb drive 4Mb RAM, 100 pcs left **£449.99**
- 386SX-25, 85Mb drive/4Mb RAM **£349.99**
- 486SX2-50 420Mb drive/4Mb **£499.99**
- 486DX2-66, 540Mb/8Mb **£699.99**
- 486DX4-100, 270Mb/8Mb **£749.99**
- 486DX2-66, 1Gb/8Mb RAM **£799.99**
- P60, 420Mb, 8Mb RAM **£799.99**

**INC 14" .28 SVGA COLOUR MONITOR & KEYBOARD (BOTH NON OLIVETTI), DOS 6/WINDOWS 3.1**



**CALL FOR DETAILS**

## TWINHEAD 486SL



**25MHz SUB NOTEBOOK**  
120Mb removable hard disk, 4Mb RAM, external floppy, mono VGA. DOS/Win installed. **£499.99**

## IBM 486SX 25



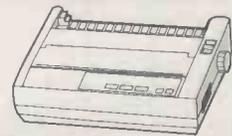
**80Mb DRIVE, 2Mb RAM**  
486SX 25MHz tower, 3.5" floppy, 14" mono VGA (non IBM).  
**£299.99**  
K/bd, DOS 6 & Win 3.1

## MITAC NOTEBOOK



**486SLC 33MHz NOTEBOOK**  
33MHz 486SLC, 120Mb/4Mb RAM, LCD VGA mono display, 3.5" floppy. DOS 6 & Win 3.1 **£499.99**

## 24 PIN COLOUR



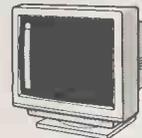
**SAMSUNG SP2417 PRINTER**  
80 col, 200 CPS/53 CPS LQ, 8K buffer, sheetfeeder. Colour kit/ribbon. 1 year on-site. **£149.99**

## IBM MODEM



**THINKPAD PCMCIA CARD**  
Type II fax/modem, 2400/9600 speed. US import with all software/manuals. Not BT approved. **£49.99**

## 20" MONITOR



**MULTI-SCAN COLOUR SVGA**  
1024 x 768 res, non-interlaced, .31 dot pitch, front panel control. **£699.99**  
ideal for CAD and design.

## AST MULTIMEDIA



**DX2 50MHz 270Mb, 4Mb RAM**  
486DX2 chip, dual speed CD ROM, 16 bit stereo card/speakers,  
**£699.99**  
14" SVGA, kbd/mouse.

- 64-72 New Oxford Street, London WC1. 0171-255 2115
- 179 Tottenham Court Road, London W1. 0171-636 1138
- Edgbaston Centre, Hagley Road, Birmingham 16. 0121-452 1141
- 12 Piccadilly Station Approach, Manchester 1. 0161-237 1111
- Open Monday to Saturday. Mon/Fri 9am-5.30pm. Sat 9am-5pm

# Morgan

- Goods subject to availability. Prices subject to change. E & OE
- We accept Access, Visa, American Express, Switch and Connect
- All prices exclude VAT (17.5%) and delivery (call for charges)
- Government, educational and major corporate orders welcomed
- Goods are not supplied on a trial basis. Restocking fee may apply

MAIL ORDER CALL 0121-456 5565. FAX 0121-456 5564. NEXT DAY DELIVERY (SUBJ TO STOCK) ON ALL ORDERS PLACED BEFORE 3PM

## Short Stories

## Fighting spirit

● The storage war (see story right) extends to traditional hard-disk makers, who have been going through a shake-up. Market leader Seagate had hardly finished the launch of a new software division when it announced the takeover of rival Conner.

And Western Digital announced the sale to Philips of its multimedia division, which produces the Paradise video-card range.



President Chuck Haggerty (above), passing through London, said WD was going to focus on storage management.

He claimed the Seagate merger could actually work out well for Western Digital because it could curb an "irrational" price war. He added: "A lot of manufacturers buy from Seagate and Conner because they do not want to be tied to one source. Now they may want an alternative."

Haggerty said hard-disk data densities would grow by more than 50 percent a year "for the foreseeable future" — enough to fight off drives like the Jaz, which takes removable 1Gb disks.

## 600dpi colour

● Lexmark, which broke new ground with a relatively low-price 1200dpi mono laser, is to introduce a 600dpi colour model for about £6,000.

Lexmark 01628 481500

## Drawing lessons

● Fractal Design has launched version 2.0 of its Dabble art package. It includes flip-book animation tutorials based on Walter Foster's Learn-How-To-Draw books.

Fractal Design 0171 454 9360

Sony MD Data drive arrives late as storage war **hots** up

Sony is at last shipping its MD Data drives, which it announced more than a year ago as the death of the floppy disk and the greatest thing to hit computing since the integrated circuit.

But the delay could cost Sony dearly, with a host of rival and cheaper technologies already competing in the market (see feature, page 134).

None is quite as elegant as the MD drive, which can also be used to play audio discs. Each 2.5in MD disk can store 140Mb and will cost £15. But at £499, the drive is more than three times the price of Iomega's Zip. It comes with headphones, a lithium-ion battery, Mac and Windows software, and a SCSI or PCMCIA interface.

Meanwhile Iomega continues

to make the running in the market, with a £149 Zip-like drive offering which takes the new Travan tapes with a compressed capacity of up to 800Mb. It will also use QIC 80 tapes (see page 150).

Iomega also says that it will ship its new Jazz drive in Europe in January. This will cost about £400 and take 1Gb removable disks.

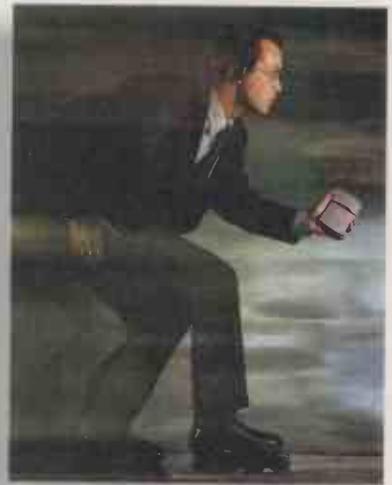
And there are more details of Hewlett-Packard's relatively cheap CD-Recorder (see Newsprint, November). It costs £850 list price, though will probably sell for rather less, and the price includes a dedicated SCSI adapter card — you are recommended not to daisy-chain this, and not to use an

existing SCSI port.

You also get software which HP says simplifies CD recording, which can be a tricky business. The drive records at two-speed and reads at four-speed.

Sony 0181 760 0500; Iomega 0800 898563; Hewlett-Packard 01344 369222

Clive Akass



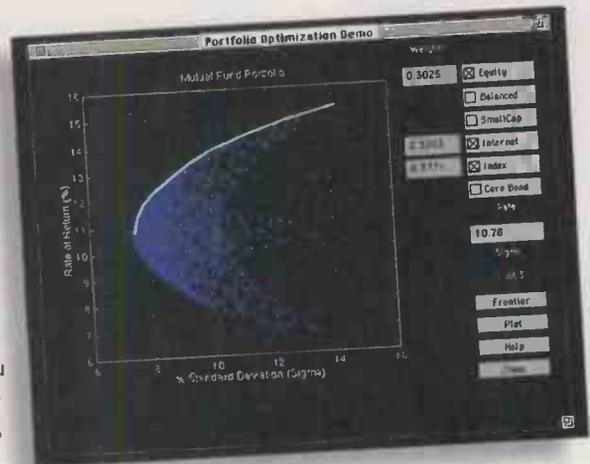
## Cold War cybernauts battle on Wall Street

The thawing of the Cold War has led to a new type of warfare — between financial analysts using sophisticated software. Arms development has slumped, throwing highly-trained engineers and mathematicians out of work in both the US and Russia. Many have switched to finance, applying to financial structures mathematical techniques that were once used to design and control missiles. The result is a kind of cybernetics of money.

"We are talking about areas in which you stand to make a lot of money if you get a 10 percent edge, or even less," said Mike Wolf, head of finance-products group at maths software specialist The MathWorks.

The company became aware of what was happening when it realised that its Matlab package, traditionally used by academics and engineers, was being taken up by finance houses and large corporates.

Wolf said one big difference between the engineering and finance worlds is that new ideas get taken up more quickly. Engineers get sued if anything goes wrong but "if you do something in finance and it works, you get a quick result and you use it again."



Optimisation curve for an investment portfolio, showing the greatest returns for given risk levels

Now The MathWorks is targeting a £745 finance toolkit at the market. Techniques used include fuzzy logic, neural networks, signal processing (to detect trends through "noise"), and dynamic system simulation, as well as more conventional tools like data visualisation and matrix manipulation.

The Mathworks 01223 462244

# SURPLUS COMPUTER STOCKS

MORGAN COMPUTER CO. DISPOSAL OF BRAND NEW SURPLUS INVENTORY, OVERSTOCK & LIQUIDATED COMPUTER MERCHANDISE

## 486DX2 66MHZ



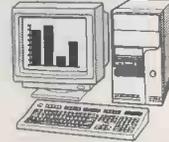
**520Mb DRIVE, 8Mb RAM**  
66MHz chip, VESA local bus, 1Mb video, 14" colour SVGA (.28). **£699<sup>99</sup>**  
DOS 6/Win 3.1/mouse.

## CA SOFTWARE



**SuperCalc FOR WINDOWS**  
Comprehensive spreadsheet for quality reports/graphics, ver 1.0a, **£24<sup>99</sup>**  
3.5" disks. Inc video tutor.

## 75MHz 486 D2



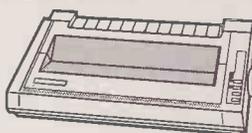
**IBM BUILT "BLUE LIGHTNING"**  
540Mb/8Mb RAM, 1Mb VESA video, 14" .28 SVGA. Access 1, **£699<sup>99</sup>**  
Word 2 (US), DOS/Win.

## 132 COLUMN



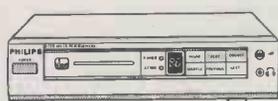
**DATAPRODUCTS 24 PIN**  
Wide carriage dot matrix printer, 76 CPS LQ/216 draft, friction & tractor feed, parallel i/f. **£129<sup>99</sup>**

## 132 COL + NLQ



**SHINWA DOT MATRIX**  
135 CPS draft, 27 CPS NLQ, auto paper load, friction/tractor, IBM & Epson modes. Parallel i/f. **£34<sup>99</sup>**

## PHILIPS CD ROM



**CD ROM DRIVE CLEARANCE**  
CM 205, internal, s/speed **£34<sup>99</sup>**  
CM 215, bare drive, s/speed **£59<sup>99</sup>**  
CDD 462, external, s/speed **£49<sup>99</sup>**

## 15PPM LASER



**SEIKOSHA OP115 PRINTER**  
300 dpi, 1Mb RAM, 5 fonts. HP II, IBM & Epson modes. 250 bin, parallel and RS232. **£499<sup>99</sup>**

## £75 NLQ PRINTER



**SAMSUNG 0912 DOT MATRIX**  
120 CPS + NLQ mode, IBM and Epson modes, tractor/friction feed, auto load. 1 year on-site. **£74<sup>99</sup>**

## SHARP UX-135



**AUTOSWITCH PERSONAL FAX**  
Fax switch, answerphone hook-up, 50 auto dials, auto doc feed. **£149<sup>99</sup>**  
1 year on-site warranty.

## MASSIVE DAEWOO CLEARANCE

DIRECT FROM MAJOR KOREAN INDUSTRIAL GIANT!  
NOTEBOOK & DESKTOP INVENTORY

### WINPRO 486SLC 25MHZ

- Fast 80Mb hard disk drive, 2Mb RAM
- 14" hi-res mono VGA monitor (US kbd)
- DOS 6/Windows 3.1
- ClarisWorks software

**£299<sup>99</sup>**

### 486DLC 40MHZ MULTIMEDIA

- Fast 120Mb hard disk, 4Mb RAM
- 14" mono VGA monitor (US kbd)
- Philips s/speed CD, sound card & speakers
- DOS 6, Windows 3.1 and MS-Works 3 CD

**£399<sup>99</sup>**

### WINPRO 486DX2 66MHZ 420Mb/4Mb RAM

- COMPLETE SYSTEM INC COLOUR SVGA SUB £500
- 420Mb hard drive, 4Mb RAM, 3.5" 1.44Mb floppy drive
- VESA local bus motherboard & 1Mb Windows Accelerator
- 14" low rad SVGA colour monitor, 1024 x 768, .28 dot pitch
- UK keyboard, DOS 6, Windows 3.1 & mouse
- Free MS-Works 3 for Windows & MS-Money

**£499<sup>99</sup>**

### 386SX 20 NOTEBOOK 60Mb/2Mb

- 60Mb drive, 2Mb RAM, 3.5" floppy
- Mono display & external video port
- Mains or NiCad power
- DOS 6 & Windows 3.1

**£249<sup>99</sup>**

### 386SL 25 COLOUR NOTEBOOK

- Intel 386SL 25MHz processor
- 80Mb hard disk, 4Mb RAM
- Hi-res colour LCD screen
- Mains or NiCad
- DOS/Windows 3.1

**£499<sup>99</sup>**

### 486SLC 25MHZ NOTEBOOK, 80Mb, 4Mb RAM

- Fast 80Mb drive, 4Mb RAM, 3.5" floppy drive
- Mono LCD display, DOS 6 and Windows 3.1

**£499<sup>99</sup>**

ALL BRAND NEW AND BOXED - PLEASE NOTE US KEYBOARD LAYOUT

TO RECEIVE A REGULAR COPY OF THE MORGAN MONTHLY FLYER - FULL INVENTORY OF MORGAN STOCK - PLEASE CALL 0121-456 5565 OR FAX YOUR BUSINESS CARD TO 0121-456 5564.

## SUPERB GRAPHICS



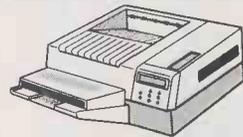
**HARVARD POWER PACK**  
The best in presentation graphics plus Clip Art, over 2000 images. Superbly packaged. Ver 2. **£34<sup>99</sup>**

## PENTIUM 90MHZ



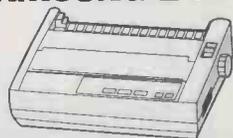
**540Mb DRIVE, 8Mb RAM**  
Intel chip, PCI board, 256K cache, 1Mb video, 14" .28 dp SVGA colour, DOS & Win 3.1. **£899<sup>99</sup>**

## ACER PCL 5 LASER



**HP LASERJET III COMPATIBLE**  
10ppm, 8 scalable and 14 Bitmap fonts, 300 dpi, 1.5Mb RAM, parallel & RS232 ports. **£449<sup>99</sup>**

## SAMSUNG 24 PIN



**200 CPS + LETTER QUALITY**  
67 CPS LQ, 80 col, 8K buffer, Epson & IBM modes, 6 fonts, tractor/friction feed. Parallel i/f. **£99<sup>99</sup>**

## CA SOFTWARE



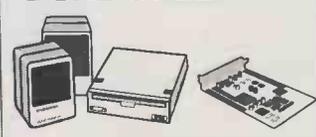
**OFFICE SUITE FOR DOS**  
CA-SuperCalc, SuperDB and Textor - spreadsheet, database and word processor, 3.5" disks. **£49<sup>99</sup>**

## AUDIOMAN



**SOUND CARD & SPEAKER**  
Self contained external system, plugs directly into parallel port, built in speaker and mic. **£34<sup>99</sup>**

## DUAL SPEED CD



**16 BIT MULTIMEDIA KIT**  
Sony dual speed internal CD ROM, 16 bit sound card, speakers and free MS-Bookshelf CD. **£99<sup>99</sup>**

- 64-72 New Oxford Street, London WC1. 0171-255 2115
- 179 Tottenham Court Road, London W1. 0171-636 1138
- Edgbaston Centre, Hagley Road, Birmingham 16. 0121-452 1141
- 12 Piccadilly Station Approach, Manchester 1. 0161-237 1111
- Open Monday to Saturday. Mon/Fri 9am-5.30pm. Sat 9am-5pm

# Morgan

- Goods subject to availability. Prices subject to change. E & OE
- We accept Access, Visa, American Express, Switch and Connect
- All prices exclude VAT (17.5%) and delivery (call for charges)
- Government, educational and major corporate orders welcomed
- Goods are not supplied on a trial basis. Restocking fee may apply

MAIL ORDER CALL 0121-456 5565. FAX 0121-456 5564. NEXT DAY DELIVERY (SUBJ TO STOCK) ON ALL ORDERS PLACED BEFORE 3PM

# TRIAL OFFER

**1** rotring  
INK JET REFILL

ONLY **£5** inc. VAT

(RRP £8.17 inc. VAT)

# The first super-clean inexpensive HP Ink Jet refill set:

**New! InkJet-Refill for HP printers**

High-capacity refill pack with first-class rotring Rapidplot ink for the best printing quality.

Comes supplied with priming pump to give the cartridge optimum internal pressure for clean printing operation.

Adapter for safe and clean refilling.

Your empty HP 51626 A High Capacity Cartridge is quickly and inexpensively refilled.

Practical: Handy package with absorbent base and integrated holder to ensure that the cartridge is properly sealed and easy to fill.

rotring InkJet Refill is a complete refill station with everything you need for refilling your used printer cartridge. Quick, easy and amazingly inexpensive!

For HP printers and plotters using the HP 51626 A High Capacity Cartridge:  
DeskJet 500 series  
DeskWriter 500 series  
200 and 600 series DesignJet  
NovaJet



Send your cheque payable to:  
**rotring UK**  
Building 272, GEC Estate,  
East Lane, Wembley HA9 7PX.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

## Video phones go mobile

Nokia has shown a system which will allow mobile phone users to use cellular links for video conferencing.

Normally up to seven callers share a single frequency, with each digitised conversation being allotted one of eight time slices — the eighth being a control channel.

The links are limited to a speed of 9600bps which is too slow for moving pictures. The Nokia system, shown at

Telecom 95 in Geneva, uses three of the time slots to achieve a data rate of 28,800bps, which is good enough for limited moving pictures.

The system uses a modified phone, data card and cell site. It can manage up to 7.5 frames per second, or a minimum of two per second. It conforms to the H.261 video specification rather than the more common H.320. Sound is limited to 5300kbps.

A European Telecoms Standards Institute (ETSI) specification exists for the use of all eight timeslots and has the potential for full-screen video conferencing.

The Nokia technology is still experimental and uses a desktop computer. But it paves the way for video phones built into laptops and maybe even Dick Tracy-style video watches.

Nokia 01793 512809

Simon Rockman

## New Netscape browser posts secure sender/receiver envelopes

Netscape has announced that Navigator Version 2.0 will be available in early December for Windows, Mac and Unix platforms. It uses nested frames, described as metadocuments, turning single Web pages into complete one-stop publications.

Designers can now create multi-layered Web pages containing, for example, a list of hyperlinked contents in one frame with a separate frame to display linked documents. Readers no longer need to return to a home page to access the contents list.

Multimedia developers will be able to display video or other moving images within frames using MacroMind Director and Hot Java Netscape extensions.

Version 2.0 supports an Adobe PDF extension which allows Acrobat documents to be



displayed within the browser — enabling Acrobat's own links within the PDF document itself and back out to the Internet.

A Gold version of the Navigator will allow readers to design Web pages on the fly using cut-and-paste techniques. Users can add pictures or video to documents which can be posted to Web servers or sent as an email message.

A new transaction system, Secure Courier, has been announced. This is described as an "electronic envelope" whereby only the sender and receiver are able to view the contents.

Netscape believes it is right to release its extensions to HTML ahead of the international committee approval but will continue to release them into the public domain.

Three beta releases of Navigator 2.0 will precede the final release and all will be available to download from Netscape's home page. This free download policy has virtually made Netscape Navigator a de facto standard on the Internet and will continue. Netscape's home page is on <http://home.netscape.com>.

Paul Fisher

## UK breakthrough claimed in speech translation

A UK-developed system for translating near-natural speech into computer-readable text will be launched by the end of the year, according to its promoters. The Abbot Recognition System, based on research at Sheffield and Cambridge universities, was due to be launched at the Live 95 show last month by Responsive Systems. But marketing manager Melanie Knowles said at the show: "It was not quite ready."

Most recognition systems require you to pronounce each word separately, Philips sells a network-based continuous-speech recognition system designed for dictation tasks normally undertaken by audio-typists. The Abbot system is targeted more at the individual user. Knowles said the first versions would have only a limited vocabulary — but enough for standard letters.

Responsive Systems 0171 603 9406

### Short Stories



#### Dual card

● Epson has produced what it claims is the first PC card to support both 10BaseT and 10Base2 Ethernet connections.

Epson 01442 227291

#### CD goodies

● Sprint Software's £14.99 "Super Oz" CD includes more than 3Gb of compressed games and educational shareware.

Sprint 0161 477 4235

#### Versatile Brother

● Brother's new multi-function machine, the £1,299 MFC 6000, can act as a printer, fax, copier, scanner and modem, and can share a single line with a phone.

Brother 0161 330 6531



● This shows Cirrus Logic's latest 64-bit graphics chip, the CL GD5436, which talks directly to the PCI bus and supports a resolution of up to 1024x768 in true colour.

Cirrus Logic 01727 872424

#### cc:Web

● The new cc:Mail Web lets you access your mail via any Web browser. The software sits on a Web server and talks to any browser or cc:Mail post office. It costs £149.

#### Hot Orchid

● Orchid's Kelvin Video64 64-bit graphics card offers full-screen video playback and resolutions up to 1280x1024. It costs £99 and £147 for 1Mb and 2Mb of RAM.

Orchid 01256 479898

Short Stories

Apple woes start with a bang

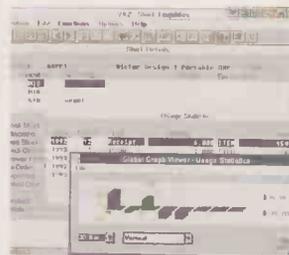
● Apple recalled more than 1000 of its new PowerBook 5300 portables after lithium-ion batteries on some models exploded into flames. None had been sold in Britain and sales were quickly resumed with cheaper NiMH batteries.

But the affair was one of a series of setbacks for Apple, in the wake of the Win95 launch, sparking off rumours of an imminent merger with IBM or Oracle.

Apple warned that its profits for the past three months would be down due to a shortage of chips and other components for its PowerMacs. Ironically, this was because demand was greater than expected — the company is said to have back orders worth \$1 billion.

Dataquest said Apple's world market share was down 1.6 percent to 7.4 percent.

See analysis, opposite



Power accounts

● British software house Global Business Systems, a division of TIS, has ported its flagship business packages to the AIX 4.1 operating system, enabling them to run on the Motorola PowerPC. The range covers accounts, distribution, and manufacturing software as well as more than 200 specialist applications.

TIS 01628 532565

Freehand 5.0 out

● Macromedia has launched Freehand 5.5 for PowerMacs and Macs, which it describes as a "significant upgrade".

Macromedia 01344 761111

BeBox-a-lu-lah - it's a totally new PowerPC

Former Apple executive Jean-Louis Gassé has emerged from four years of silence with a new PowerPC-based computer — and, more surprisingly, a new graphical operating system (pictured).

The BeBox uses two Motorola PowerPC 603e chips, running at 60MHz, that allow you to run multiple Windows and applications with no apparent degradation in performance.

Gassé, who founded the Be company in 1991, claims it is the first PC operating system designed specifically for multi-processing.

He showed me seven applications working all at the same time; they included three Web pages all getting data on the fly, and four other programs processing in real time. It was actually the most amazing demonstration I have seen on a low-cost PC platform — the base system will sell for around \$2,400 when it ships later this year.

The machine will support the PowerPC alliance's CHRP architecture in the future, which means the BeBox will run the Mac, NT, Solaris and AIX operating systems as well as its own.



Gassé is positioning the BeBox for techies and the audio-visual market but it could also be a powerful Web server. He has shown a lot of guts and he could end up with a winning strategy, albeit one with limited potential.

More details can be found at Internet address <http://www.be.com>.

Be 415 462 4141 (US). Fax 415 4624129

Tim Bajarin

Dream package

Ray Dream Studio is a suite of 3D imaging software for the PowerMac and Windows 95. The £375 package includes four modules: Designer, Animator, Models and Extensions — the last including a panoramic camera.

Principal (Mac version) 01706 832000; Softline (Windows version) 0181 401 1234



Top 10 Windows and DOS		
Product	Manufacturer	Last month
1 Windows 95 U/G	Microsoft	1
2 SoftRAM Memory Doubler	RMG	-
3 Plus	Microsoft	2
4 Office 4.2 U/G	Microsoft	4
5 Works	Microsoft	-
6 Uninstaller v3.0	Microhelp	11
7 Office Pro 4.3	Microsoft	13
8 Sidekick 95 for Win95	Starfish	-
9 Office 95 v7 U/G	Microsoft	10
10 PCDOS v7 U/G	IBM	-
Top 10 DOS		
1 PCDOS Version 7	IBM	1
2 QEMM v7.5	Quarterdeck	2
3 Flight Simulator v5.1	Microsoft	3
4 WordPerfect 6.0 C/U	WordPerfect/Novell	-
5 Turbo C++ v3.0	Borland	4
6 PC Anywhere v5 Host	Symantec	-
7 Easy to Learn Computing	VCI	-
8 Pegasus Solo Payroll	Pegasus	7
9 Solo Accounts	Pegasus	-
10 Gardeners World	Euopress	8

Top 20 Windows		
Product	Manufacturer	Last month
1 Windows 95 U/G CD	Microsoft	1
2 SoftRAM Memory Doubler	-	-
3 Plus CD	Microsoft	2
4 Office 4.2 U/G	Microsoft	4
5 Works	Microsoft	-
6 Uninstaller v3.0	Microhelp	11
7 Office Pro 4.3	Microsoft	13
8 Sidekick for Win95	Starfish	-
9 Office 95 v7 U/G	Microsoft	10
10 PCDOS v7 U/G	IBM	-
11 RAM Doubler	Com. Unlimited	5
12 Business Plan Builder	RMG	8
13 First Aid Windows	RMG	3
14 CorelDraw 5.6 U/G CD	Corel	-
15 Sidekick for Windows v2	Starfish	7
16 WordStar V2	Softkey	18
17 Lotus SmartSuite	Lotus	12
18 Office Pro 95 (U/G)	Microsoft	-
19 Applications trade-In Pack	Microsoft	-
20 Dr Sol Anti Virus Quarterly	S&S	15

Figures, supplied by Software Warehouse, relate to bestsellers for September, 1995.

# Spindler's list

Two years ago, when John Sculley was forced out of his position as president of Apple, German-born Michael Spindler took over, and now all eyes turn to him when something goes wrong.

And there have been a lot of eyes on him over the past few weeks, with a succession of bad news (see page 30): the problems with the PowerBook's lithium-ion battery, a warning of poor earnings because the supply of parts could not meet demand, and the latest Dataquest figures estimating Apple's worldwide market share as having fallen from 9 percent to 7.4 percent in a year — perhaps due to its lack of a portable product with strong appeal.

Amid rumours that he was about to be fired, Spindler invited seven analysts to Apple, for a talk. As the only analyst who has covered Apple from day one, I had a particular perspective.

Apple is clearly going through a difficult time, but nothing like as bad as when co-founder Steve Jobs was fired amid accusations of poor management, or when Sculley had to lay off 2,000 people due to lack of demand. Even though Apple has made mistakes over the past year, all can be fixed.

This was the main topic of the meeting with Spindler. All of us wanted to know how Apple was going to deal with these challenges. Spindler was confident that Apple has enough entry-level and mid-range products for this Christmas, but said it would not be able to keep pace with the demand for its high-end boxes until early next year.

When asked about rumours that he is quitting, Spindler just laughs. In fact, he was the most relaxed I have seen him in the past four years: one reason is that Apple chairman Mike Markula

**Apple is having a rough ride at the moment — president Michael Spindler is under pressure to fix the mistakes of the past year. Tim Bajarin's meeting with Spindler revealed his strategic goal to focus on a list of market segments where he hopes that Apple can accelerate its share.**

has publicly supported him. Markula helped Sculley oust Steve Jobs, and then helped Spindler with the ousting of Sculley — no-one, not even the board, can oust Spindler without the nod from Markula.

Markula supports Spindler because despite the recent problems, the fact remains that demand for the Mac is still 35 percent up on last year. The key reason for this strong demand is that Spindler did an amazing job of smoothing the transition from Motorola 68000 chips to the Power PC. Apple misjudged demand this year because it had not reckoned on the thousands of 68000 Mac users who were waiting for more Power PC software to come out before upgrading — and a lot of Power PC software emerged last year.

Spindler pointed out that Apple cannot be all things to all people. His strategic goal is to focus on market segments where Apple can accelerate its market share. These segments include publishing, media and entertainment creation, small business

and home office, home PCs, graphics and engineering and government sectors.

Several analysts wanted to know when Mac prices would be on a par with those of the PC — Apple has been defensive on this issue in the past, claiming that its easy-to-use operating system could command between a 12 to 20 percent premium. Now, though, Spindler has changed his tune slightly: he said Apple knows that Mac prices should match those of the PC and claims that there is near parity at the high end of the market; a PowerMac 9500 costs the same as a Pentium 120 of comparable configuration. Meanwhile, there are glaring differences at the low end. Spindler vows to change that in some models this year, and in all by early 1996.

Spindler wants eventually to take the Mac operating system to other platforms and extend its reach in the digital world. But unless Apple gets its shortages and pricing problems dealt with quickly, the company will continue to suffer tough times.

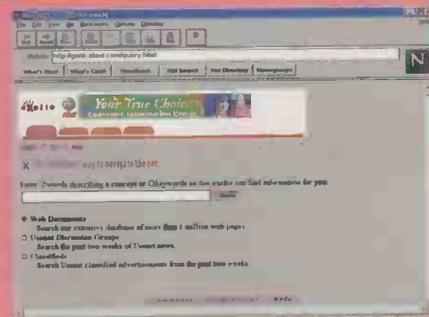


# ANALYSIS

## Seeking excitement

A new Internet search and navigation site, called Excite, is receiving rave reviews. California-based Architext Software's site at [www.excite.com](http://www.excite.com) is regarded as a next-generation Web navigation service.

Excite uses powerful concept searching, so that even though a search on "bond" may turn up articles on municipal bonds, chemical bonds and even James Bond, they will be sorted into subject area. Excite also has more than 30,000 lively reviews of Web sites. A virtual Web newsroom provides hourly news updates.



# The **final** frontier?

**Subscribers to the Internet service of a company called Frontier Communications voiced severe criticisms: a disappearing news server, unanswered telephones, lack of technical support. Then the company went offline. What has been happening? Wendy M Grossman reports.**

# ANALYSIS

When we reviewed Internet service providers (PCW October), we gave the nod to a service called Frontier Communications International (which we will call FC for short). As we went to press in early August, users were reporting that they were happy with FC's service and its technical support. But the honeymoon didn't last.

Shortly after our review appeared, several users mailed me with criticisms: engaged tones had become the norm at FC and its news server had gone down for nearly four days, during which time the technical support people were unavailable.

Since then people have been asking questions, especially on the CIX conferencing system, about claims FC made about its service and the company behind it.

## Claims

FC, based in Hove, Sussex, launched its service in June claiming a huge bandwidth, its own international links, seven-day 24-hour technical support, and as many as 32,000 points of presence (since modified to 120), and 100 staff (they now say 29). It also claimed to be part of a large, multinational American telecommunications company. Users who asked on CIX for the name, address, and phone number of this company and details of its Public Telecomms Operator licence, were told to write to the company for information.

These same questions were among 12 queries we faxed in September, to FC managing director, Eden Akhavi, asking for clarification. He referred us to the company's lawyer, who declined to comment.

Public records show that FC began as Philgan Ltd, with Akhavi as a company director and Wenda Shehata, thought to be Akhavi's mother, as company secretary. On CIX, the resumé for Akhavi's "eden\_akhavi" ID links him to a company called Expotech: FC's tireless promoter, Justin Rogers, who logs onto CIX as "expotech", has repeatedly said that FC is "part of the Expotech Group" which he stated had taken over Frontier Communications.

A faxed brochure for FC, dated 12th September 1995, was sent on Expotech letterhead, and FC users' credit card debits are headed "Expotech Direct". Akhavi and Shehata, according to Companies House records, did have a company called Expotech Corporation, at the same Hove address as FC; 24 Western Road.

But the Expotech Corporation was wound up in October 1994, by petition from IMSI UK, which claims that it is still owed £18,000.

## Legal action

Expotech seems to have specialised in Visual Basic add-ons and tools for Borland Delphi. A trail of old CIX conferences (expotech,

delphi\_direct, farpoint, thenet, and many others) shows the same pattern of promotion, followed by patchy service and customer complaints, followed by silence.

Akhavi says that its corporate customers (one of our unanswered faxed questions requested a corporate reference) were not interested in CIX but in Compuserve. But Akhavi's Compuserve ID was cancelled last August.

Akhavi says the company is taking up to 15 legal actions against some of the users who complained publicly, as well as several Internet service providers, which "could be" including Pipex.

Pipex says it terminated FC's leased line feed on 25th September for non-payment. Akhavi claims it was his company who pulled the link.

By the end of September, a few FC users had received refunds but one potential customer, calling at around the same time, was told he could be connected in a couple of days.

## Unanswered questions

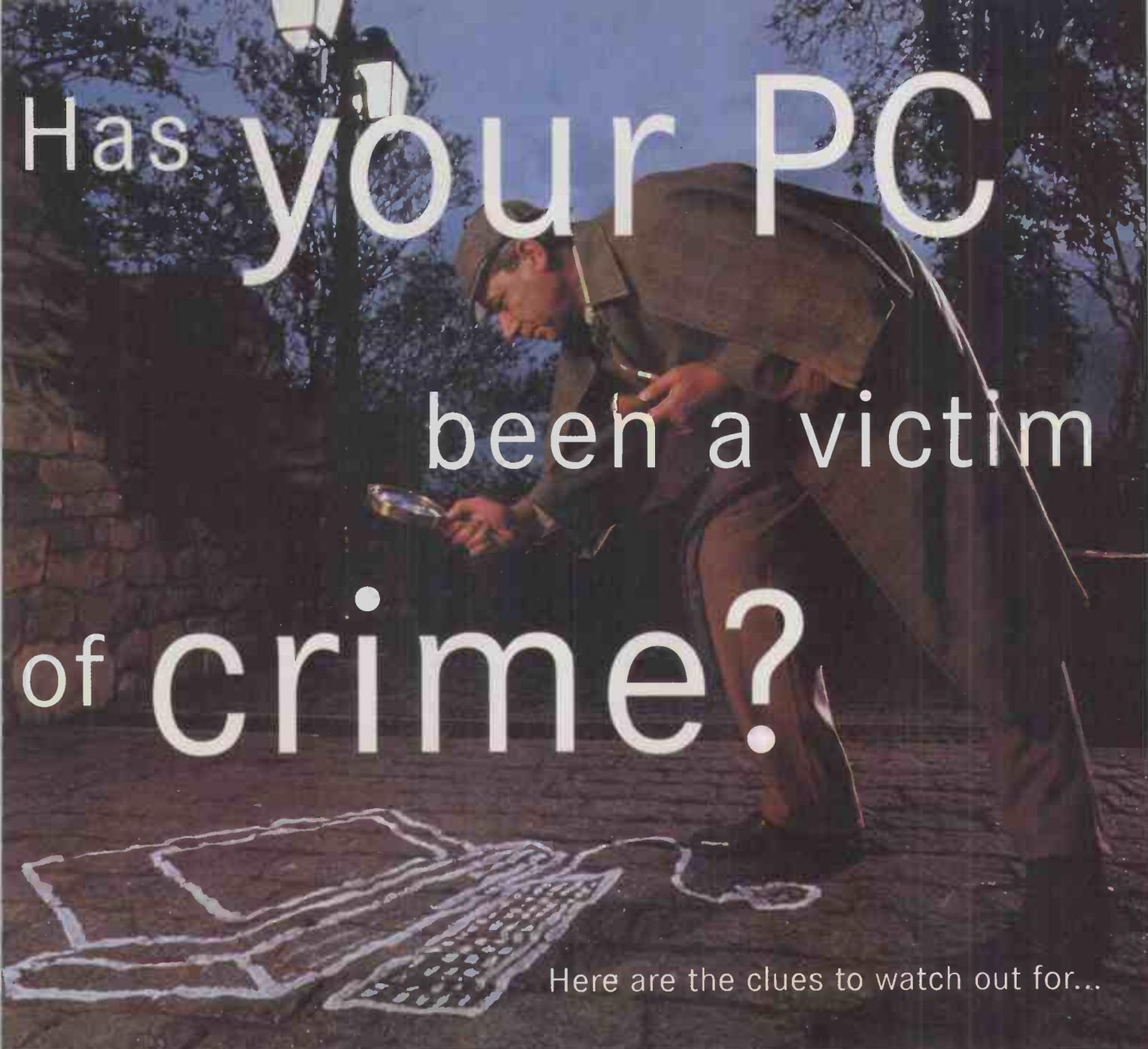
Another of our unanswered questions was: "When is the service expected to be up and running again?" As of 9th October, FC's "thenet" domain remained offline to the rest of the Internet.

All who came into contact with FC believed its claims; even the unrelated, Hatton Garden-based Frontier Internet Services, which has come in for a great deal of trouble over the similarity in names.

Internet service provision is an area where flaky service and growing pains abound. Everyone longs for a low-cost, all-purpose solution and wants to believe in a company that seems able to offer one.

It's a shame: a service that could build a PoP network as quickly as FC, and offer 24-hour technical support, even if it were a small service, would be welcomed with open arms in this market.

# Has your PC been a victim of crime?



Here are the clues to watch out for...

**Was your operating system software delivered with the PC? Microsoft® MS-DOS® and Microsoft® Windows® are the most widely used desktop operating systems in the world. If your PC came with either of these, can you be sure that your software is legal?**

To check that you have a fully authentic Microsoft product look for the Certificate of Authenticity - C.O.A. (only operating systems are required to have this) and the End-User Licence Agreement - E.U.L.A. which have to be delivered with MS-DOS and Windows.

If you have these two safeguards you will have: • Technical support. • Rights to warranty. • Right to update to the latest version from the software vendor.

If you don't have the Certificate of Authenticity and the End-User Licence Agreement your system may be illegal, you won't get any of these benefits, and illegal software carries the risk of viruses with the potential catastrophic loss of information.

You can help us with our enquiries. If you think your PC has been a victim of crime, call Microsoft on **0345 300 125** extension 1001 and tell us where you purchased your PC and Microsoft software. We will follow up on the information you give us, in the strictest confidence, and send you details of your consumer rights.

Microsoft and Windows are registered trademarks and "Where do you want to go today?" is a trademark of the Microsoft Corporation in the US and/or other countries.



**Microsoft®**  
WHERE DO YOU WANT TO GO TODAY?™

# It's a heavy scene

**Today's notebook PCs are akin to desktops on wheels, and seem to weigh almost as much, Clive Akass observes. The latest crop of launches shows how manufacturers have moved away from portability — why can't we have a notebook fit for a briefcase, he asks?**

Some months ago I took to carrying around an Amstrad Notepad costing about £100. The two-inch deep screen is unreadable except in perfect light and the technology is a decade old, but it has a full-size keyboard. It stays live for weeks on four AA cells, and allows me to write on the move.

It is not PC compatible but it is lighter and more genuinely portable than any state-of-the-art notebook currently on the market. A similar, perhaps better, machine is the Cambridge Z88 — also using old technology and retaining a host of users, too.

The trend today is to turn out notebooks that are desktops on wheels, with all the facilities of a sit-up-and-beg PC packed into an A4 case. That means having disk drives, backlit colour screens and even CD drives, which add weight and need big batteries to run them. You may also have to carry a mains charger/mains adaptor (one day, perhaps, the industry will standardise to the extent that you'll find notebook power sockets wherever you go).

## Pattern

Last month's crop of new notebooks from NEC, Compaq and Hewlett-Packard all fell into this pattern. They are fine if you don't plan to carry them about much, or can sling them into a car; otherwise, as the hippies used to say, "it's a heavy scene".

Inteco analyst Rana Mainee, speaking at the NEC launch, put current machines into three categories: high-end notebooks with TFT

colour screens and the latest multimedia gizmos; low-end notebooks using cheap off-the-shelf components and lower-quality dual-scan screens; and executive mobiles — high-quality machines with pretensions (my word, not Mainee's) to portability.

In addition, there are palmtop organisers which are nothing if not portable. I've been using a Psion 3a this month, and have been pleasantly surprised by how easy it is to type on (though I would not use it to embark on writing a book). I'm told the two AA batteries can last months.

By contrast, I also looked at an Omnibook 600CT (see First Impressions, page 60), a prime example of an executive mobile. The Lithium Ion battery lasts two and a half hours between charges. It is a lovely machine: better to use than most desktops and more portable than any standard notebook, but for hard travelling I'd rather take the Psion.

## User demand

The 600CT, which boasts just about every desktop feature short of a CD drive, is a curious case: it shows how manufacturers have actually moved away from portability. The original Omnibook 300 had its main software on ROM and no hard disk, and could run off pen batteries. Hewlett-Packard says power-hungry disk drives and colour screens were added in later models because of "user demand".

This echoes what I have been told by just about every manufacturer to whom I have

spoken on the subject: that users are not willing to sacrifice features for portability. This may well be true for people whose notebook is their only machine, but I simply don't believe it of those who use a portable as an adjunct to a desktop.

Manufacturers say, too, that a low-featured lightweight model cannot be made at a price that people are willing to pay, particularly when it is for a second machine. This argument would have some force if it were not for the success of the Psion. If we can get a machine that good and that cheap into the palm of our hands, why can't we have one fit for a briefcase?

## Change of attitude

Happily, the growing importance of comms and networking is already forcing a change of attitude. With a high-speed Net connection, the world is your hard disk and you can contact your base machine from anywhere — no need for power-hungry disk drives.

PCMCIA cards are already available to link portables and mobile phones, to offer true go-anywhere wireless networking for Europe. Hewlett-Packard last month demonstrated a hybrid organiser called the OmniGo 700, looking like one of its LX palmtops which had been speared by a Nokia mobile handset (Nokia and HP have just signed a co-operation deal). The next step must surely be to merge the palmtop completely into the phone.

And if redesigned handwriting, like the Graffiti script used by HP's new OmniGo 100 palmtop (see page 23) takes off, or predictions of a breakthrough in speech recognition prove correct, the keyboard and the notebook format may go the way of the dinosaurs. ■

ANALYSIS



# XM-5402B: How

If Sir or Madam is hungry for data buffer capacity, may we recommend the Toshiba XM-5402B in the 256 KB version? Or, if you have a smaller appetite, we can serve you this tempting new CD-ROM drive with a 128 KB data buffer.

## Would You

The choice is yours with the XM-5402B, and so are the significant savings in cost and space, thanks to the ATAPI

interface which eliminates the need for additional interface boards and allows ultra-simple drive integration.

Making the XM-5402B a deliciously cost-effective solution.

## Like Yours

There's plenty more to savour, too. With a 600 KB/s sustained

data transfer rate, 190ms random access time and 150ms random seek time, you'll enjoy the full flavour of

Toshiba cordon bleu performance. And with 80,000 hours MTBF, reliability is also at the top of the menu.

The XM-5402B tray-loading drive is presented in a dust-proof enclosure. It offers refreshingly easy horizontal

## Done, Sir?

or vertical installation, consumes power at a mere nibble and supports CD-ROM XA, CD-DA, CD-Bridge (Photo CD,

Video CD), CD-I, CD-I Ready, CD-G and Multisession (Photo-CD, CD-Plus) and MPC-3 standards.

So, for a mouth-watering combination of advanced technology and highly



satisfying economy, feast your eyes on the new

XM-5402B. Whichever version you choose, it has

all the ingredients for success.

# TOSHIBA

Toshiba Europe GmbH, Disk Product Division, Hammfelddamm 8,  
41460 Neuss, GERMANY. Fax: +49(0)2131 158-583/473.

Ideal Hardware plc, Tel. 44-181-286 5000. Koch Media Ltd., Tel. 44-1-252-714340

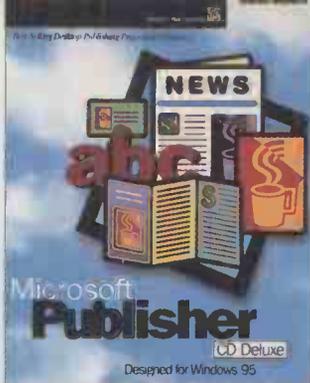
35

PERSONAL COMPUTER WORLD  
DECEMBER 1995





Microsoft Publisher  
3.0 for Windows 95  
is now available for  
approximately  
£79.99 including VAT.†



In the past, you needed great skill to produce great literature. Computer skills, design skills...

Now you just need a great publisher.

Microsoft® Publisher 3.0 for Windows® 95.

There's no pencil chewing. You start straight away and go through each step in logical order.

Select the document you want: newsletter, leaflet, brochure, invitation, banner or whatever. Then fill in the text, choose images, watch as the software lays it all out for you.

Don't worry if you failed Art. Wizards are on hand to guide your creativity, as is continuous on-screen help.

There's a library of designs and styles called the Design Gallery, so you can produce personalised, professional literature, without ever seeing a pony-tail or a pair of red spectacles.

# literature,

Indeed, you might like to buy your own, with the help of our £20 cashback\* available to those with any previous version of Publisher or other Windows desktop publishing software.

Microsoft Publisher 3.0 runs exclusively on Microsoft® Windows® 95 and is compatible with Microsoft® Office.

To purchase, visit your local stockist. For details of a stockist, call the Microsoft Connection on 0345 00 2000 ext 602 now.

# Classics

# to Norman's mailer.

**Microsoft®**

WHERE DO YOU WANT TO GO TODAY?™

# DECISION MAKER



## Atlas GIS for Windows

Version 3.0—More Features, Best Value at £370



**See what you've been missing.** Atlas GIS 3.0 for Windows is simply the best tool for making important decisions. In a recent head-to-head review of the most popular desktop mapping programs, Atlas GIS was the clear choice. It was judged much easier to use, provides access to broader and more current data files, and at £370 is less than half the price!

**More powerful features and easier data access.** To make your geographic analysis of key information more effective than ever, Atlas GIS 3.0 for Windows includes a host of advanced features such as map creation and editing (digitising), flexible data querying and analysis, and full network compatibility. When combined with its built-in SQL access, centralized layer management features, and robust data handling capabilities, you have all the tools to perform sophisticated analyses...and make smarter decisions, every day.

**Put the power to work for you.** Applications developers and MIS professionals can easily expand the power of Atlas GIS with industry-standard customisation tools.



*"If you're looking for an easy-to-use program for applying powerful query and thematic tools to map data, Atlas GIS has the advantage."*

*InfoWorld, September 19, 1994*

*"Atlas becomes the value leader in the growing Windows desktop mapping market."* **J. Steinburg, Business Geographics, October 1994**

**Data + software + expertise.** Even the best mapping software is only as good as the data it represents. Select Atlas GIS and you automatically open the door to a new world of Conquest MarketData,™ the most current and accurate source of demographic, geographic and business information available.

**Make the decision.** Call now to order Atlas GIS for Windows or to request a free demo diskette. It's one of the smartest decisions you'll ever make.

**(01753) 62 11 99**



Please call us for seminar dates in your area

Strategic Mapping, Inc. - Castle Hill House - Castle Hill, Windsor - SL4 1PD, U.K. - Tel: (01753) 62 11 99 - Fax: (01753) 62 45 45

© 1994 Strategic Mapping, Inc. Atlas GIS for Windows is a trademark of Strategic Mapping, Inc. All other product and brand names are trademarks of their respective holders.

# Sounding Off



Michael Hewitt

I recently had to have my business stationery reprinted. The main reason, apart from availing myself of Phoneday's additional digit, was that the UK press have taken it upon themselves to rechristen me. In PCW I am Michael Hewitt, as it says up top. However, for reasons best known to themselves, newspapers and glossies call me "Mike" Hewitt. Maybe "Ozzie" Wilde and "Ginnie" Woolf got this in their day, but had the wit to do something about it. Not me. I just said What the hell? and had the letterhead amended, instead.

Anyway, as part of the amendment, I asked that my email address be included, too. It took the droid at Kall Kwik four attempts to get it right. Okay, typing in `hewitt@cix.compulink.co.uk` might be the keyboard equivalent of saying "The Leith police dismisseth us", after downing a couple of large ones, but surely it isn't that complicated to master? The printer apologised. There isn't much call for email addresses on business stationery, he explained, so he wasn't used to setting one.

That just about sums up the state of our nation, doesn't it? Email ought to be universally regarded as the major evolutionary leap in business communications: the homo erectus to the Australopithecus which is the fax and telex. But the great British boardroom just does not want to know. It makes you think: If the Institute of Directors had been asked to evaluate sexual intercourse, by now we'd be having to rely on virgin birth to propagate the species. Why this peculiarly British reluctance to move into the nineties? I used to think it was simple technophobia. But if that were truly the case, you'd expect executive clonazepam usage to have rocketed back in the mid-eighties when the first fax machines appeared. No; I think the real reason why more British businessmen won't go online has a far more simple explanation: bone idleness coupled with — dare I say it — vestigial sexism.

Apologies if I'm starting to sound like a member of the Neasden Socialist Vegetarian Alliance and Gender Awareness

Fellowship. Actually, I'm about as politically correct as a 12-month subscription to Loaded. However, a study of UK business practice over recent years has convinced me that I'm right.

If I get in touch with a fair-sized US company, the likelihood is that all the senior personnel will have an email address. Furthermore, they'll display it proudly on their business cards and letterheads, too. And I'm not just talking about hi-tech US companies here. In recent months I've had to contact low-tech organisations as diverse as used-car dealerships and undertakers. Whatever, even the head honcho is accessible via email, and usually reads and writes his own. That goes for simple two-line memos right through to elaborate letters and proposals. In other words, there appears to be no "Take a letter, Miss Jones" culture.

Over here, the situation is quite different. Just a couple of months ago, for instance, I had a department store manager phone up and apologise for not having faxed an urgent and short letter through to me. There were two reasons for this, he explained. The first was that his secretary (female, naturally) was away and therefore couldn't type it up. The second was that "the girl who operates the fax machine" was out for lunch. Hit by this double whammy, he was effectively rendered incommunicado. Indeed, credit is due to him for managing to dial my number without the assistance of a Kelly Girl temp. But even on those rare occasions where the businessman can do his own typing, I've often observed a marked inability for him to

progress much beyond that. In other words, he'll save the document to disk, extract said disk, and pass it over to a secretary for printing and posting, or subsequent faxing. It's a bit like parking his car in the middle of the road and then taking a taxi to the kerb.

Interestingly, the majority of British businesswomen seem able to bypass this intermediate stage. Not only can they type, they're physically capable of printing out and faxing their own documents, too. And when, once in a blue moon, I actually receive email from a British (non-technical) company, it's usually been sent by a woman.

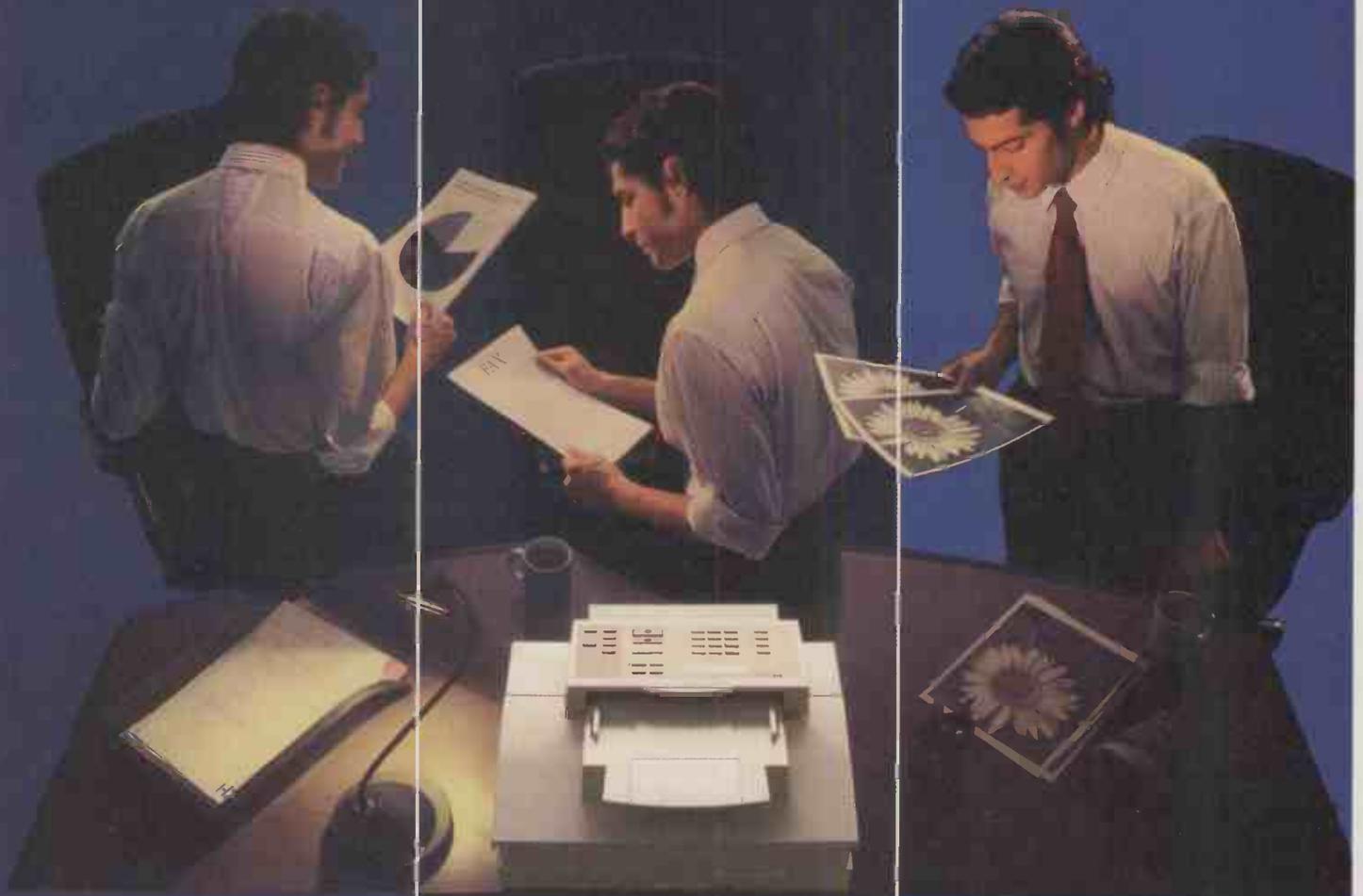
All of which suggests that the main reason why British businessmen don't use email is that it represents a challenge to their masculinity. To click on that mail icon — to have to take responsibility to send and receive their own messages, which is what email forces you to do — could provoke instant and irreversible detumescence. It might even drop off.

Fortunately, there are signs of change. I was recently told the tale of a senior executive who has gone over to email in a big way. He insists that all his colleagues now send their messages to him electronically, eschewing the fax and the Royal Mail. He spends hours both reading and replying to their missives. On the face of it, the guy sounds like the corporate equivalent of a "New Man".

There is a downside, however: he has to get his secretary to log on and download the mail on his behalf. She edits it all into a single document which she then prints out or faxes to him. Once he's read it, he dictates his replies to her, and the cycle begins again.

Still, it's progress — of a sort. ■

# Be in three places at once. HP OfficeJet LX.



## Printer

## Fax

## Copier

The new HP OfficeJet LX is designed to save you time, money and space, because it's an HP DeskJet printer, plain paper fax and copier all in one. Which means that even the smallest office can now have all the equipment you need for today's business, as it's

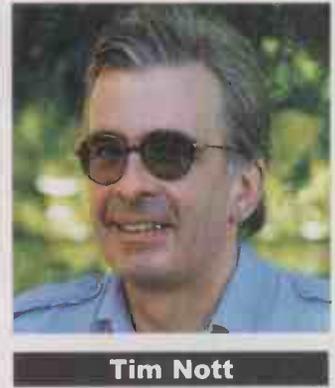
no bigger than a standard printer. Saving you time by being able to do all your printing, faxing and copying from your desk. And saving you money because you get all this for less than the price of the individual products.

The HP OfficeJet LX. One product. One manual. One set of supplies. A one year Express Exchange warranty. And only one place to go to find out more. Your nearest HP stockist. For more information call HP on 01344 369222.

## THE NEW HP OFFICEJET LX

 **HEWLETT®  
PACKARD**

# Homefront



Tim Nott

Is it now safe to turn on your television? I refer, of course, to the Microsoft advertising campaign, which has been blasting us with the Rolling Stones' Start Me Up, to foster the impression that computer operating systems are cool, sexy and fun. Yes, we've had it here in France, too. Night after night.

There's nothing new, of course, in using well-loved music in an advertisement, in order to enhance the attractions of what might be an otherwise dull product, but some might argue that it's far better to stick with the classics. Firstly, the music is out of copyright. Secondly, people are familiar with the tunes — even though they may not be able to quote composer and work, they know that "tum-tum-tum-tum-ti-ti-TUM", technically known as Spring, from Vivaldi's Four Seasons, is posh and adds a touch of class to any product it accompanies. Thirdly, long-gone composers are unlikely to embarrass their corporate clients by dropping dead of a drug overdose, embracing a bizarre religious cult, or making a record with Tom Jones.

The real damage is to the composers themselves. Take Dvorak, and his New World symphony. Well, why not? Many others have helped themselves. And since he himself lifted the "dah-dee-dah, dah-dee-dah..." bit from what I am probably in flagrant breach of political correctness in calling a negro spiritual, there's an ironic nemesis in its being used to laud the natural, old-fashioned goodness of factory-produced bread.

Compared to Beethoven, however, Dvorak gets off lightly. Back in the eighties, when the corporate view of the Rolling Stones was that they were a bunch of dangerous drug-crazed anarchists, there was a TV commercial for a perfume spray, called, if I remember rightly, Tweed. A difficult one to market, I would think, as it sounds more

like an aftershave, or at best, something Bertie Wooster's Aunt Agatha would have dabbed behind her ears. Nevertheless, the marketing people gave it their best shot. A smartly-dressed woman is seen driving what is obviously Her Own Car through an expensive-looking suburb, stopping to pick up her immaculately-uniformed children from what is, equally obviously, a fee-paying school. Quite what this has to do with Shepherds Giving Thanks After the Storm is not made clear, but the final movement of Beethoven's Sixth rolls majestically out as we are left in no doubt that "Mrs Upward-Mobile wears Tweed Parfum de Toilette spray". And you can bet your bottom dollar she doesn't own a Rolling Stones record. From then, it was downhill for Ludwig Van's TV career, as the next time the tune surfaced it was advertising a well-known brand of lavatory roll. And having been downgraded, so to speak, from toilet water to toilet paper, poor Beethoven was given the push in favour of a small yellow puppy. This sad tale reveals the fatal flaw in using out-of-copyright music for advertising — anyone can do it. Just when you've carefully woven your advert for a 32Mb Pentium portable around the delicate strains of Mozart's Clarinet Concerto, along comes some clown using the same tune to flog washing powder.

Nowadays, Mrs Upward-Mobile would have not just Her Own Car, but her Own Job, Own Laptop, a nanny to fetch the children from school, and more sophisticated tastes in both fra-

grance and music. So maybe Microsoft is right after all. I'm sure that the reputed eight million pound deal included exclusive rights, so we're unlikely to hear Start Me Up being used to promote laxatives. And the Stones can now be considered a fairly stable product — raunchy, but mature, and unlikely to embarrass their host.

As computers and software become increasingly consumer-desirable, I think we can look forward to much more of this. REM, apparently, have already turned down an offer from Microsoft, but in any case can't be seen as serious message-pushers as everyone knows that, in computers, you ignore everything after a REM statement. For reasons of geographical and spiritual affinity, WordPerfect obviously has first claim to the Osmonds, but hopefully, it will have the good sense not to use them. Could U2 be persuaded to change their name to OS/2? Or given IBM's penchant for employing high-flying grocery executives, perhaps it has designs on the Jam.

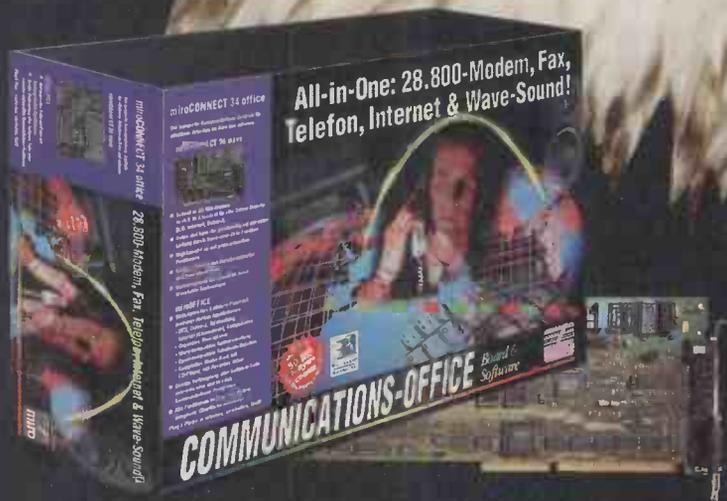
Perhaps it would be more useful to consider function. Obviously Blur are non-starters in anything to do with displays. Similarly, no peripheral manufacturer is going to touch the Clash. But the Spin Doctors are heaven-sent for a purveyor of disk utilities, the Cure have got to be snapped up by an anti-virus company, and Eric Clapton's Unplugged could bring a cachet of virtuosity to any member of the Infra-red Data Association. Finally, let's not forget the users. As it's becoming increasingly common to involve the general public in beta-testing with "Preview" software, then obviously the Crash Test Dummies are on to an earner. ■

# Turns Your PC into a Complete Communications Centre...Instantly

- Easy to Use, Easy to Install
- Integrated "One Card" Hardware and Software Solution
- Fast Data Transfer - V34/28,800 modem with Voice-over-Data
- HighSpeed-Fax-V17/14,400
- Telephone with Answering Machine and Voice Mail
- High End Wavetable SoundCard
- Integrated Office Software Suite for Data, Communication and Sound Editing (100% compatible with MS Office)



The miroCONNECT 34 OFFICE is a total office and communications package in a one card "plug 'n play" solution with sophisticated features, that are simple to use, all built around office and communications software that enables Desktop Conferencing with "Voice-over-Data" on the same telephone line, at the same time, sharing Data and Speech.



It's only  
**£279** excl VAT

AVAILABLE FROM

**ES.COM**

TEL: 0990 555888 FOR NEAREST STORE AND LATEST ESCOM PRICE



# Straight Talking



Barry Fox

What a rare treat to find a computer company that knows and cares about its products. When I tried a copy of Flagtower's Space Race CD-ROM it threw up the error message "Application error — call to undefined dynalink". Flagtower's parent, First Information, then sent me a write-once disk containing a new version — which gave the same error message

At this stage, most ROM publishers run for cover and concentrate on selling as many discs as possible before the bad news gets around. Instead, First Information insisted on sending a software engineer round to my office to find the cause of the problem.

The high quality images on the Flagtower disks are encrypted. They display on a PC screen, but cannot be copied. The encryption system is C-Dilla, which a lot of ROMs use to control access. Flagtower's installation program had found some previous C-Dilla files with the same name. It should have over-written old with new, but had not. So Space Race was looking in vain for its own code. We solved the problem by renaming the old files and then reinstalling Space Race. It ran like a dream. Flagtower say they will now alter the installation program.

Compare this to what happened earlier this year, when science magazine *Nature* gave away CD-ROMs containing full copies of all issues between 1992 and 1994. The purchase price of the disk is around £155. The free trial version stops working twelve days after its first use. But the dead files remain on the hard disk. These files soak up nearly 4Mb of valuable space. And *Nature* neglected to provide an uninstall option.

*Nature's* office admitted that it had been getting "quite a few calls" about this. But their technical helpline had been closed down. Someone in the editorial office tried to be helpful and

suggested that people with dead files should "find the directory on the hard disk that is labelled Nature, and delete it."

You cannot delete a disk directory until you have first deleted all its files. Bulk deletion of files is always risky. In any case, it leaves the icons in Windows and stray files in other directories. This is just one of many recent incidents which, until the Flagtower reassurance, had left me wondering whether there is anyone in the computer business who really understands or cares about what they are selling.

I recently bought a Canon BJC-4000 colour printer. For weeks it drove me mad, spewing out a three-line "info status" printout before each page of real printing. Canon's press office referred me to several in-house techies, none of whom knew the answer. I then spent ten minutes, at 49p a minute, on Canon's helpline, much of it spent listening to horrid Muzak on hold. For my £5 I got useless advice that failed to solve the problem.

Purely through trial and error, I found the simple trick myself. Go to Windows Print Manager, Options, Setup, Connect and then uncheck the box: "Fast printing direct to port". Hey presto. No more wasted paper. At 49p a minute shouldn't Canon's helpline have been able to tell me this?

A year ago I raised an issue with Hewlett-Packard about the then-new 4L printer. It was the first HP laser

without NVRAM. On all previous lasers it was possible to store favourite settings in non-volatile memory. With the 4L, settings evaporate if the user powers down to save wasting 10 Watts, 24 hours a day, 365 days a year. They also disappear if the printer has to be reset or altered by other software. In each case, the 4L resets to its factory defaults, which include the Roman 8 character set which wants to print hashes instead of pounds. It also defaults to 64 line page length.

HP says, rather unsympathetically, that this only affects people who are using a DOS program without the correct driver. A lot of business offices still use DOS (if only through a Windows window) and cannot get new drivers for the older programs their staff are trained to use. I regularly get business letters with hashes instead of pounds. If you are going to sell a printer in the UK which cannot be prevented from defaulting to North American settings, at least explain it in the instruction book, I begged.

Now HP has launched the 5L. Like blood from a stone, I have established that it too has no NVRAM and resets if the owner is energy-conscious. But the 5L has a new feature. It comes with a DOS utility which resets the printer to the user's chosen defaults every time the PC is powered up.

This is a clear admission from HP that the 4L caused problems for some users. The 5L utility won't work with the 4L. I have suggested to HP that the company should now provide a 5L-style utility upgrade for suckers who bought the 4L. I doubt it will happen. Dealing with HP is like dealing with IBM five years ago — no sense of urgency or concern. And we all know what happened to IBM in the end. ■

# OTHER PROGRAMS CAN UNINSTALL YESTERDAY'S SOFTWARE. CLEANSWEEP™ 95 CAN MANAGE TOMORROW'S AS WELL.

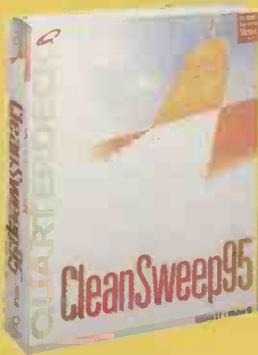
When you move up to the 32-bit power of Windows 95 you don't want old programs and duplicate files clogging your hard drive and choking performance.

An uninstalling program can rid you of all those odd bits of software that you don't need. But most uninstallers are only 16-bit, and with a whole new world of 32-bit computing just around the corner, they have a very limited ability to manage your software into the future.

That's where CleanSweep from Quarterdeck comes in. As a native 32-bit uninstaller, CleanSweep is able to work in both 16- and 32-bit environments, allowing you to manage your system efficiently not just today, but well into the future.

CleanSweep is the safe way to take a new

broom to your whole system, deleting or compressing unwanted or idle software, and enabling a whole host of system management functions. Your PC will be easier to use thanks to graphical displays of available disk space, while automated wizards and simple clickable commands speed up the processes of uninstalling, transporting and re-installing programs.



So why not put your house in order for the new world – install CleanSweep today and help Windows 95 get the most out of

your PC tomorrow. To see for yourself everything CleanSweep 95 can do, call 01245 496699 for your free trial edition. Or you can download a copy from our website at <http://www.qdeck.co.uk/>

# Business Matters



Nick Beard

**A**fter last month's brief foray into the realm of the anorak, my personal computer world has been smooth and easy, with most things running as happily under Windows 95 as they did before. Some DOS games no longer work properly, much to my son Alex's irritation, since Fatty Bear's Birthday Surprise was a big favourite.

The "free" game, *Hover*, which comes with Windows 95 is a tolerable substitute, though (*Hover* involves driving a hovercraft around a disused Doom set after the bodies have been cleared up). *ccMail* works fine, which means I can still access remote mail, but the remote log-in via our Shiva modem pool no longer functions, so my ECCO file synchronisation mechanism is no longer working and I cannot pick up files from my office drive. I have to remember not to make changes to my home ECCO database, but sporadically to bring changes back on disk. It's a hard life...

I wrote, some columns back, that we have been restarting our document imaging system. There had been problems with the system since we upgraded the software to which it is interfaced. These have been solved, and we are merrily rolling it out. Merri-ly, but with caution, since there are things which document imaging simply should not be used for. Our system is from Atlanta-based company IMNET. Their Image Engine product is pushed as an "under the covers" solution — it is a fine technology which system users hardly ever get to see. As regular readers know, at HCI we have implemented a highly integrated hospital information system, which enables doctors and nurses to access patient records from any PC in the building. The primary clinical system software is from Cerner Corporation, whose UK

office is in Luton. This provides a full suite of hospital applications, including lab, radiology, pharmacy and "enterprise wide" systems such as patient registration, scheduling, and an ordering system to set up tests and investigations on patients. All clinical notes go straight into the system, so staff at HCI turn to the PC, not a filing cabinet, to find out about patients.

We use a clinical workstation, which is an X Windows application running through an X-emulation routine on the Microsoft Windows desktop. (The business of migration to a Microsoft Windows desktop client is a near-future plan, and topic for this column.) A doctor may be reviewing a patient's casenotes on the system, through a database browsing tool which displays all the available data in a spreadsheet-type view. Much data can be displayed directly in this fashion — blood chemistry results, temperature etc. To access information which cannot be displayed in a single cell, such as a long clinical report, a doctor simply clicks on the cell which shows that the report is there, and the report pops up in a window. Thus far, the work is all being done by the Cerner systems.

If the document is an image, then the Cerner application — an Oracle database — sends a message over an OS/2 gateway to the IMNET image engine. The message states "send document number PQR to workstation

XYZ" and the image is sent. The desktop viewing client pops up, and there's the document. This means that when a user requests an electronic document, be it a summary of lab results or a surgical operative note, they do not know when they summon it whether it is coming from the scanned document source, as a bitmap of a sheet of paper, or whether it is a native Cerner file in digital text format.

It all seems very simple, yet we avoid using it wherever possible. Document imaging is fine and clever technology, and has a place. The concern is that it becomes a sop to people who are too idle or set in their ways to learn to use a computer "properly". Instead of going through the discipline of devising an electronic form and thinking about the data needed at a particular stage in a workflow process, an institution allows people to just carry on with their traditional paper scribbles, and scans them all in. Of course, there are good reasons to use this technology: it is hard to capture a quick surgical plumbing diagram any other way and surgical consent forms, signed by a patient, need to be kept. (One could build a big online text database which builds a consent form according to the scheduled surgical procedure, and uses pen-based computing to capture the signature, but life is too short.) Document imaging is powerful and effective technology — if it is applied properly.

Send your letters to:

**The Editor  
Personal Computer World  
VNU House  
32-34 Broadwick Street  
London W1A 2HG**

or email

**editor@pcw.ccmil.compuserve.com**

or fax

**0171 316 9313**

# Letters

## Gateway to hell

I am writing to you about the extremely poor level of service that I have experienced from Gateway 2000. I bought a P5 executive system from Gateway at the end of last year. After I had two faulty monitors replaced, the system settled down apart from one annoying feature: it would not reboot when hot. I lived with this for a while but as it was taking longer and longer to reboot I decided to get it fixed.

That's when my problems began. Gateway decided that a new motherboard needed to be fitted. Apart from the reboot problem, the system had been working well. The engineer arrived (a day late) to fit a new motherboard. He couldn't get the system to work and diagnosed the replacement board as faulty. He fitted another board the following day and was still unable to get the system working properly.

After speaking to the Gateway technical support team, he reloaded Windows, thus wiping out the PC tools desktop shell that I had spent a considerable amount of time setting up and customising to my requirements. He was still unable to get the system working and left. And so it went on.

I went from having a system that was working extremely well to one that was not working properly for over two weeks. During those two weeks, I spoke to at least six different support staff; I was

asked to do the same things over and over again; I lost the customised working environment that I had set up on my PC, and a considerable amount of time — I would estimate that I spent over ten hours on the phone and some 20 hours re-installing and downloading software. On several occasions people promised to call me back and failed to do so.

The support I received was badly informed, badly co-ordinated (there has been hardly any continuity when I have spoken to different technical support people) and cost me an awful lot of time and money.

This is not what I had been led to expect from Gateway and the impression I am left with is that they are keen to win your business, but if anything goes wrong you will be met with incompetence and indifference. I hope this will serve as a warning for anyone for whom service and support are critical issues.

**RV Geal**

## **Gateway 2000's managing director, Ian Pluthero, replies:**

*Having recently taken on the role of Managing Director, Europe, at Gateway 2000 I am extremely keen to maintain our company at the forefront of customer services and so value all customer comments, good or bad. Mr Geal has made some observations regarding on-site service which I am*

*happy to say have been addressed. In fact, customers are now able to arrange a four hour slot with service engineers, during which time the engineer will visit the customer's home. Additionally, we have extended our on-site service hours, from 8.00am-10.00pm Monday to Friday and 8.00am-8.00pm Saturday.*

*In this particular instance I would like to point out that Mr Geal has since been given a replacement PC and that overall, Gateway 2000 has a very high rate of customer satisfaction; having recently won PCW's award for best after sales service.*

## **Demon overload**

I don't think Cliff Stanford of Demon (PCW November) should be so dismissive about BT and the cable companies. They are quite capable of picking off the 90 percent or so of Net subscribers who know their way around the system and who just want a high quality dialup service without bottlenecks.

What Demon offers over what BT is likely to offer is a news server, but the Demon server is so overloaded that while one can just about retrieve message headers, it hangs after a few minutes without returning a single message contents. I have tried it many times. In comparison, the Compuserve server is vastly more accessible.

The only other offering from present Net service providers is web page storage. Despite media hype, this is of little relevance to the average private individual, and technically this service can be provided by any net-connected third party organisation which could easily charge far less than the £25/month per 5Mb Demon charges.

**Peter Holy**  
**100103.554@**  
**compuserve.com**

## **Virtual reality**

When you "test" internet service providers, do you connect through virtual points of presence (where the provider uses them) rather than physical PoPs?

Perhaps you should. My present provider uses Pipex virtual PoPs, giving a very wide coverage at local call rates. Or that's the theory. What Pipex and the other VPOP providers don't tell you is that the reliability of these VPOPs is so poor that over the last four days, only half my attempts to connect were successful. Each one of these failed connections cost me five pence and considerable time and frustration. From the correspondence with the provider (who is as frustrated as its customers) I know this is a common problem. To protect my provider (who has used Pipex in good faith) I would be grateful if you would omit my email address.

**John Gruffydd**  
**Wales**

## **Rodent rage**

I feel I must register my dismay at Nick Beard's comments in Business Matters, PCW September, denigrating what I consider to be a very worthwhile pastime; namely his view of wasting hours "spent downloading useless wretchedness from various hamster-discussion groups". Many people might consider expense forms, freeform text databases, forms routing *et al* considerably more "useless" and "wretched" than dissemination of information on such a noble beast as the hamster. Having participated in both sets of activities (corporate software development and hamster showing) I can personally vouch for the greater fascination of the latter.

May I respectfully suggest that Mr Beard sticks to his



area of expertise and we, the South Of England Hamster Club (email soehc@ri.ac.uk) will desist from derogatory comments about the merits of in-house ledger software. If Mr Beard would like to experience the joys of hamster showing first hand, he would be most welcome at one of our shows.

**Adrian Dornford-Smith**  
(Secretary, South Of England Hamster Club)  
adrian@ri.ac.uk

#### Correct diagnosis

Sometimes it's clear that what columnists write has little resemblance to what they know. Nick Beard's opening paragraphs in October's Business Matters typifies this: his knowledge of formal methods appears to fall far short of the two paragraphs you wrote.

It is *impossible* to mathematically prove all programs correct. I refer you to the classic "Halting Problem" for more details. Formal methods, however, are not designed to prove existing programs correct; they are designed to *create* proven correct programs. By starting with a mathematical specification of the problem, one can iterate through a series of proven logical steps to another specification, and finally to code — again via proven translations from your specification language to your coding language. Thus one can develop proven correct programs.

Of course, there are still problems with this process: the "fuzzy" stage of actually determining the original specs mathematically (the users rarely know what they want, to start with, as your recent columns show) and assumptions on the correctness of the compiler and OS and hardware and so on. But the actual "spec to code" stage of the process *can* be performed in a rigorously correct manner. It's hard work though, and unlikely to be of interest to the brilliant

programmers currently used by Microsoft *et al*; the flash of insight used to solve programs has to be rigorously proved rather than assumed correct.

Incidentally, a few years back (1989 I think) Intel (yes, that company with the dodgy Pentiums) funded a research project at Oxford University's Programming Research Group (PRG) to prove one of their Transputer chips correct. Using the Z language, a specification of the chip was drawn up and then mathematically modified until the spec matched the final chip layout. And (surprisingly, perhaps) the chip was correct. More surprisingly, the chip emulator used to test the layout was proven to have bugs in it (Oxford PRG received the Queens Award for Technology for this bit of work).

**Stephen Harris**  
sweh@spuddy.mew.co.uk

#### Image problem

In Computer Answers (PCW October) the picture on page 312 states "Data transfer problems caused by a video card like this one could be down to driver software". I suspect the fact that the "video card" is a disk drive doesn't help.

**David Pryor**  
david@brctl.demon.co.uk

#### Wake up to MDL

Tim Nott's evaluation of several CAD products squeezed more than a quart of information into a pint of review (PCW, October).

However, he omitted to mention that both MicroStation and PowerDraft from Bentley Systems are open to third party developers through the use of the MicroStation Development Language (MDL). This is an extended version of C — the extensions covering areas such as command parsing, the user interface and data resource management. Developers familiar with Windows or

# There's only one thing that's difficult to understand about AutoSketch for Windows.



## Its new low price.

Precision drafting and drawing with AutoSketch for Windows is simplicity itself.

Its flexibility means that sketches, drawings, schematics, technical illustrations, business graphics and flowcharts are all easily within its power — and yours.

And because AutoSketch for Windows comes from Autodesk, the makers of AutoCAD, you can be sure of compatibility with AutoCAD LT — and even AutoCAD itself.

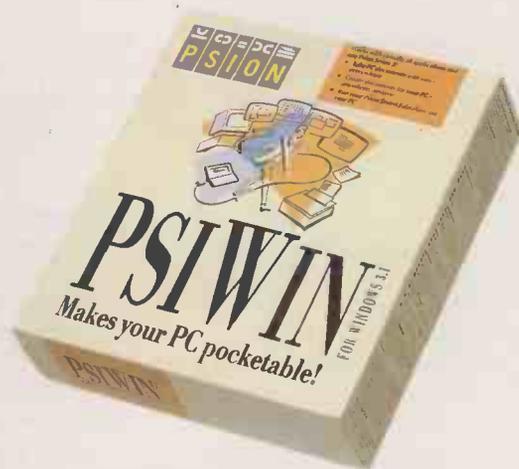
Now, at only £99, AutoSketch for Windows is the best value drawing programme on the market.



So why not call Autodesk on 01703 814116 for more information. It's as easy as that.

 Autodesk.

# PsiWin makes your PC pocketable!



**Now you can have the freedom to use and actively work on your PC files, anywhere, anytime**

With PsiWin and the award-winning Psion Series 3a, Windows files can now be kept in your pocket. You can refer to them, work on them - and even create new files, anywhere, anytime. A simple drag'n'drop is all it takes to transfer files back and forth between PC and a Series 3a: file conversions are taken care of automatically.

PsiWin also gives you comprehensive and fuss free back-up of Series 3a data, by simply clicking on a toolbar icon. It adds a Windows version of the Psion Series 3a database to your PC. And it even lets you print from your Psion using your PC's TrueType™ fonts.

**For a full colour leaflet and stockists, call +44 (0) 171 258 7368 (9am - 5.30pm)**

Psion PsiWin £79.95 inc. VAT (price includes RS-232 interface and cable). Requires a PC running Windows 3.1 or higher. Upgrade from Psion Serial Link also available direct from Psion, £39.95 inc. VAT. Call the number above.

All Trademarks acknowledged.



Macintosh programming will feel at home with these MDL concepts.

The astonishing thing about MDL is that it is source-code compatible across all the platforms that Bentley support — every Unix workstation you can think of, plus the Mac, and the PC in all its forms: MSDOS, Windows 3.x, Windows NT and OS/2.

**Jon Summers**  
100332.3463@  
compuserve.com

#### Winword weightwatchers

The time is now right for Microsoft to prepare a version of Word for Windows which could be called Winword Lite.

The latest version, Word 6, is a huge heavyweight that is simply over the top for most users. The hardware cost and performance penalties are a drawback. Part of my job involves training novice computer users in the gentle art of word processing, and those that have seen current versions of Word tell me that they were overwhelmed by the complexity of the screen and the huge array of meaningless buttons.

I am still running Word for Windows version 1.1 and I find it more than adequate. A colleague used it for a 240-page document on a 286 machine with just a 20Mb hard disk and 2Mb of RAM. Word 6 would barely fit on the disk, let alone run.

In your October issue, Eleanor Turton-Hill's Beginners column lists some interesting features of Word. Well, every one of them except Word Art is available in Winword 1.1, although some of the keystrokes are different.

**Adrian D Bailey**  
Loughborough University  
of Technology

#### Three legged horse won't win the race

If Barry Fox could get PC suppliers to give us products that work, can be used by the average purchaser and have

all necessary bits with them, he would deserve a medal (Straight Talking, PCW October).

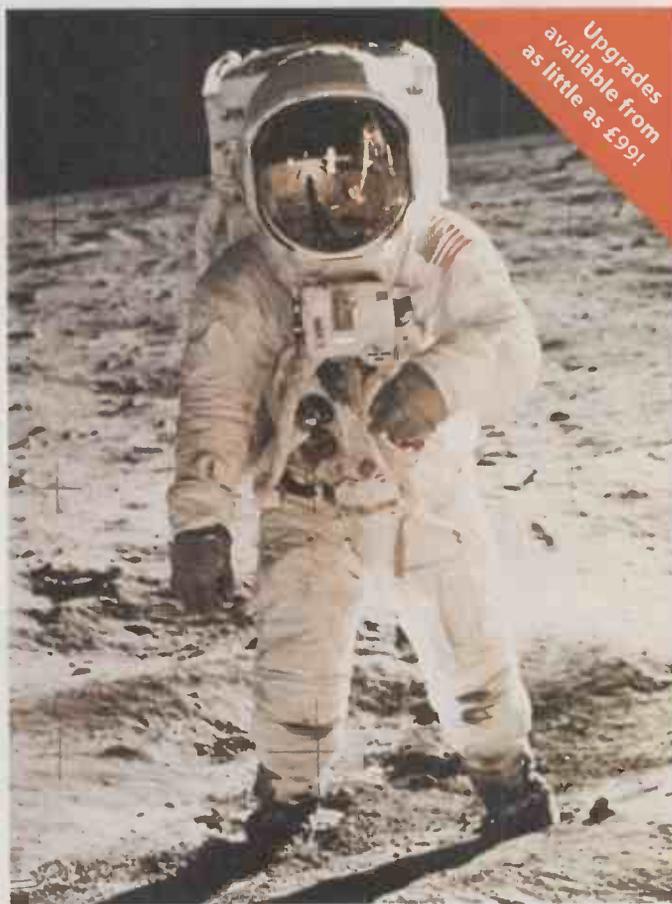
As a result of a recent PCW review I opted for the Umax Vista S8 scanner. A fine machine by all accounts — but only if you can get it to work. After several evenings of poring over the manuals, wondering what to do with a device driver update disk not mentioned in the documentation, wondering how to configure the SCSI card model also not referred to, wondering where my bundled OCR software was, trying every combination of options in the software and still not getting the PC to recognise the scanner at all, and memory problems which Photoshop LE reports as peculiar to Umax scanner drivers, I was driven to call the dealer for support.

"Sorry, we're not really experts on this. You'd better phone Umax's distributors." Technical support was out to lunch (how prophetic) so an hour and a half and five calls later I am told that the wrong version of the driver and software has been included for that card. Oops. And sorry about the OCR software. Yes, we'll send it by courier. And yes, there is a memory utility to deal with the "Not enough RAM to run Photoshop LE" problem. And in the meantime we'll email you the necessary files and instructions. Needless to say, the email doesn't arrive. So now (with the document feeder) I have £1,000 worth of junk doing nothing while I wait for the bits that should have been there in the first place.

To avoid future grief and anguish couldn't we have a little item in product reviews like "Umax Vista S8 — excellent scanner once it was working but arrived as a complete and usable as a three-legged horse".

**Les Cowan**  
100421.2201@  
compuserve.com

## It's just a 'small step' from drawing board to CAD — with AutoCAD LT.



Upgrades  
available from  
as little as £99!

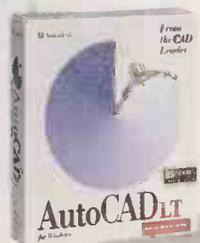
## But it could be a 'giant leap' for your productivity.

If you're using outmoded design tools, the chances are that your productivity and competitiveness are being seriously restricted. All too often, though, the move to CAD can seem as daunting as stepping into a new world.

Fortunately, finding the solution is as easy as the solution itself... **AutoCAD LT Release 2**, from Autodesk — the makers of AutoCAD and the world leaders in design software.

Because AutoCAD LT is windows-based, it's remarkably simple to use. At the same time, it can take large professional projects in its stride. And Release 2 includes a range of exciting new features carefully structured to work with you in a giant leap forward in design capability and productivity.

At only £495, AutoCAD LT Release 2 represents a real investment in your competitive future — without the need for space-age budgets!



So why not call Elite Software on 01675 464488 for more information and bring your productivity-leap a step closer.

 Autodesk.

**Maudlin mugshot**

Avid reader of *PCW*. Think it's an excellent publication. There's a lot to praise and very little to criticise. In fact, the only thing that lets it down is the appalling photo of the editor (page 13). What a dreadful cardboard, characterless exposition. The current photo has about the same effect as a pair of furry dice dangling in the windscreen of an Aston Martin.

**Graham S Mills**  
Southwell, Notts

**Satisfaction guaranteed?**

I always enjoy Barry Fox's Straight Talking column and particularly his comments in

the October issue on the subject of guarantees. How about a page each month on the variations of guarantees offered? On page 101 (October issue) Gateway offer an extended warranty of three years for £210 but "at Gateway's discretion". I am sure your staff could come up with many more examples of guarantee quirks which would make interesting reading,  
**R Swarbrick, Troon**  
Ayrshire

**Don't cry, buy!**

Peter Brown (Letters, October) stop whining. You've been buying *PCW* for years, so you know the magazine

has been practically yelling "GET 8MB RAM" for nigh on two years and as recently as April 1995 an extra 4Mb RAM was listed as the most important upgrade with your spec, followed by the processor.

You just can't cry naively about trying to run today's software on yesterday's minimum specs.

**Kenneth Henry**  
Enfield  
Middlesex

**Big heap no fun**

I am doing a project on Computer Desk Tidies for my GCSE technology course and I am going to design and make a computer desk tidy. I find that I have a permanent heap of useless items surrounding my computer. It's extremely annoying and no matter how many times I clear it away, it always returns.

So that is the background to my project. Please could you tell me if you, your company, or anyone else in the whole wide world suffers from this

problem, and if so, what would you most like to see a desk tidy featuring?

Oh, by the way, your magazine is dead cool.  
**Victoria Folgate (14)**  
Kettering  
Northants

**PCW replies:** We could certainly do with some desk tidies in this office. If readers have any suggestions, please write in and we'll pass them on to Victoria.

**Hindsight**

Five years ago: December 1990  
Michael Dell interview  
"He managed to make one faintly incautious prediction. By the middle of the decade, he thinks the PC will have dispensed with the need for mainframe makers. 'We'll be selling mainframes in 1995.'"

**Update:** He was wrong. The death of the mainframe was widely predicted at the time but has failed to materialise. They're still doing surprisingly well, particularly with the move towards (the hot buzzword) data warehousing. At times this year, IBM has been unable to meet demand for its ES9000 enterprise mainframes or its mid-range AS400s.

Ten years ago: December 1985

WordPerfect review

"A useful question when approaching a new word processor is: How easy is it to write a short letter or document without using control codes? In this case, the answer must be 'very easy indeed'. WordPerfect comes close to the ideal of 'What you see is what you get' (WYSIWYG) and although it doesn't show right-hand justification on-screen, you work at all times on a screen uncluttered with control codes... WordPerfect costs £425."

**Update:** As far as a DOS program working in text mode can be WYSIWYG! And that's when £425 was a lot of money.

# Panther Nx P100

"25% faster than Pentium systems"†

† PC Answers Windows 95 review, September 95

**NexGen™**

NexGen's powerful RISC - based Nx586 CPU gives Panther Computers the leading edge over the competition on price and performance. Our quality is second to none - but don't take our word for it, ring us now for a summary of what the press say in a string of glowing reviews! Plus our new leasing schemes mean you can now afford the best technology, today.

- RISC-based Nx586 processor
- PCI motherboard with integrated high speed I/O
- 8MB to 192MB system RAM
- EIDE hard disks from 1.08GB
- Choice of Quad or SIX-speed IDE CD-ROM
- Quality graphics and Monitor
- Prices start from as low as £995+VAT

Computers for the next Generation

**01442 253811**

E-MAIL: panther@pancomp.demon.co.uk  
FAX 01442 250657



# Life's too short!

I don't need to worry about **looking good**.

With 720dpi printing I look great. Rich,

**photo-real colours** for **outstanding**

**graphics** and DTP. Crisp, dense blacks for

letters and reports that **mean business**.

I can sit back and **relax**. Check it out.



## The **NEW** Stylus range.

The world's most advanced  
720dpi inkjet printers.

Epson brought you the world's first 720dpi inkjets. And won over a hundred awards for quality worldwide. Now there are three new Epson inkjets. The Stylus 820 prints crisp, dense black for professional text and graphics every time. The Stylus Color IIs combines professional dense black with photo-real 720dpi\* colour. And if you use colour frequently, the super-fast Stylus Color II has accelerated 720dpi\* along with photo-real colour and double-density black. The new Epson Stylus 820, Color IIs and Color II. Life's too short to compromise.



Dial 100 and ask for  
Freephone Inkjet

Or E-mail us at [info@epson.co.uk](mailto:info@epson.co.uk)

Please send information &  
my nearest dealer address.

Stylus Color II  Color IIs  820

Send my free Epson 'Colour-In  
Colour-Out' CD-ROM

Name

Job Title

Company

Address

Postcode

Tel

Return to: Freepost, Epson UK Ltd, Campus 100,  
Maylands Ave., Hemel Hempstead, Herts HP2 8BR.  
(No stamp required.)

PCW-DEC-SR

# EPSON®

Epson is a registered trademark and Epson Stylus a trademark of Seiko Epson Corporation  
80 Himechinden Hirooka, Shiojiri-Shi, Nagano-Ken, 399-07 Japan. \*Coated paper  
is required for 720dpi colour. A 960dpi setting gives outstanding results on plain paper.



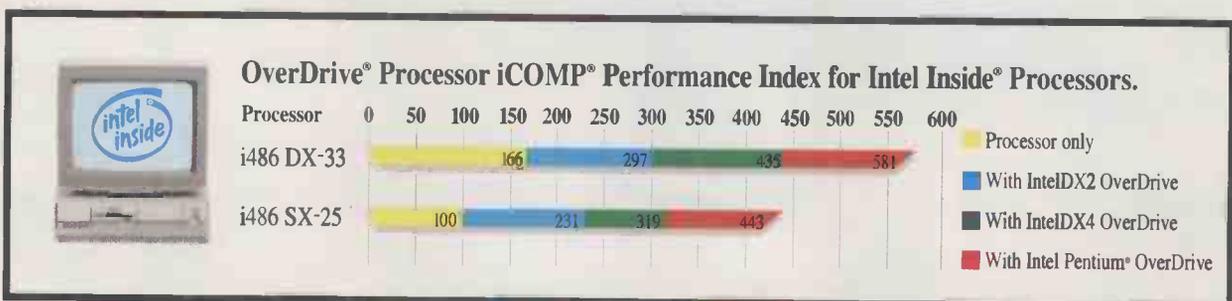
### Slow performance.

Your software is bogged down, but you can't buy a new PC right now.

### CPU processor.

Intel Pentium® OverDrive® processor, one of a family of single-chip upgrades that significantly boosts the overall performance of your Intel486® SX, DX or DX2 processor-based PCs.

# To speed up your 486, follow the





**Speeds up software.**

Microsoft Excel\* 4.0 runs 170% faster and Microsoft Word\* 2.0 158% faster when you upgrade an i486® SX-33 processor with an 83MHz Intel Pentium OverDrive processor.

**Get the full facts fast!**

To find out how the Intel Pentium OverDrive processor can boost your PC's performance, contact your reseller today, or call Intel on 01793 431155 and request pack No. ODP0144H. Or visit our Web site at <http://www.intel.com/>. or see Intel's Forums on CompuServe (GO INTEL).

© 1995 Intel Corporation. The Intel logo, Pentium, OverDrive IntelDX2 and IntelDX4 are trademarks of the Intel Corporation. \*Other brands and names are the property of their respective owners.

# OverDrive® processor upgrade path.



■ For i486SX or DX PCs  
Gives IntelDX2 Technology



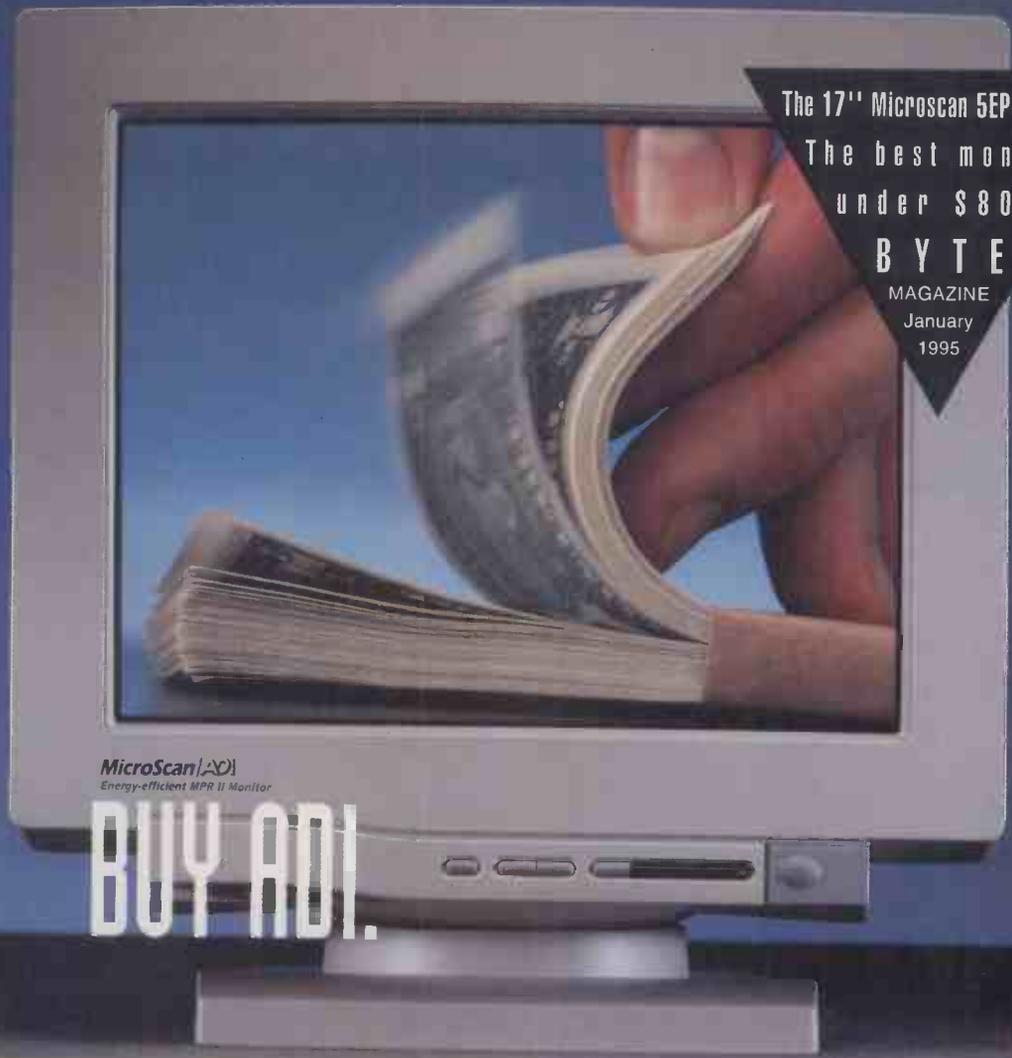
■ For i486SX or DX PCs  
Gives IntelDX4 Technology



■ For i486SX, DX or DX2 PCs  
Gives Intel Pentium® Technology



Give  
your eyes  
and your  
pocket a  
refreshing  
break.



The 17" MicroScan 5EP Awarded  
The best monitor  
under \$800.

BYTE  
MAGAZINE  
January  
1995

MicroScan ADI  
Energy-efficient MPR II Monitor

BUY ADI.



## The features and quality YOU expect. The price YOU don't.

A billion \$ giant, ADI was established in 1979 and is recognised as a leading force in monitor manufacture. Our line of innovative monitors has set benchmarks for quality, performance and reliability.

### The ADI MicroScan Monitor Range

- Microprocessor intelligence
- Fingertip front panel controls
- 76 Hz flicker-free refresh rate
- Brilliant, non-interlaced images
- Single-board design
- 2-year on-site warranty
- Optional 3-year warranty



US Edition  
ADI MicroScan 3E+

Until now products populating the landscape of performance monitors have looked a lot alike. High in quality, long on features, hefty on price. Thanks to ADI, things are looking up. For much less, you can get the same quality and features ADI has for years built into the monitors of many of today's world class monitor and PC companies.

With the opening of our UK office, ADI can now offer the same quality of service and support which has helped us to sell over 4 million monitors world wide in the last two years.

So what's the big difference between us and the other so called top-line monitor manufacturers? The answer is the bottom line. ADI gives you something that we all need today - Better Value.

When it comes to quality, features and affordability, you can't beat an ADI MicroScan Monitor. For more information on ADI and our monitors, call **(0181) 236 0801**



MicroScan is a trademark of ADI Corp. All other brands or product names are trademarks or registered trademarks of their respective companies. The Energy Star emblem does not represent EPA endorsement of any product or service. © 1995 ADI Corp. All rights reserved.

ADI Systems (UK) Ltd. Unit 3, Manor Place, Manor Way,  
Borehamwood, Herts. WD6 1WG  
Tel: (0181) 236 0801 Fax: (0181) 207 3842

ADI

More than just a monitor

# First Impressions



## Contents

- 60 H-P Omnibook 600CT
- 61 Intel Pentium Overdrive
- 62 OfficeBlox
- 64 Gateway Solo and Hi-Grade Notino
- 66 Evesham Platinum 133MHz
- 70 Cubasis Audio
- 72 ImageAXS
- 74 Xerox 4920
- 77 Teleshare 2.0
- 78 Autoroute Express for Psion

First Impressions includes the irresistible "Gadgets" spread on page 56. Highlights include the tempting Intel Pentium Overdrive, a side by side comparison of the latest new-look notebooks: the Solo and the Hi-Grade Notino. And, Teleshare 2.0 might help you make your fortune on the stockmarket.



## VNU European Labs

VNU Labs tests cover every kind of hardware and software including PC hardware, printers, network products, modems and software applications. The tests are continually developed

and enhanced to reflect hardware and software developments.

Our tests closely simulate real-world use. For example, the suite of PC hardware benchtests uses complete versions of industry-standard applications like Microsoft Excel and Word for Windows, WordPerfect 6.0 (DOS and Windows), Lotus 1-2-3 version 3.4 (DOS) and FoxPro (Windows and DOS).

Application tests are the backbone of all the VNU Labs system evaluations but it's nearly impossible to pin an application result to a specific machine component. Only system-level tests (also known as low-level tests) can reliably tell the difference. VNU Labs' system-level test suite is called Euromark. The tests, which are mainly Windows-based, quickly size up a hard disk, sound card, motherboard, display adaptor and printer, and give individual and overall figures.

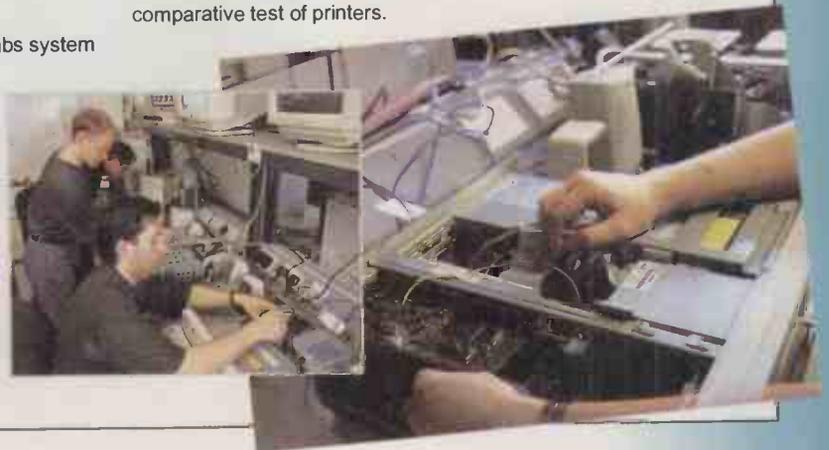
Starting this month are our Doom 2 tests, which offer a good indication of processor, graphics and games performance. You can do these at home: quit Windows 3.1 or shut down Windows 95, restarting in

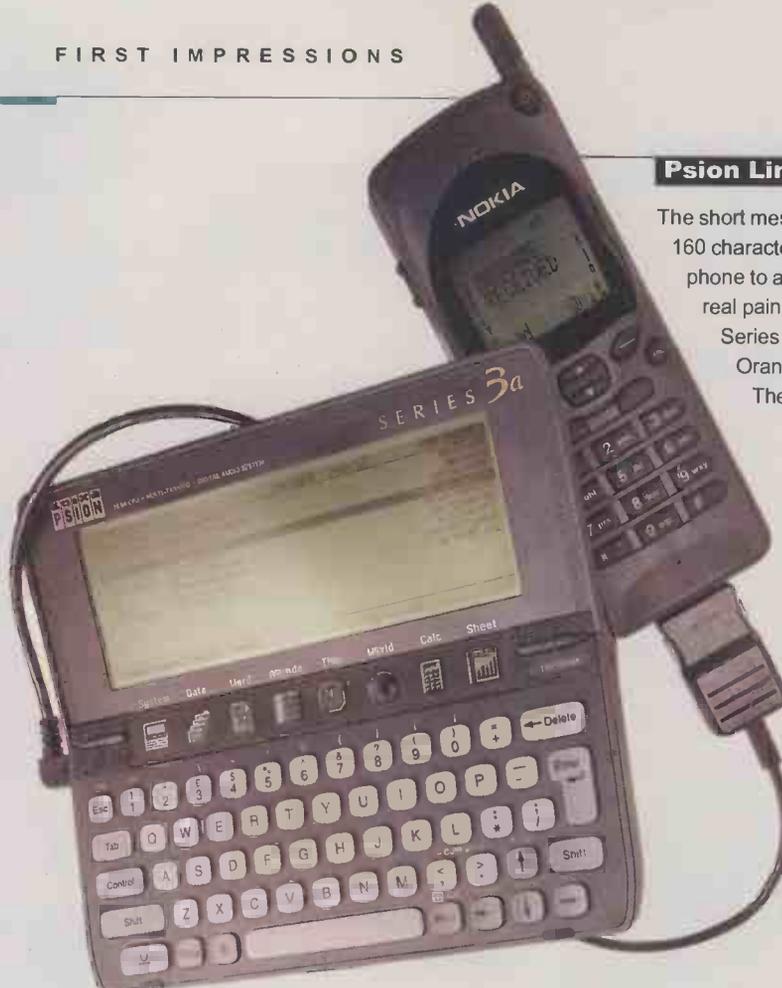
DOS mode. Start Doom 2 and set the screen size to maximum, then quit. At the DOS prompt type

```
doom2 -timedemo demo1
```

then wait for the demo to finish, automatically quit and drop back to DOS with two results. Divide the first by the second and times the result by 35 to get a frames per second total — bigger is better.

● To make them easy to read at a glance, all the graphs in PCW are now drawn so that the bigger the bar, the better the result. Normally we'll also include the original data we worked from: for example, the time in minutes and seconds to print a page in a comparative test of printers.





**Psion Link for Nokia**

The short messaging service, SMS, allows short text messages of up to 160 characters to be sent from one suitably equipped digital mobile phone to another. But entering the words from a mobile's keypad is a real pain. Psion's Link allows messages to be composed on the Series 3a and transmitted from a Nokia 2110 GSM phone. Nokia Oranges will work too if upgraded to firmware release 4.77. The cable will cost around £80. Call TBC on 0171 258 7368



**Canon SV-15A speakers**

If your PC multimedia experience is lacking the sonic punch it deserves, then you should be looking for a new pair of speakers. How about these from Canon? They're not lava-lamps, oh no. With built-in mains powered amplifiers, these magnetically shielded wonders wack out 40 Watts, with a wide sound dispersion offering a wider listening area than normal speakers.

Price £179 from Canon UK on 0181 773 6000



**Microsoft Sidewinder Pro**

To make Windows games more enjoyable Microsoft has released a joystick, which comes bundled with Fury<sup>3</sup> reviewed in this month's Screenplay. The Sidewinder Pro has multiple fire buttons, a special twisty grip, and is ideal for both fast action and simulation titles.

Price £69.99.

Microsoft is on 01734 270001.

**Gadgets**  
PCW Gadget Photography by David Whyte





### Panasonic Panafax UF-S1

It's a phone, a fax, a digital answering machine, and a copier! Yes, it's Panasonic's remarkable Panafax UF-S1, a feature-packed gadget which could singlehandedly look after most of your home or small office communication requirements. It looks rather nice, too. Well worth the £299 asking price (VAT already added).

Panasonic is on 0500 404041, price £299.95 inc VAT

### Fujifilm FV-10

This impressive-looking gadget is Fuji's answer to many imaging requirements. Using a 470,000 pixel CCD similar to those found in video camcorders, the fully automatic FV-10 can focus its zoom lens and image anything. Use it for archiving, databasing, multimedia, the internet, or even film scanning with its 35mm film carrier. The PAL output can be viewed on-screen, recorded on tape or captured by a PC with a suitable card.

Price £695 from Digital Imaging Group on 0171 586 5900



### Philips Routefinder

If you're fed up with getting lost, tangled up in maps or hitting impenetrable traffic, the Philips Routefinder could be the gadget for you. This handheld device calculates routes, estimating time and cost of journey, taking into account preferences for scenic or speedy routes. Don't leave home without it.

Price £199.99. Dial 100 and ask for **freephone routefinder**



# All purpose *is now* powerful.

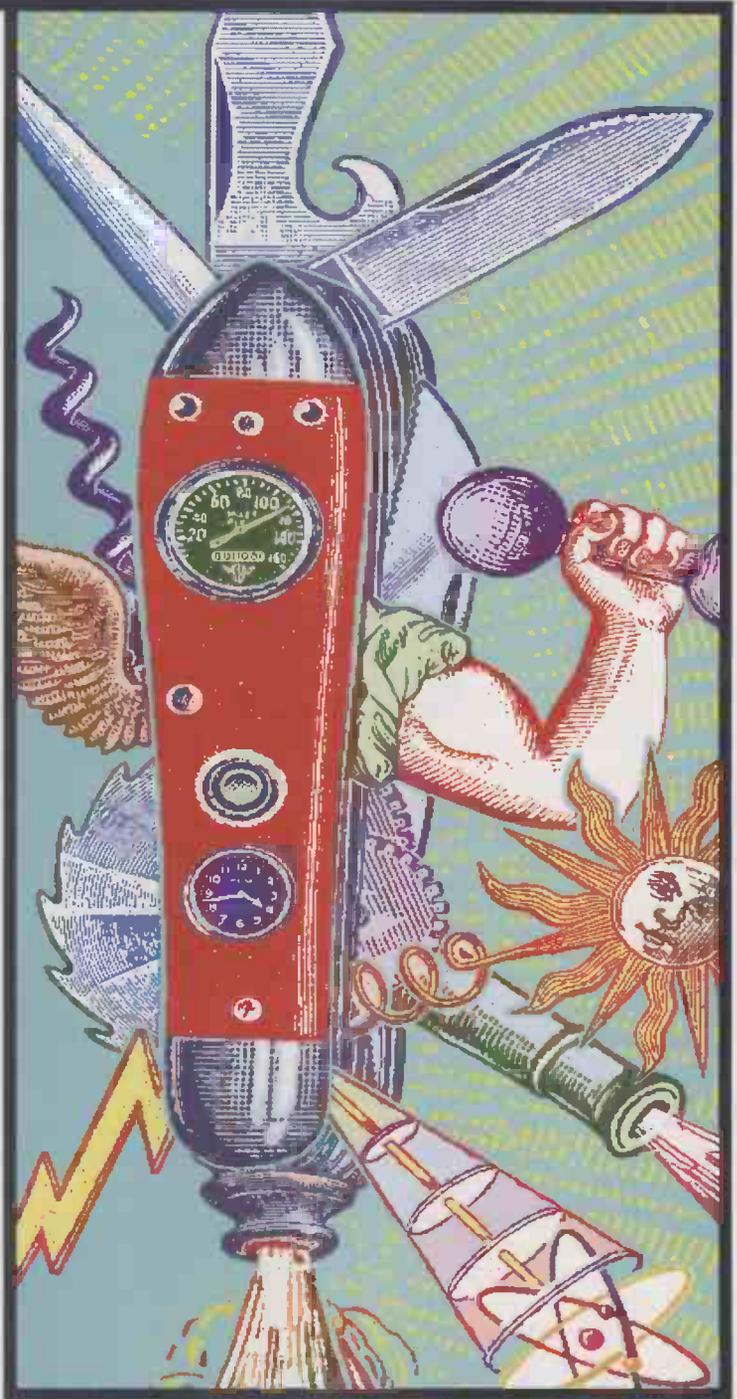


**DIGITAL VENTURIS. NOW RUNNING  
WITH 120 MHz PENTIUM® PROCESSORS**

The complete desktop family of quality-engineered Digital PCs now comes packed with Pentium® technology. What's more our PCs are priced at the level of many of our competitors' less powerful machines. The new Digital Venturis and Celebris PCs



# all



are now supplied with your choice of five different Pentium® chips – from 75 through to 120 MHz – not to mention PCI/ISA bus, advanced power management and Plug and Play capabilities. Yet for all their power, the entry-level Digital Venturis and power-user's Celebris desktop PCs remain the

easiest machines to set up and integrate into your network, and maintenance is a breeze. Discover how Digital brings unprecedented PC power and speed to every business solution. To find out more, please call 0345 227 228.

**digital**<sup>™</sup>  
**PC**

## HARDWARE

# Hewlett-Packard Omnibook 600CT

A classy little number that you'd be proud to take anywhere in your briefcase, says **Clive Akass**.

The lighter models of Hewlett-Packard's Omnibook range fall into the class known as executive mobiles, which are the nearest manufacturers currently get to making a truly portable, desktop-standard PC. They are not so portable as non-PC old bangers like the Cambridge Z88 or Amstrad Notepad (see our *News Analysis* pages), but unlike most notebooks they can be carried in a briefcase without putting your back out.

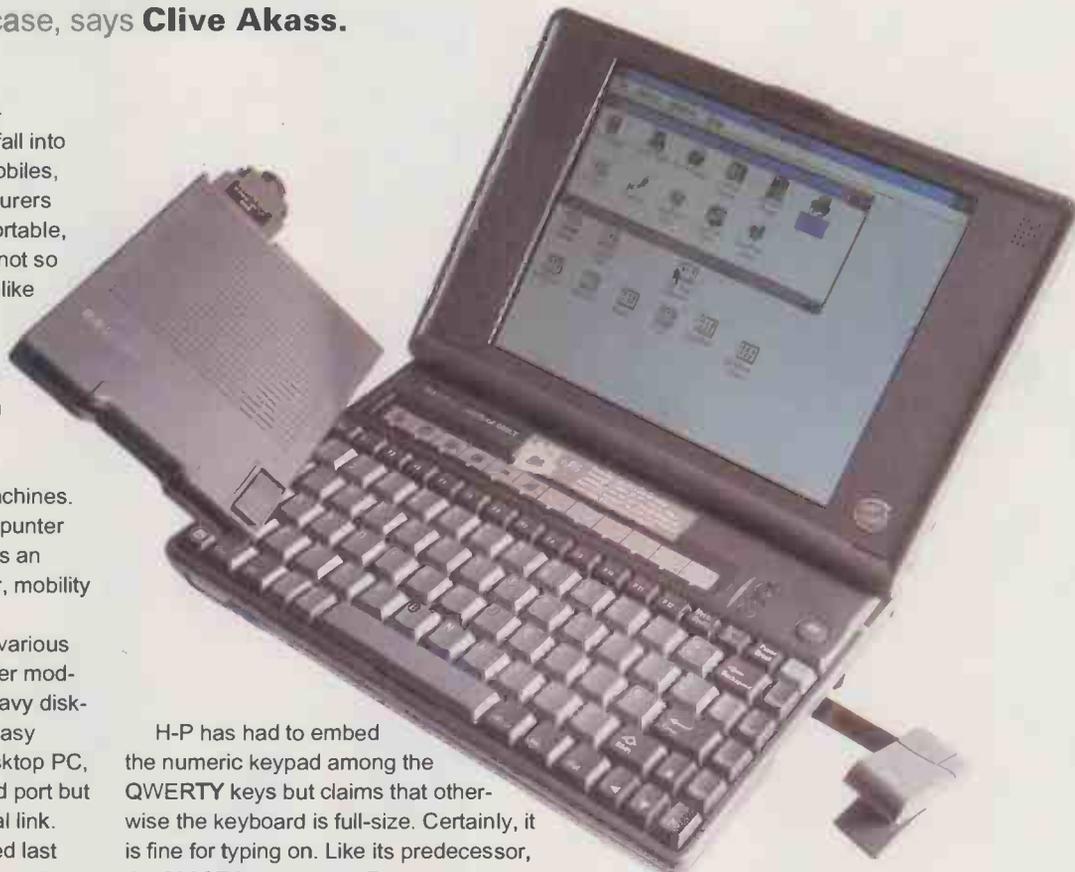
They are also high-quality machines. Too expensive for your average punter and too useful to be dismissed as an executive toy; they sell on power, mobility and status.

Omnibooks have undergone various weight reducing measures. Earlier models dispensed altogether with heavy disk-drives. Sensibly, they relied on easy communications with a base desktop PC, pioneering the use of an infra-red port but also offering a conventional serial link.

The Omnibook 600, introduced last year, had a 170Mb PC card disk, a plug-in floppy drive as standard, and an 8.5in dual-scan colour screen. The latest 600CT packs a larger 9.5in TFT colour screen, 8Mb of RAM as standard and new features such as 16-bit audio with a built-in microphone and tiny internal speakers providing surprisingly good sound quality.

Nevertheless, it weighs much the same as the 600 at 1.72kg (3.8lb), or just over 2.1kg including the mains adaptor and cable. The floppy drive would add still more weight but of course may be dispensed with on many journeys. The 18.5cm x 11.1cm x 4cm (7.25in x 11in x 1.6in) case is slightly smaller than a standard A4 notebook.

The screen supports only VGA to 256 colours but an exterior monitor can be driven at 1024 x 768 in 256 colours. Subjectively it gives a strong, easy-on-the-eye display which can be read from quite a wide angle (not necessarily an advantage if you want to keep your work to yourself) and is desktop-fast thanks to 1Mb of video RAM and local-bus acceleration.



H-P has had to embed the numeric keypad among the QWERTY keys but claims that otherwise the keyboard is full-size. Certainly, it is fine for typing on. Like its predecessor, the 600CT has an extra Fn key which can be used in conjunction with the function keys to launch chosen applications; you can write names or icons on a membrane above the keys to remind yourself what launches what.

The CT also retains the traditional Omnibook mouse, which pops out on a short plastic arm from the right edge of the machine. This works well (at least for right-handers) on a good surface in short doses, but is difficult to use on your lap and becomes very hard work during a long session — though perhaps not so much as a trackball or nipple pointer. The review version was a little tricky to get back into its slot, though we have not had this problem with earlier models.

Superficially, the CT looks much the same as the 600, except for three audio sockets (stereo out, line in, mic in) on the left edge; next to these is a slot for one Type 3 or two Type 2 device PC cards; a similar slot on the opposite edge, in front of the mouse, carries a 260Mb disk (there's a 340Mb option).

Beneath the machine is a memory-expansion hatch (up to 32Mb), a reset

button, and a compartment for the Lithium Ion battery with a claimed life between charges of up to three and a half hours.

At the rear edge are a power-supply socket and the IRDA-compatible infra-red port, capable of transferring data at 115Kb/sec — as fast as a standard serial link. A flap lifts to reveal the serial, parallel, floppy-drive, and exterior monitor connectors, plus one for an optional enhanced port replicator with SCSI-2, PS/2 mouse and keyboard ports.

Software includes HP's suite of organiser applications, including a phone book and financial calculator. You also get good online manuals and Laplink Remote for phone links to your office machine. The review machine was supplied with Windows 3.11 but Win95 should be available by the time you read this.

The Instant On feature works particularly well, without the disconcerting delays of some rival implementations. It lets you switch the machine on and off like a light, with as-you-were boot-up and no tiresome exit procedures.

The review model had a pronounced whine, apparently coming from the screen; H-P said this was a problem on some early products but had been sorted out. Certainly, the second machine we looked at was silent.

The 600 proved robust on the road

and there seems no reason why the 600CT should be any different. It scored a nifty 5.47 in our Euromark tests — a performance aided by its fast hard disk. The only factor that may hold it back is the processor: at this price level, customers may look for Pentium power.

### PCW Verdict

Fast, elegant and roadworthy.

Price 600CT £2,460; port replicator £259

Contact Hewlett-Packard Customer Information Centre 01344 369222

## HARDWARE

# Intel Pentium Overdrive

Don't be tempted into a P24T upgrade just because it's there. If your BIOS and cache can cope it represents a reasonable upgrade, but you might be better off with a DX4, says Simon Head.

With the release of the 83MHz version of the Pentium Overdrive chip, many people using 486 DX33 or DX2/66 machines may be tempted into an upgrade. But this is not necessarily as simple as it sounds, and with some PCs, upgrading to a P24T will not provide a performance increase over a DX4/100, which is considerably cheaper.

The main issue is that of the Level 2 cache in your PC. The Pentium chip uses a bus operating at 60 or 66MHz, whereas a 486 chip operates at 33MHz; so to get Pentium performance from a 486 chip immediately presents a problem in delivering data to the chip fast enough. To try to alleviate this, the Intel designers have placed a large 32Kb cache on the overdrive chip; twice as much as is available on the Pentium itself. This cache has to operate in conjunction with the cache on your motherboard to provide data to the P24T overdrive.

Cache memory can operate in two modes: write-back and write-through. In write-back mode, writes to cache memory are allowed and the changes to the cache are subsequently written back to the main memory. This is the most effective mode but is more expensive to implement as you require logic to keep track of cache modifications. Write-through cache is simpler: when a memory write occurs it is immediately written to main memory.

One of the other major features of the P24T is the fan and heatsink design.



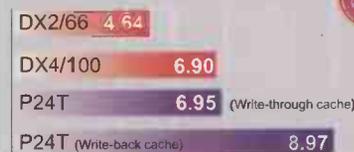
Power for existing fans is drawn from the power supply, either from pins on the motherboard or from a floppy disk power cable. The P24T draws power for the fan directly from the ZIF socket. The fan can be detached from the processor and Intel offers a lifetime guarantee on the fan. Removing the fan reveals three contacts on top of the chip: two of these power the fan and the third provides monitoring of the fan's performance.

The P24T can monitor the fan speed and, in the event of failure, will switch down from its 83MHz clock speed to the bus speed of the processor. Although this will provide a performance loss it stops the chip overheating. Intel provides a small Windows utility that can monitor the fan and notify you if it breaks, though the resulting loss of performance as the processor slows down to bus speed does

make this superfluous. One thing the processor will not do is switch back up to 83MHz when the fan is replaced, so if you stop the fan with your finger, or if a cable in your PC fouls it momentarily, the processor will drop down to bus speed and you will have to reboot your machine to convince it that the fan is now working. Should you upgrade your PC? In our VNU Labs we have experienced some problems with PCs and P24T overdrive chips, particularly with older PCs, so unless you are sure that your PC's BIOS can support a P24T you would probably be better off buying a DX4 and using the price difference to upgrade your memory.

### Pentium Overdrive

#### Performance Graph



■ 486 ■ P24T

### PCW Verdict

If you have a BIOS and cache that can take advantage of a P24T, then it represents a reasonable upgrade. Many people will be better off with a DX4.

Price £219

Contact Intel 01793 403000

## SOFTWARE

# OfficeBlox

This OLE-compatible component software can make all the difference to the way you work. Users of small hard disks or slow processors should take special note, says Adele Dyer.

AlphaBlox is the first global components company to ship Windows 95 and Office 95 compliant component software. OfficeBlox is its first product and is built as OLE-compatible component software. Put in non-technical terms, the product is a series of building blocks which can be added to any files of any OLE 2 applications or which can receive files from the same applications.

The five components themselves are a means of storing words (NoteBlox), lists (ListBlox) and doing calculations (CalcBlox). ToolBlox, a toolbar, controls their operation and WorkBlox creates an area in which to store your work. The functionality of each can be added to simply by downloading code from AlphaBlox's Web site. Thereafter, you can add only the components you need: as a result, each component is initially low on functionality but high on adaptability.

This has advantages and disadvantages when compared with larger applications. Firstly, OfficeBlox needs very little resources: only 2Mb of hard disk space. On the down side, compared with an application such as Microsoft Office, OfficeBlox at first seems a little crude in its implementation.

It is suspiciously easy to use and the size of the manuals does nothing to allay your fears: you expect a textbook to arrive with a new application, not 15cm<sup>2</sup> little booklets containing only eight pages of explanation. You can learn to use most of the functions of OfficeBlox in about half an hour, but this does not mean they are just toys.

Toolbox is the first element which can be used to improve your working methods. The first improvement is provided by the ToolBlox. From here you can launch any of the Blox as well as any MS Office application or documents you choose to include on the toolbar. (Eventually,

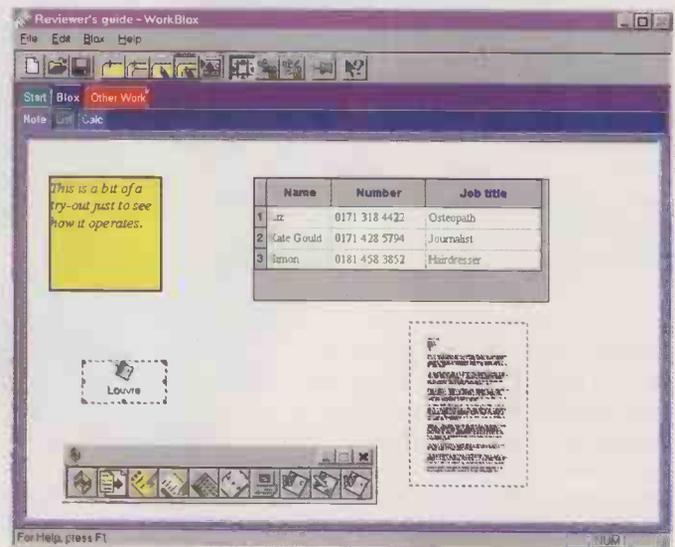
OfficeBlox will support any OLE 2 application but there is no fixed date for that at present.) It also works as a source for dragging and dropping any application you wish to embed. You can open a frequently used Word document from the ToolBlox, add a CalcBlox to do a specific calculation and then stick in a NoteBlox to make additional notes to yourself.

Another improvement to your working environment is supplied by WorkBlox. It looks like a filing cabinet, into which you can drop your documents. You can add as many tabs and subtabs as you need to organise your work and mix different types of documents within those tabs. Documents can be copied to make multiple entries under different tabs.

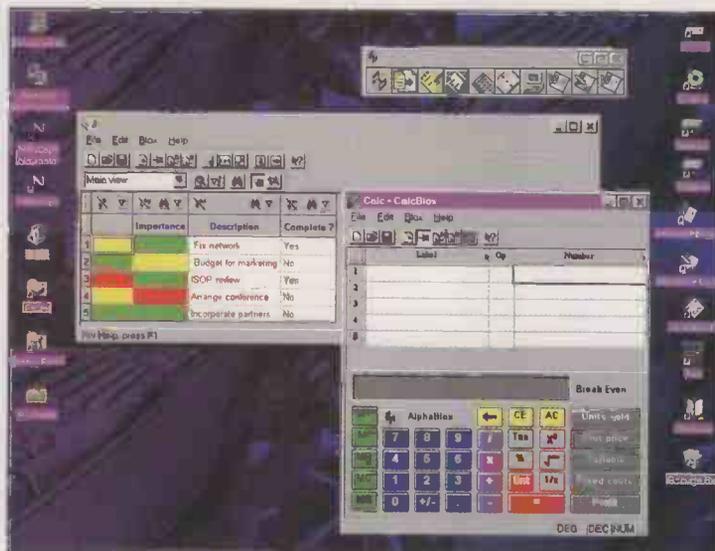
The structure of OfficeBlox takes a little getting used to after a continuous diet

of applications, and the differences require a change in your working practices. For example, with NoteBlox you can create little notes to yourself and others which can be posted anywhere. The functionality is nothing like Word's or even Write's, but it does allow you to easily drop text into whatever setting you choose. You achieve more satisfactory results, for example, by dropping a note into an Excel spreadsheet than by embedding it in a Word document. The simplicity of the design makes advanced functionality look like child's play.

You are advised not to throw away MS Office just yet: AlphaBlox removes the need to open these vast applications so often, but it does not replace them. OfficeBlox rather supplements the most commonly used functions of Office, but saves you processor time. For instance, instead of launching a large Excel spreadsheet each time you want to perform a quick calculation on some recent



Above  
Workblox lets you store and view many different file formats together



Left  
Each component has a specific purpose. Information can be dragged and dropped between them



# Imagine what Adobe has done with PageMaker



Of course you know Adobe Illustrator™ and Adobe Photoshop™. They're innovative. They're creative. They're brilliant. New PageMaker™ 6.0 from Adobe lives up to the standards they set. Try it. Check out fifty (count them) new features. Create layouts that do absolute justice to your ideas. You won't want to design page layouts in any other way again.

You need speed. You'll work faster with multiple master pages, with Adobe Photoshop 'hot-links' for quick image editing, and with hundreds of other features. Even apply special effect filters from within PageMaker itself.

You want convenience. We provide it. Be sure of accurate and consistent colour from start to finish with the Kodak Precision Colour Management System. Ensure that your pages will print within the dimensions of your selected output device's paper or film, with the Print Fit view facility.

You expect innovation. You won't be disappointed. For Internet publishing and other electronic distribution you can create Adobe Acrobat™ PDF files and convert PageMaker files to HTML from within the program. You can also extend your colour capabilities beyond the standard four process inks with HiFi colour.

Adobe PageMaker 6.0 works in perfect harmony with all our other products. So you can be sure of seamless compatibility and great results, from creation through to assembly and on to delivery.

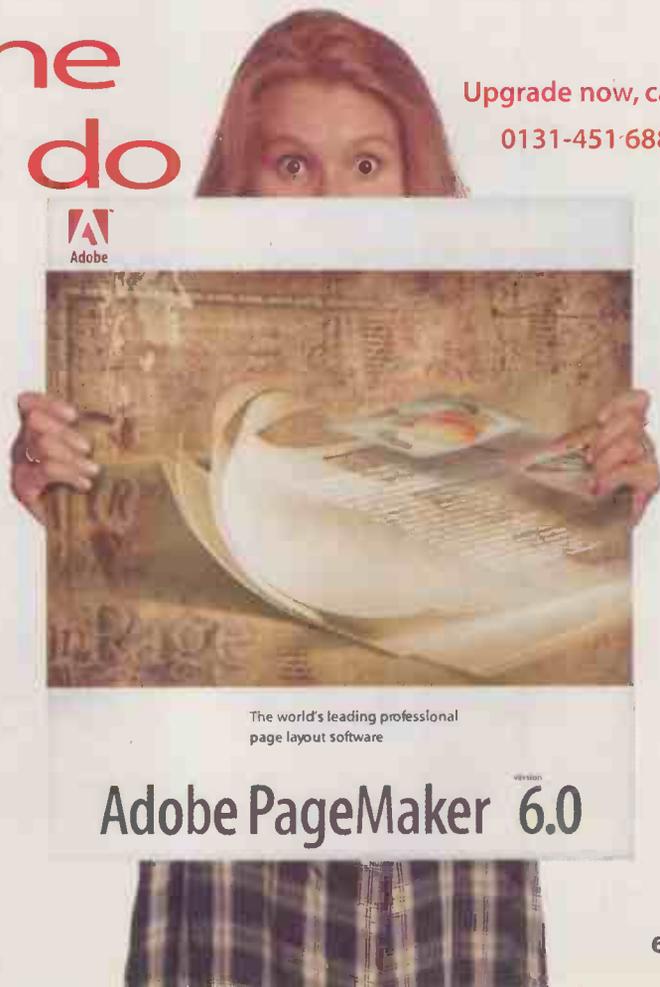
We've done a stunning job with Adobe PageMaker 6.0. Now it's your turn.

For more information call 0181-606 4000 or contact your local reseller. Alternatively read [www.Adobe.com](http://www.Adobe.com).

## Then imagine what you can do

Upgrade now, call  
0131-451-6888

- Kodak Precision Colour Management System
- Grouping, Locking, Trapping and Masking
- Adobe Acrobat compatible
- Multiple Master Pages
- Adobe Photoshop 'hot-links' and Special Effects
- Kodak Photo CD support
- Print Fit View
- HTML Authoring



It's everything you imagine

The world's leading professional page layout software

### Adobe PageMaker 6.0

This advertisement, including the Create, Assemble, Deliver characters, was created using Adobe software. Adobe, the Adobe logo, and Adobe Photoshop, Adobe Illustrator, Adobe PageMaker and Adobe Acrobat are trademarks of Adobe Systems Incorporated or its subsidiaries and may be registered in certain jurisdictions. Kodak is a trademark of Eastman Kodak Company.

figures you could keep the figures in a ListBlox, export them to a CalcBlox and embed the results in a NoteBlox, then use Microsoft Mail to send them to a colleague. Any figures stored in the ListBlox can then be exported to Excel by dragging and dropping. As a result you work in real time and are not held up by

having to load cumbersome files several times a day or by having them running in the background. They are ideal for low-end business users, allowing significant freedom of working methods but more importantly, for those with low clock-speed processors, the ability to work in real time.

### PCW Verdict

An excellent working package specially for use with small hard disks and low clock-speed processors.

Price £69.96 until 17th November; £99.95 thereafter

Contact AlphaBlox 01628 777475;  
<http://www.blox.com>, [uksales@Blox.com](mailto:uksales@Blox.com)

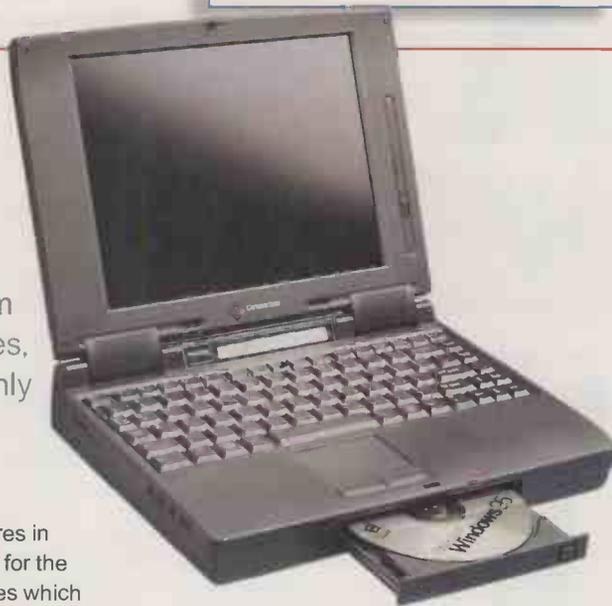
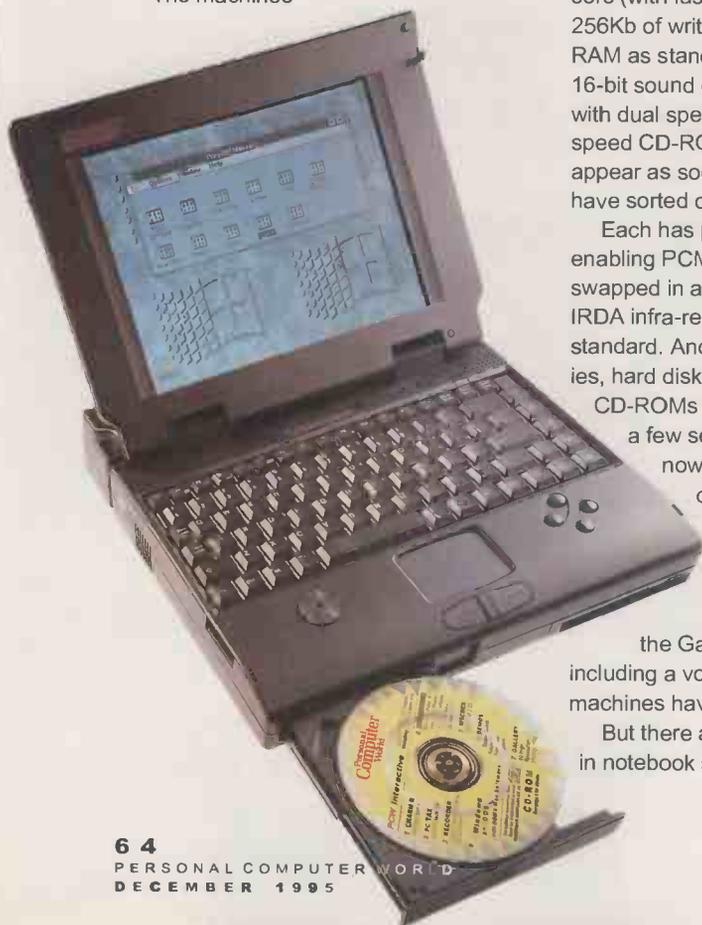
## HARDWARE

# Gateway Solo and Hi-Grade Notino

The latest notebooks come equipped with Pentium processors, CD-ROM drives and sound capabilities, Ben Tisdall agonises over two able contenders, only to be seduced by Japanese elegance.

Notebooks are going multimedia in a big way. Everywhere, manufacturers are using fast Pentium processors, whipping out floppy disk drives in favour of CD-drives, building sound onto motherboards and concealing stereo speakers. The Gateway 2000 Solo and Hi-Grade's Notino are two of the latest and the cheapest with starting prices of less than £2,500.

The machines



have a number of features in common. They've gone for the trackpad pointing devices which first appeared on Apple Powerbooks. These are easy to get the hang of, don't suffer from "sticky ball" syndrome which often affects trackballs, and there's plenty of space to rest your wrists in front of the keyboard.

They have 75MHz Pentium processors (with faster versions promised), 256Kb of write-back cache and 8Mb of RAM as standard. Both have on-board 16-bit sound capability and are fitted with dual speed CD-ROM drives (quad speed CD-ROMs for notebooks will appear as soon as the manufacturers have sorted out power requirements).

Each has plug and play BIOS, enabling PCMCIA cards to be hot-swapped in and out, and support the IRDA infra-red communications standard. And they're modular so batteries, hard disks, floppy drives and

CD-ROMs can be slotted in and out in a few seconds. Both go for the now almost standard LCD indicator screen at the back of the keyboard and both have jacks for a microphone, headphones and midi on the side, although the Gateway gilds the lily by including a volume control, too. Both machines have port replicator bars.

But there are differences. The trend in notebook screen technology is

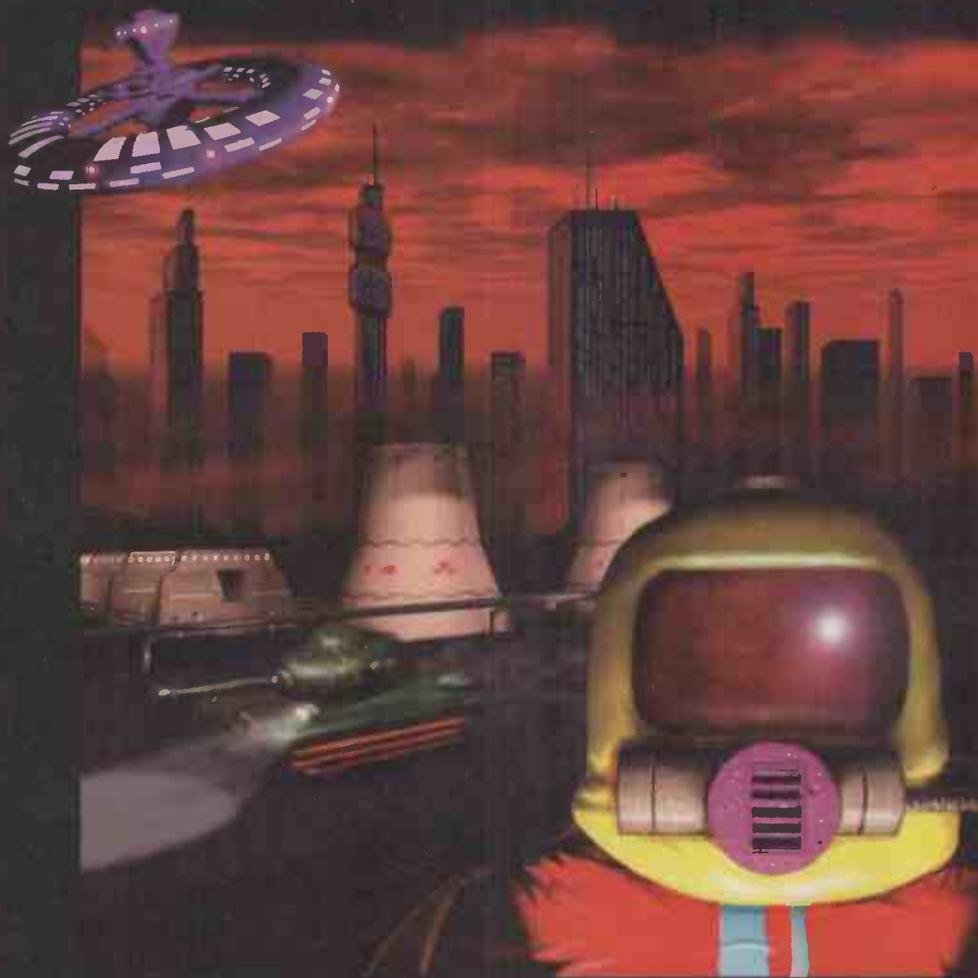
towards active matrix screens at the SVGA resolution of 800 x 600. These refresh faster and prevent the mouse pointer submarining (disappearing) as you move it around. Gateway has gone fully active matrix. The dazzling 10.4in SVGA screen on our review machine would cost you extra. Hi-Grade still offers a slower dual-scan screen on its entry-level machine.

The Hi-Grade has nickel metal hydride batteries while the Solo goes for the more leading edge lithium ion battery technology. The entry level Solo has a 720Mb hard disk, while on the Hi-Grade it's 500Mb.

Take a closer look at the styling and detail of the two machines and it's the Gateway which has the edge. Partly because it has a CD or floppy drive, rather than both, the case is more compact. There are neat touches like the contoured plastic moulding, the way the speakers are built into the hinges and the special Windows 95 key. The Gateway weighs less than the Hi-Grade, too, and its power supply is lighter and smaller. It has a ghetto blaster-type connector rather than the bulkier kettle lead variety.

The Hi-Grade does, however, offer the option of an internal adaptor which fits into the battery compartment.

*Riveting arcade action!*



**Includes:**

- Wicked 3D rendered images
- Futuristic digital soundtracks

**LUNAR FOX**



- Intelligent enemy tanks
- Fractal terrain landscapes
- 20 levels of play

**NEUTRINO**



- Random & chain-reaction events
- Varying balls, particles & paddles
- Up to 70 additional levels of play

**NOVA 3**



- Eight 3D rendered chambers
- Enhanced weaponry
- 24 levels of play

**For Windows**

**COREL**  
**ARCADE MANIA™**

*More multimedia fun from Corel:*



Wild Cards™



Wild Board Games™



All-Movie Guide™



Bernard of Hollywood's™  
Marilyn



November 20-21, 1995, London, England  
For independent CorelDRAW  
and Corel VENTURA user groups.  
Tel.: 01248 853080 Fax: 01248 713757

**SiMPLY**  
**COMPUTERS**  
TEL: 0181 523 4020

KUR-013F

**COREL®**  
0800 581028  
<http://www.corel.com>  
Corel Service Centre  
Channel MarketMakers  
Tel: +44 01703 814142  
Fax: +44 01703 813830  
**10,000,000 CD-ROMs shipped!**

Whether you prefer the black Hi-Grade or the dark grey Solo is a matter of taste. The overall look of the Taiwanese-made Notino is a year or two behind the Japanese-designed Solo. Yet the Notino has a couple of tricks of its own. For example, it's the only notebook I've seen with a built-in games joystick, and promised soon is an MPEG/TV Tuner module to fit into the floppy disk drive bay.

There's little to choose between the two keyboards. Gateway's goes to the trouble of lining up the touchpad with the space bar so it's easily to hand for touch typists, but it's a trivial difference. And it

sports a couple of fairly pointless, but harmless Windows 95 keys for the Start button and right-clicking. On the performance front there's barely a fag paper between the two machines' performance levels. In our Doom frame-rate test both scored just under 22.5fps: disappointing results for Pentium-based PCs.

The Notino arrived a couple of weeks before the Gateway and I became quite attached to it. Yet just a short time with the Solo was enough to cause a complete switch of loyalties. The Gateway is a better thought out and more complete machine that illustrates the gap between Taiwanese and Japanese design.

### PCW Verdict

Both notebooks are capable, well specified and competitively priced. But it's the more compact, stylish Gateway Solo which gets my vote.

#### Gateway Solo

**Price** £2,499 (75MHz Pentium, 8Mb RAM, 720Mb hard disk, active matrix screen)

**Contact** Gateway 0800 172000.

Fax 00353 1 848 2022

#### Hi-Grade Notino

**Price** £2,125 (75MHz Pentium, 8Mb RAM, 500Mb hard disk, dual-scan screen)

**Contact** Hi-Grade 0181 591 9040.

Fax 0181 591 1586

## HARDWARE

# Evesham Platinum 133MHz

This big, chunky, high-performance machine leaves little space on your desk for a telephone and a cup of coffee but is nevertheless well designed. Ben Tisdall gives it the thumbs up.

**A**lthough Evesham Micros doesn't quite get mentioned in the same breath as Dell or Compaq, it's firmly up there with the likes of Viglen, Elonex and Dan Technology and now turns over £45

million, annually. The name betrays its age. When the company started, 12 years ago, PCs were still called micros.

The Vale Platinum PCI is Evesham's top of the range desktop. Despite the state of the art 133MHz Pentium processor, it's a traditional machine which arrives in a desk-gobbling steel case. Arrange the seriously large Zydec Pro speakers on either side and you're hard pushed to squeeze a coffee cup and a phone alongside.

As befits such a generously proportioned case, there's a nice chunky on/off switch at the front. To the left is a Toshiba XM-5302B quad-speed CD-ROM drive above a free drive bay for another device. Further along

there's a completely unnecessary clock-speed indicator and turbo

and reset buttons.

They're not recessed and far too easy to press accidentally.

Press the reset button and you lose your work. As for the turbo button — I

once spent a couple of days wondering what was wrong with my PC before someone suggested I might

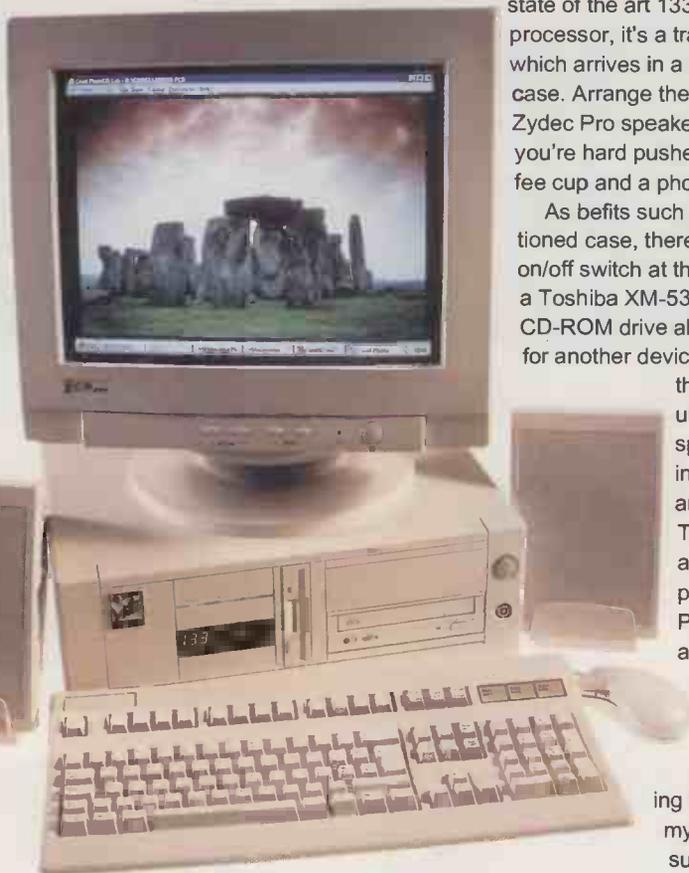
have inadvertently turned down the speed.

Three cross-head screws get you into the all-steel case to reveal an airy interior. There are spaces for two extra hard disks if you need more space than the Seagate 1Gb EIDE drive, fitted to our review machine, provides.

Other components are tidily arranged. The Intel Advance/EV Baby AT sized motherboard has the latest Triton PCI chipset, three ISA slots and four PCI slots. There's a special Card Edge Low Profile (Celp) for the 256Kb of second level write-back cache, and support for EDO (Extended Data Out) RAM or the cheaper standard DRAM. Our review machine had 16Mb of EDO, which is basically RAM with a small cache of its own. It's faster and reduces the need for second-level processor cacheing.

Diamond graphics cards are fast becoming an industry standard. So it's reassuring to discover that one of the PCI slots is filled with a Diamond Stealth 64 VRAM video card. It makes the machine a pleasure on which to run Doom, and the 2Mb of on-board memory will cope with 16.7m colours at 800 x 600 or 65,000 at 1024 x 768. The card has its own slim manual and comes with Diamond's easy-to-use InControl utilities.

One of the ISA slots contains a Diamond Telecommander 2500XL. This is a



# COMPLETE NETWORK SOLUTIONS FROM NETLAND

## LIFETIME MANUFACTURER'S WARRANTY

### PCMCIA Ethernet Adapter

- \* Credit-card sized PCMCIA Ethernet card
- \* Low power consumption; All components meet U.S. EPA Energy Star standards
- \* Uses NE2000 drivers; no additional drivers needed
- \* Conforms to IEEE 802.3 and fits Type I, II, III PCMCIA slots
- \* Media type auto detection (BNC & UTP)

### EN-5100 32-Bit PCI Bus Ethernet Adapter

- \* Single-chip solution for 32-bit PCI bus
- \* Supports Windows 95 plug & play function
- \* Low power consumption for green PCs
- \* 3-in-1 design supports AUI, BNC & UTP

### 2000 PXA Plug & Play Full-Duplex NE2000 Combo Turbo Adapter

- \* Full-duplex design doubles performance
- \* Plug & play, auto setup IRQ and I/O
- \* Configuration by jumpers or software
- \* Auto detection for media (BNC/UTP)
- \* Uses NE2000 drivers; no additional drivers needed

### SNMP Smart Hubs

- \* Stack up to 16 hubs to form a logical hub
- \* 12 UTP ports on each hub
- \* In-band, out of band SNMP management
- \* Supports MIB I, MIB II and repeater MIB
- \* Windows-based management software

### ER-5395T 5-Port Ethernet Hubs ER-5390T 8-Port Ethernet Hubs ER-5396T 16-Port Ethernet Hubs ER-5397T 32-Port Ethernet Hubs

- \* Automatic partitioning of bad ports
- \* Automatic polarity detection
- \* Hub status LEDs for easy diagnostics
- \* Conforms to IEEE 802.3 10Base-2, 10Base-5 and 10Base-T standards
- \* Supports 8 UTP ports + 1 BNC port for 8 port hubs
- \* Supports 16 UTP ports + 2 BNC/AUI ports for 16 port hubs

FOR QUANTITY DISCOUNTS PLEASE FAX YOUR REQUIREMENTS

**SNMP Smart Hub**  
only **£499**

**16 PORT HUB**  
only **£195**

**24 PORT HUB**  
only **£349**

**32 PORT HUB**  
only **£399**

**5 PORT HUB**  
only **£59.95**

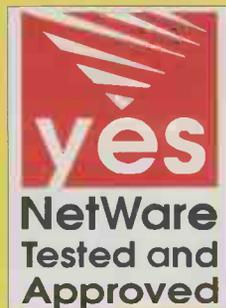
**8 PORT HUB**  
only **£89**

**PCMCIA**  
only **£79.95**

**PCI COMBO**  
only **£69.95**

**NE2000 TURBO COMBO**  
only **£24.95!**

**yes**



LIFETIME  
MANUFACTURER'S  
WARRANTY

## NEW PLUG & PLAY NE2000 TURBO COMBO - £32.95

### EP-3020 EPP Pocket Ethernet Adapter

*extra special* **£55**

- EN-3201 EISA Ethernet Combo Adapter
- EN-3200 MCA Bus Ethernet Combo Adapter
- EN-4300 32-Bit VESA Bus Ethernet Adapter
- 2000RA Jumper + Jumperless NE2000 Adapter

**2 PORT REPEATERS**  
only **£149**

**4 PORT REPEATERS**  
only **£199**

**EISA £129**  
**MCA £119**

**VL-BUS £129**

**NEW NE2000  
PLUG & PLAY**  
**£32.95**

**POCKET  
ADAPTER** **£55**

Lan Professional has a staff of 160, serving international LAN customers since 1986. Represented by Netland in the U.K. From Arcnet EtherNet and Token Ring to fast Ethernet, Lan professional is dedicated to providing the correct hardware for your network environment.

Unparalleled service, prompt shipping, and unlimited technical support are just a few good reasons why professionals choose Lan Professional.

If you are in LAN business, you should be acquainted with Lan Professional, and their complete line of communication products.

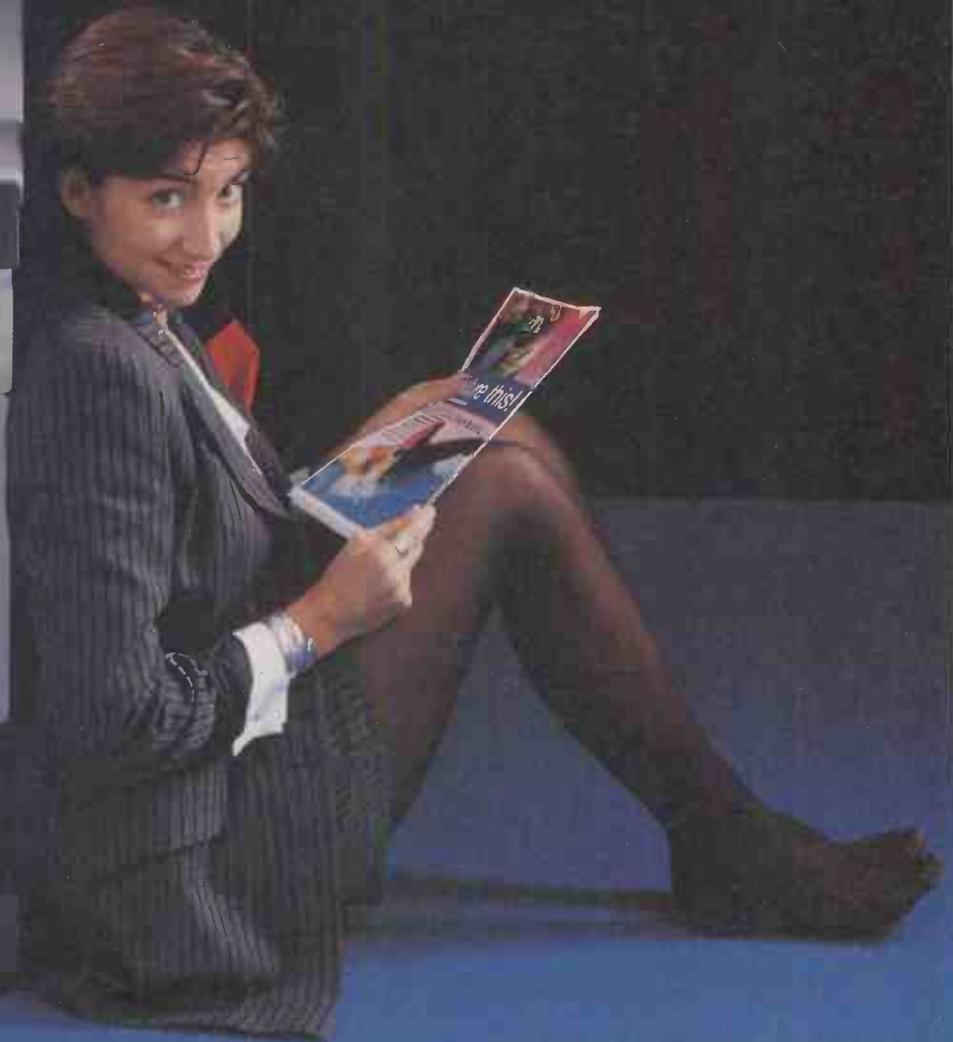
*Lan Professional*  
Authorised  
Distributor

**NETLAND NETWORKING** **NETLAND (UK) LIMITED**  
Unit 5F, Lynx Business Park,  
Newmarket, Cambs. CB8 7NY  
**TEL: 01638 720999**  
**FAX: 01638 721424**

**RING OR FAX ORDER TODAY**

**Is this fun** or am I just obsessed?

It doesn't get easier than this! One small, neat box does the lot! My Epson colour scanner. I can put dazzling illustrations in my documents. Input text or file documents straight to my PC. (No toiling at the keyboard.) Add a printer and churn out colour copies. And get seriously creative with free CorelDraw 4!



## The most fun you can have on a desk.

What will an Epson scanner do for you? Turn the power of your PC into the power of infinite output. And input!

Documents with added dazzle. Creative colour. Reams of text scanned in without retyping. Words or pictures lifted off *anything*. Easy faxing and email when you add a modem. How did you do without it?

The new 2400dpi\* GT-5000, for around £350<sup>†</sup>, makes perfect sense at work or at home. The unique GT-5000

### The **NEW** Epson GT-5000 Scanner.

package includes *PhotoPaint 5* and *CorelDraw 4* for effortless retouching and design. Xerox document management software puts a whole office on your desk. You can go paperless, scanning documents to file on your PC. And add an award-winning 720dpi Epson Stylus Color inkjet for instant, photo-real printing or copying.

All that in a box that won't hog your desk or dent your wallet. But why stop there? There are two more award-winners from Epson. The 3200dpi\* GT-8500 at £540<sup>†</sup> and 4800dpi\* GT-9000 with 30-bit colour at £630<sup>†</sup>. Both available with brilliant document, text and imaging software for your PC.

The bestselling Epson GT range. Scanners for everybody. And about time too!

*Find out what an Epson scanner can do for you.*



Return the coupon,  
email [info@epson.co.uk](mailto:info@epson.co.uk)  
or call free on **0800 220456**.

*I want more information. Send me info on the GT range.  
Send Epson's Scantastic Scanning Guide   
Or the free Epson CD-ROM guide to scanning/printing*

Name \_\_\_\_\_ Job Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_ Tel \_\_\_\_\_

To: Freepost, Epson UK Ltd, Campus 100, Maylands Ave., Hemel Hempstead, Herts HP2 8BR.



PCW-DEC-GT

# EPSON®

Epson is a registered trademark and Epson Stylus a trademark of Seiko Epson Corporation, 80 Harashinden Hirooka, Shiojiri-Shi, Nagano-Ken, 399-07 Japan \*Interpolated resolution. †Prices are approximate and exclude VAT.

multi-function fax/modem, sound and messaging card. It turns your PC, armed with a suitable printer, into a plain paper fax machine/answering machine. It also enables speed dialing and allows you to receive files from any ITU/TSS T.434 Binary File Transfer (BFT) compatible program. At the time of writing, the card wasn't quite BAPT approved, although it should be by the time you read this. Call Evesham to check.

I liked the Keytronics Windows 95 keyboard. It's somewhere between spongy and clicky in feel. The Windows 95 keys either side of the space bar bring up the Start button, and there's a key to

the right of the space bar which has the effect of a right click.

And there's nothing wrong with the rather unusual-looking 17in Ecoscan monitor. The controls were easy to use and the image was distortion free. There's a decent software bundle included: Encarta, MS Works for Windows, MS Golf, Scenes, Money, Dangerous Creatures and Photo CD software. There's a choice of Windows 3.11 or Windows 95 at the same price.

As this was the first 133MHz Pentium we've tested with Windows 95 benchmarks, comparison is difficult, but the preliminary figures looked about right

for this level of specification. Its Doom benchmark result (57.56 frames per second) was excellent.

### PCWVerdict

A good-looking, well-designed, high-performance machine with just a couple of niggles: the oversized case, and that reset button.

**Price** As tested £2,528 plus £150 approx for the Telecommander

**Contact** Evesham 01386 765500.

Fax 01386 765 354

## SOFTWARE

# Cubasis Audio

Steinberg's Cubasis has been given a tune-up and now includes a new stereo sampling facility. It heralds the end of traditional four-track recording, says Steven Helstrip.

Steinberg has added audio capability to Cubasis, its entry-level version of Cubase. In addition to its 60 tracks for recording MIDI, Cubasis Audio enables you to record and play back up to four stereo tracks of sampled audio — that could be a live guitar, sax, vocals or a combination of these.

Over the years, Cubase has established itself as the industry-standard music sequencing package and is distinguished by its ease of use and intuitive interface. Cubasis Audio is no different and maintains many of the features found in the full version. These include a similar arrange window; score, piano role and lists editors; a toolbox allowing you to quickly edit parts; and drop-down menus containing many of the same functions as before.

To get Cubasis Audio up and running, you need a Windows-compatible 16-bit sound card; see January's sound card group test. Once you're wired for sound, it's easier to install than it is to carry this magazine from your doorstep to the living room.

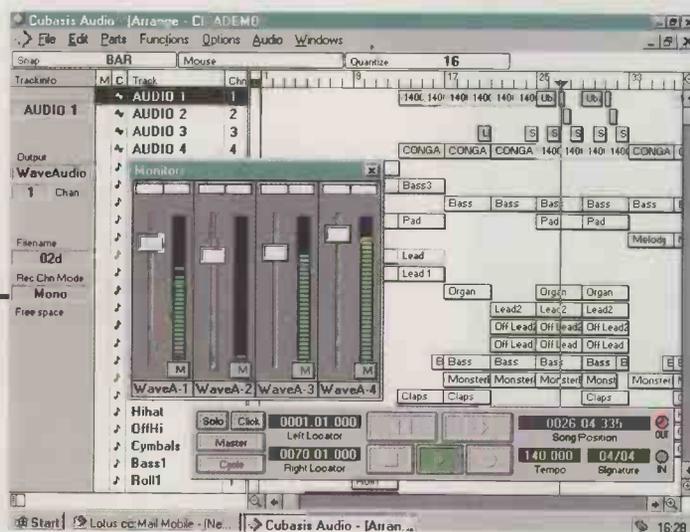
Given the size of sound files (around 10Mb per minute for a stereo track recorded at 44.1kHz), audio is recorded direct to disk unless you have a few gigabytes of RAM to spare. Therefore, a fast enhanced IDE (EIDE) or SCSI drive is essential. Utilities are supplied with Cubasis Audio to test the performance of your

*The mixer provides overall track level and a pan pot when using mono samples*

hard drive and at the same time tell you how many audio tracks you can play simultaneously.

Our test machine, an Elonex P90 fitted with 20Mb RAM and 540Mb SCSI hard disk, had no problems playing four stereo tracks sampled at 44.1kHz. Systems with slower hard disks may only be able to play two or three mono tracks and at lower sampling rates.

In the arrange window, audio tracks can be identified by a wave symbol in the track info column. Other than the way audio tracks are recorded (which first requires you to give it a filename) audio parts can be treated in pretty much the same way as MIDI parts: you can move them around; copy and drag audio parts to other sections in a song; parts can be glued together; and sections can be cut



out and/or deleted. What you can't do is quantise or fine-tune any performances. More of which later.

Audio is recorded as standard Windows wave, or .wav, files in either 11, 22 or 44.1kHz. You can record in mono or stereo, but you cannot combine the two within the same song. When you hit the record button you are given the usual two bars count-in. As with MIDI information, Cubasis records between the left and right locators and allows you to punch in and out as normal.

Unless you have a duplex sound card such as the Turtle Beach Tropez, you will not be able to record and play audio at the same time. None of Creative Labs'

# YOU SPEAK THE LANGUAGE

## NOW GET A WORD PROCESSOR THAT DOES TOO



### The languages you need

Produce documents in other languages like French, Greek, Russian, Spanish, Arabic or Hebrew. Accent™ lets you produce elegant and correct documents, no matter how many languages you use.

### The utilities you want

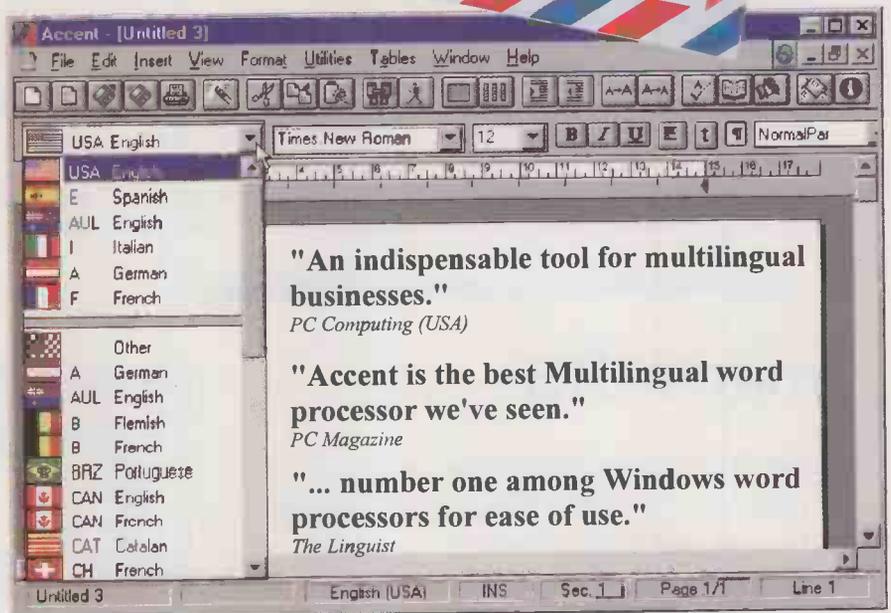
Spell checkers, thesaurus, hyphenation - plus the Berlitz® Interpreter™ for English, French, German, Spanish and Italian!

### Easy and comfortable to use

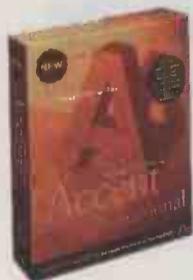
Accent makes it easy to work in the language you want. Not only can you change the language in which you're typing, but you can also change the menus, dialog boxes and on-line help.

### Wherever you go

Accent works with any language version of Windows® 3.1 and Windows® 95 so it can work wherever you do.



With Accent you can type in these languages: Arabic, Belorussian, Bulgarian, Croatian, Czech, Danish, Dutch, English, Finnish, Flemish, French, German, Greek, Hebrew, Hungarian, Icelandic, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovakian, Slovenian, Spanish, Swedish, Swiss-German, Turkish, Ukrainian



For further information visit your local dealer or call 01923 208435, or visit our Home Page on the Web at <http://www.accentsoft.com/>



**Accent LanguageWare™**  
Premium word processing  
for people who use more  
than just English.

Byte

Micro  
Anvika  
Computer  
solutions

JOHN LEWIS PARTNERSHIP

WARE  
HOUSE  
SOFTWARE WHOLESALE

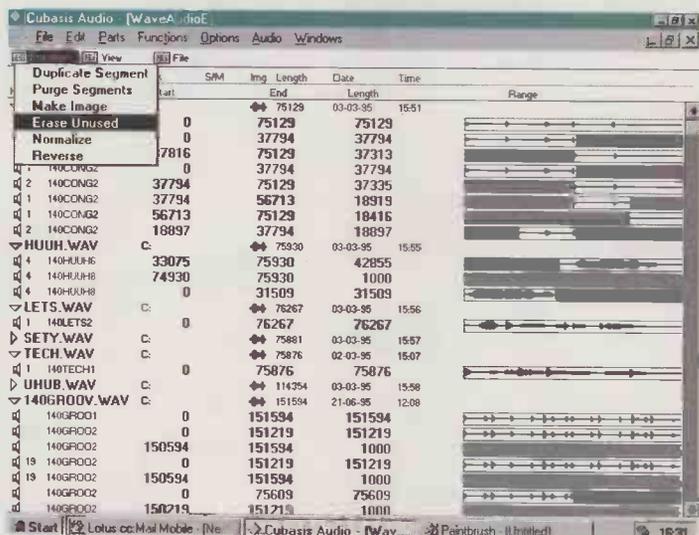
Power  
Mark

WATFORD  
COMPUTERS

ES.COM

TEMP

STAPLES  
The Office Superstore



Samples are managed from the audio pool. From here you can audition, copy and create new audio sections

completed the song you are working on, there is a "delete unused"

cards offer duplex audio as I write. In theory it is possible to use two cards, one for recording, the other for playback. That said, we tried this with a Roland RAP-10 and Creative's AWE-32, only to find it crashed the system. Steinberg assures us they have had this working on their test machine, however.

All editing in Cubasis Audio is non-destructive, which means any edits you perform won't change the original sound file. Instead, a new image is created, based on the original take. For example, say you have recorded a 16-bar vocal and you only want to keep the first two. Cubasis does not delete the last 14 bars, but makes a virtual copy of the first two. This, you may think, is a waste of hard disk space, but worry not. After you have

command which does just that.

After an audio part has been recorded, you can "chop up" the sections you want to keep and position them as you would with MIDI parts. If there are timing problems, each track can be offset and made to synchronise with any MIDI tracks.

All sound files are displayed in the Audio Pool dialogue. From here you can audition parts, copy sections and create new images. Images can also be dragged into the arrange window for use in the song. Drop-down menus in the Audio Pool allow you to optimise the gain of audio parts (the same as normalise), import sound files and reverse samples.

Once you have your audio tracks laid down and positioned correctly, you can

then use the audio mixer to get the best mix. This is a basic four-channel mixer with sliders for output level and pan position. One disappointment in this area is that you cannot record fades, or recall mixes at a later stage. And unless you have a 500MHz Pentium system, changes in volume don't happen in real time.

Another drawback with Cubasis Audio is that there is no sample editor. If you need to create a crossfade or fade out, you'll need to export the sound files to a dedicated sample editor, such as Fast-Eddie, then import it back. Well, you just can't have your cake and eat it, can you?

Overall, though, what you get for your money is a solid system that looks set to make the traditional four-track recorder redundant. Those already familiar with Cubase will only need a few hours to become proficient with this package and some excellent results can be achieved with a highly-specced system and the right sound card: we recommend at least a DX2/66 with 8Mb RAM and a Turtle Beach Tropez, or equivalent.

**PCW**Verdict

When used with a highly-specified PC and the right sound card, you can obtain some excellent results. However, even with our test machine some glitches did occur.

Price £211; upgrade from Cubasis, £102  
Contact Harman Audio 0181 207 5050

**SOFTWARE**

**ImageAXS**

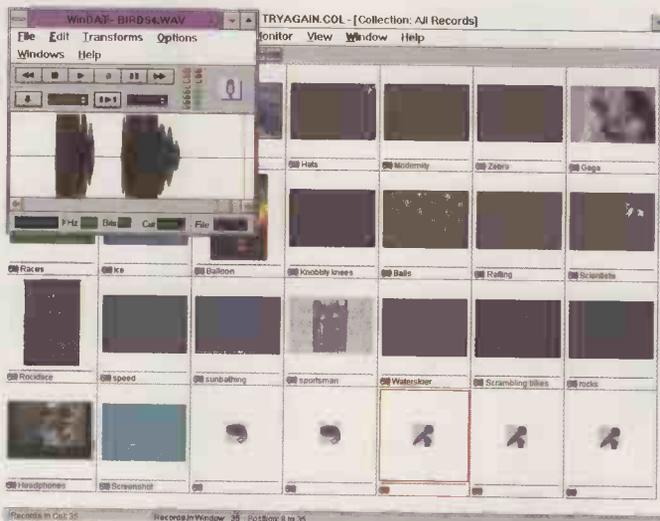
Adele Dyer goes through the looking-glass to assess New Media's ImageAXS image database and finds it easy to use, with impressive results, if a bit pricey against the competition.

Image databases have been around for a while and this one follows very much in the footsteps of Kodak Shoebox and Power Album from Softkey. They are a means of collecting together all your images without actually having to store all your image files in a single place, so cluttering up disk space unnecessarily.

New Media Solutions (NMS), an off-

shoot of Virgin, has distribution rights and has anglicised what was originally a US product.

Asked to produce an image database for Storm model agency, NMS discovered this software



Multiple file formats can be saved in each collection, including AVI movie files and WAV sound files

and approached its authors with a view to making it more widely available — a case of: "We liked the product so much we bought the right to sell it." NMS has already created products for various corporate clients, including a major car company, and is now launching ImageAXS onto the general market.

ImageAXS lets you catalogue your pictures, wherever they may be held. Instead of storing your images in one database, it creates a database of images with pointers to their locations, while at the same time creating thumbnail representations. Three-megabyte GIFs can therefore be replaced with thumbnails of only 128 x 128 pixels, allowing you access without crippling your hard disk.

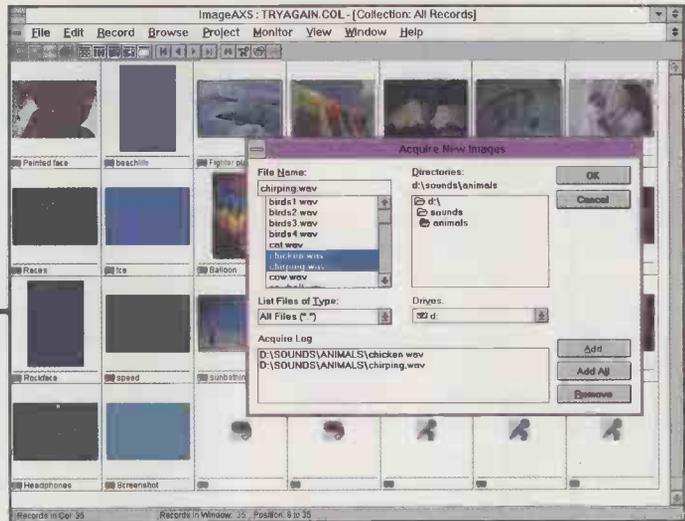
NMS is keen to stress that the users of this product do not need to be either graphics gurus or database nerds. Its interface is very simple to use and with a little application you can go from taking off the shrink-wrapping, to producing some fairly impressive results in an afternoon.

We began by creating a database which included PCD files taken from a Kodak PhotoCD collection, AVI movie

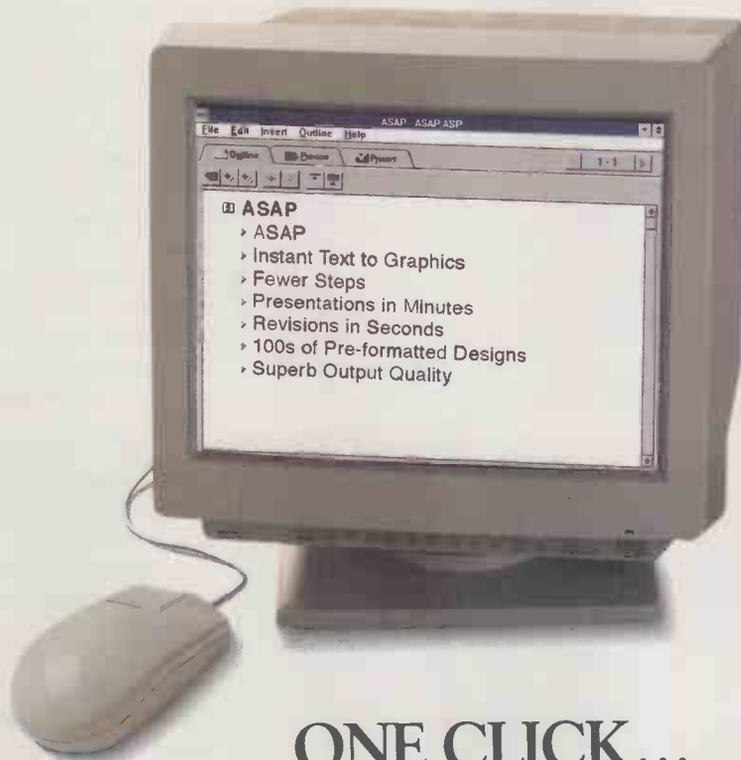
*Acquiring new images is simple and quick: thumbnails act as pointers to the actual files*

files and WAV sound files from the Softkey Multimedia Library CD-ROM. The package supports a reasonable selection of other file formats including BMP, TIF, TGA, PCX, GIF, EPS, JPG, WMF and JIF. As a cross-platform package you can happily point to either Macintosh or PC files on a CD-ROM, your hard disk or a remote site.

To create a collection, all you need to do is tell ImageAXS where to find the relevant files. It then takes over to create thumbnails, with blank records attached for you to fill in. Each record contains seven database fields which



can be tailored to each collection you create, allowing a description of up to 32,000 characters and keywords. There is no compulsion to fill in all of these, although as they can be used to facilitate searches it's an idea to cram in as much information as possible. In the case of the model agency, there was so much disagreement as to what should and should not go into the descriptions they decided to catalogue their models according to physical restrictions, set out



ONE CLICK...

in the database fields alone.

Collections can be subdivided into projects, allowing you to copy records from one collection into a smaller one. You can open as many projects as you want, so large databases can be broken down into more manageable and potentially more useful pieces. The real advantage is not the simple databasing of images, video and sound, but the ends to which you can use them. So long as you have access to the original files, you can view them, including AVI and WAV files, through the database without opening other applications.

Taken to its logical conclusion, the

package lets you run slide-shows either of an entire collection or on a more selective basis. These pull up the source files with alarming speed to roll through a show of images. Unfortunately, you cannot add videos to the slide-show as these need to be launched through a particular command.

If you want to see what is outside the database you have the option to monitor accessible material, even if it has not yet been collected, without leaving ImageAXS. This is of limited use. You can collect images into the monitor window, but you cannot view them unless they are JPGs with a thumbnail

already attached.

But this is really a minor gripe. The package is easy to use and can produce good results with little effort. However, since it does very much the same thing as Kodak Shoebox, it is a little overpriced.

### PCWVerdict

Very easy to use and you can create good results, although it is a little overpriced.

**Price** £149

**Contact** New Media Solutions  
0171 229 1708. Fax 0171 727 8200

## HARDWARE

# Xerox 4920

For small office workgroups looking for colour and black & white printing across mixed platforms, the 4920 offers a nice size at the right price. Eleanor Turton-Hill reports.

Up until recently, colour printing was considered by most computer users to be an expensive and unobtainable luxury. But massive changes in the printer market over the past couple of

years have got people used to the idea of producing colour documents. Many different technologies can be used to achieve this, but the most effective (and affordable) one to date is the inkjet.

Laser technology, of course,

gives much better-quality results than the inkjet but the printing process is far more complex, and consequently, colour lasers have not hit the mass-market in anything like the same way. Most colour lasers are massive pieces of equipment (about the size of a deep freeze) and cost several thousands of pounds, and this restricts their market to large corporate organisations and medium-sized businesses.

This latest printer from Xerox has a list price of £5,999, one of the cheapest colour lasers we've seen so far. It's also a lot smaller than previous offerings – not exactly a neat desktop device, but it can be lifted by two people and will fit on a largish desk. It measures 533 x 610 x 380mm and weighs 49kg. The 4920 is targeted at small office workgroups and attempts to cater for all printing needs, producing black and white documents at a speed of 12ppm and full colour at 3ppm.

The 4920 has Adobe PostScript Level 2 as standard, with optional PCL 5e. 24Mb memory is fitted out of the box, expandable to 48Mb. Ethernet and Token Ring network cards are optional. The engine will handle paper from 60 to 160gsm.

The design of this printer shows Xerox's experience in the printer market. It comes with all the necessary cartridges pre-installed and a "Getting Started" card showing how to set the whole thing up. As the cartridges are already in the



printer, there's no risk of spraying yourself with toner. All you have to do is remove a series of protective tags, fill it with paper and plug it in. There's nothing fiddly about this either; the top cover opens to reveal the entire innards of the printer and from here everything is clearly accessible — four toner cartridges containing yellow, magenta, cyan and black, two rollers at the back which guide the paper out of the machine, and a selection of colour balance controls on the left-hand side.

The paper tray opens towards the front of the machine at the bottom. It has a capacity of 250 sheets of ordinary paper, or 75 transparencies. This can be extended with an optional paper tray with the same capacity, which slots in below. We did have the odd paper-feeding problem, but this is easily resolved by opening the rear door of the machine and removing any stray sheets.

When it comes to quality of output, Xerox has developed several imaging enhancement techniques including Quad Dot technology, Smooth Screen technology and microfine toner which enhance various aspects of the printing process.

On the Xerox 4920, these techniques are referred to collectively as "Intelligent Colour" because the best image quality is applied automatically.

If you're experienced in tweaking your printer driver to provide the best possible effect, there are advanced options for customised adjustments. It is possible to adjust colour correction separately for text, graphics and halftone photographic elements. If you're not into fiddling around, the Intelligent Colour provides an "idiot button" pretty much like an automatic flash on a camera. This will apply the most suitable imaging methods to individual elements within a page, such as halftones, graphics or text.

In practice, the "intelligence" factor works better on some images than it does on others. We found that Xerox's smoothing technology worked exceptionally well on large blocks of dark colour. Lighter colours, on the other hand, tended to suffer from a very slight banding and shadowing effect. Compared to similar products however, the overall quality was excellent. Performance increase was marked on plain black and white text documents, and the quality of

output on these appeared crisp, showing the clear superiority of 600dpi resolution.

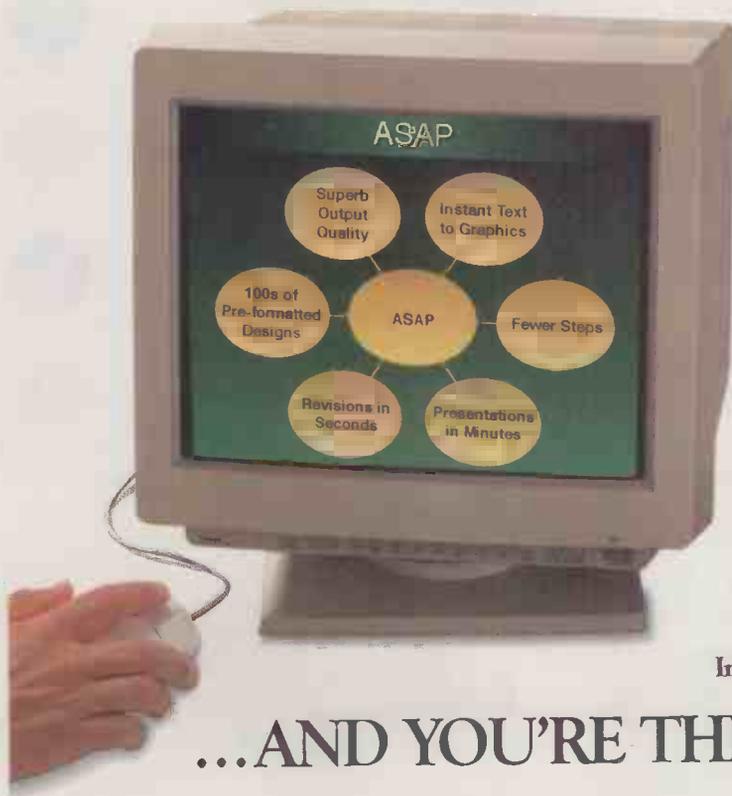
As well as its relatively low price and manageable size, this printer is also one of the easiest colour lasers we've come across to set up. The automatic driver features allow non-specialists to produce good-quality, well-balanced colour documents. It's also flexible across operating systems working with Macs, PCs, and workstations, and has built-in automatic sensing which allows you to talk to it in any language without having to reconfigure the control panel for each print job. This printer is a sensible choice for small- to medium-sized workgroups who need good-quality colour as well as a reliable office workhorse.

### PCWVerdict

Great buy for any office workgroup which needs black & white and colour capability, especially across mixed platforms. There are minor glitches in the "Intelligent Colour" technology, but otherwise, the 4920 is user-friendly, reasonably priced, and versatile.

Price £5999

Contact Xerox 01895 251133



If your presentations are taking you longer to produce than it's taking you to write them, you're ready for the ASAP™ revolution.

At a stroke, ASAP's Intelligent Formatting™ has taken the drudgery out of creating professional presentations. It's uncomplicated to use, there's no system to learn, no multiple disks to load, and no problem updating your presentation at literally the last second. Nothing gets your ideas across faster, better and easier than this.

ASAP for Windows lets you concentrate on content by taking care of the visuals.

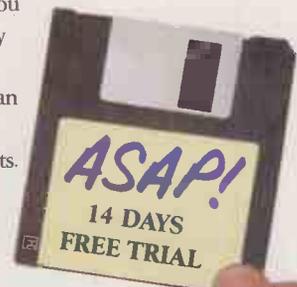
If you can type, you can create great reports, presentations and handouts. That's all there is to it!

**One call and it's yours  
free for 14 days!**

Tel: 0800 220977

Fax: 0131 4586990

Internet: <http://www.spc.com>



## ...AND YOU'RE THERE!

© 1995 Software Publishing Corporation. All rights reserved. The Harvard and Software Publishing Corporation logos are registered trademarks and ASAP and Intelligent Formatting are trademarks of Software Publishing Corporation. The Harvard product line is a group of products from Software Publishing Corporation and has no connection with Harvard University. Windows is a trademark of Microsoft Corporation. All trademarks referenced herein are the property of their respective owners.



Harvard VisuCom  
Visual Communications

SPC SOFTWARE  
PUBLISHING

# Feel The Power Of FreeHand 5



Feel the flexibility with dozens of new plug-in tools and palettes. Even use existing Illustrator plug-ins right within FreeHand!

Upgrade to the power of FreeHand 5 for just £99, or crossgrade from Illustrator, Coral Draw or Micromedia Designer for just £149\*. Call the upgrade hotline for details.

Feel the speed of working in the fastest WYSIWYG preview mode—faster than Illustrator and all the others!

Feel the power of page layout with text style sheets, spelling checker, columns, search & replace, copyfitting, linked text blocks, even multi-page support!

Feel the possibilities of special effects like Fisheye Lens, 3-D Rotation, Multi-colour gradients, Calligraphy Pen, even Drag & Drop colour!

Feel the precision of "snap-to" grids, guides, and points—plus magnification of up to 25,600% on a massive 22' x 22' pasteboard!

**32-bit native**

Supports Windows 3.1, NT and Windows 95.

**£450** SRP

**New FreeHand 5**

Includes 500 URW fonts and 10,000 pieces of clip art.

Can you feel it? Ultimate power and unlimited freedom in design and illustration. It's all here in the new FreeHand™ 5 the professionals choice. Every copy of FreeHand 5 ships with the amazing Showcase CD which is designed for digital designers

just like you. You'll see cutting edge work from artists, designers, desktop publishers, illustrators and the world of multimedia that will not only show you what's possible, it'll inspire you to turn your vision into reality.

So go ahead, take a leap into the future and feel the power of FreeHand 5 for yourself.

FOR UPGRADES AND INFORMATION  
☎ 0181 358 5855



\* For a limited period only. Macromedia is a registered trademark and FreeHand is a trademark of Macromedia, Inc. Other names are trademarks of their respective holders. © 1995 Macromedia, Inc. Prices exclude VAT and handling.



## SOFTWARE

# Teleshares 2.0

Stock market thrills and spills come direct to your PC with Updata's Teleshares 2.0. Andy Webb reckons aspiring City types will find this system pays for itself in no time.

Updata Software not only offers a range of investment packages aimed at the private investor, but has also become a market leader at using free Teletext data to feed those packages. Teleshares 2.0 can be combined with three different cards — Hauppage WinTV, Opt III Teletext, or Microtext. System requirements are not too demanding, so a 386 (DX for choice) with 4Mb RAM and 10Mb of free disk space will be able to cope.

The Microtext card used for this review takes up a standard ISA slot and uses the same circuitry as the text card in a TV. It's quite tall, so you have to be sure that you have clearance between it and any adjacent card, otherwise life could get expensive when you next power up. Tuning the card to the Teletext signal is handled by the software and takes less than two minutes. You aren't restricted to UK text services with this setup, so if reception is strong enough you can access European data as well.

The system is built around a series of lists and folders. The lists specify which text pages the software will strip from the text card. The program comes with eight lists already set up, but as the last four are duplicates you can alter these to suit yourself. The software only scans one list at a time, though you can switch lists manually and automatically. The fewer the pages in the list, the faster the refresh cycle; so it's worth deleting any irrelevant pages. Each item on a list has a template (Updata calls it a "mask") that ensures only relevant data is stripped from the page.

The folders allow the data collected from the lists to be grouped in a meaningful manner. The software arrives with ten system folders already set up for markets ranging from commodities to investment trusts. You can create your own customised folders by selecting individual items from the system folders, so if you lust for a page full of obscure Middle Eastern currencies, you simply select the ones you want from the relevant folder and add them to a page. The

folders continually accumulate the data from the card into a database for each security. The data can be manually edited in case of errors, or exported to other applications in a variety of popular formats. You can even import data and graft it to an existing Updata file.

Teleshares offers DDE links to other Windows applications. If you set up your share portfolio in an Excel spreadsheet and use the "Paste link" command, you can have its value updated throughout the day. At present, the only Teletext prices that are realtime (instantaneously updated) are the currencies and the FTSE index, while most other markets are refreshed on roughly a three-hour cycle. Any software that supports DDE

can take the free feed from Teleshares and, considering that the cheapest real-time data feeds start at about £1,200 a year (not including hardware), this looks a bit of a bargain.

The information in a custom window can be manipulated in several ways. You can choose to see the current or previous day's price, the highest/lowest price for the day, or the change on the day. A "Leaders and laggards" facility will sort the page in ascending/descending performance order. If you don't know the origin of a particular piece of data, a "Source" command will put the Teletext page number next to the name of the security. At present, the source of the data cannot be changed, so if Updata has decided that ICI's share price will come from Channel 4 not BBC2, tough. This can be bad news if there is a transmission problem on one channel and you are left with no alternative data source. Updata says this will be revised in the next release.

News stories are split into various categories — City, general, company — and can be displayed as they break or saved

PZST CEEFAX 201 MON 4 SEP 11:2		BBC		INTERBANK RATES 11	
\$	FriCIs	MonLst	£	FriCIs	Mo
£	1.5538	1.5590	\$	1.5538	1.
DM	1.4645	1.4593	DM	2.2755	2.
Y	97.35	97.35	Y	151.26	15
SFr	1.1985	1.1960	SFr	1.8622	1.
FFr	5.0512	5.0388	FFr	7.8486	7.
BFr	30.12	30.02	BFr	46.81	4
DF1	1.6410	1.6360	DF1	2.5498	2.
DKr	5.6900	5.6750	DKr	8.8411	8.
SKr	7.3000	7.2950	SKr	11.3427	11.
NKr	6.4050	6.3900	NKr	9.9521	9.
L	1624.50	1622.50	L	2524.15	252
Pta	125.45	125.22	Pta	194.92	19
C\$	1.3427	1.3435	C\$	2.0863	2.
Ecu	1.2750	1.2800	Ecu	1.2187	1.
Source:		CEEFAX 201 Mon 4 Sep 11:2			
<b>BBC FINANCE</b> PACE OF UK MONETARY GROWTH QUICKENS RESERVES advance by underlying \$66m BURMAH CASTROL'S PROFITS nudge £60m RJB MINING leaps to £85m at halfway £/DM 2.2750 - 0.0005 Oil \$16.55 +0.25 £ index 84.7 +0 Nikkei 17,748.52 -372.21 FT-SE 3517.3 +7.9 at 11:29 News index 202 SHARECHECK 2					

With Teleshares you can access Teletext financial pages — you don't even need a TV

for later viewing. If you want to view complete Teletext pages as you would see them on a TV screen, you can do that too. The program also screens incoming data for errors so you shouldn't wind up with a database full of garbage. You can even go on holiday and leave your PC to gather data in your absence by setting a software data capture timer. The only additional costs involved before you are up and running with Teleshare, are an

aerial and a colour TV licence.

There isn't much to pick fault with. It's not a clever move to have loads of windows open simultaneously or the program starts hogging system resources to run the refresh cycle. I ran the package on a DX2/66 with 8Mb of RAM and by the time I had eight text pages open, Word 6.0 (where I was trying to write this review) was going like a snail on sedatives. That aside, Teleshare looks like a winner.

### PCWVerdict

A neat idea that will save the keen investor serious money.

**Price** £249 for Microtext card and Teleshare bundle

**Contact** Updata 0181 874 4747 or Optimum Technology 0181 203 0220

## SOFTWARE

# Autoroute Express for Psion Series 3a

Clive Akass was in no hurry to chuck away his well-thumbed road atlas for any new-fangled nonsense. But Autoroute Express might just have changed his mind.

The marriage of Autoroute journey-planning software to the Psion 3a organiser brings together two of the more successful British computer products of recent years. It allows you to plan the best route between any two of 7,200 locations and estimate the journey time, all in a pocket device. And it will even replan a route to take account of traffic jams. The question is whether, given the inevitably limited display capabilities of a palmtop, it can do better than the

eminently portable and supremely readable pages of a tupenny-hapenny road atlas.

The designers have gone all out to prove that it can. Hotkeys allow you to zoom easily in and out of both text and map screens, and you can select the level of detail to avoid cluttered screens. Scrolling map views is awkward: you have to press a hotkey, then hold down the cursor-key for the required direction; the edge of the map shifts, leaving a

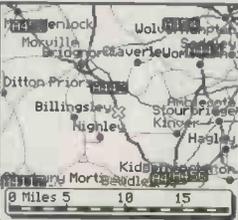
blank space, and you press Enter when you guess the view has shifted as required. Only then is the map redrawn.

The Psion's diamond key cycles you through three main views: map, table of written directions, and split map/table. There are hotkeys for most important control functions, but you can navigate the program just as easily via the menu key. One aspect jars until you get used to it: the dialogue box in which you enter your start point and destination is summoned by an obscure option labelled Route/Calculate — which surely implies the calculation of data already entered. However, you can opt for this dialogue to come up automatically on start-up.

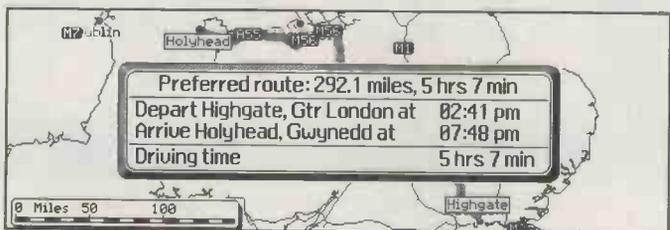
You can also specify roads and locations to avoid, and set defaults such as your home location and average speeds for different road conditions.

Autoroute Express for the Psion comes on a 1Mb ROM card and is sold under the Microsoft Home brand — Bill Gates bought the company last year. It will work on any 3a with 512Kb of RAM or above.

Time	Miles	Ins
03:07 pm	0.0	DEPART Highgate (G
03:10 pm	0.8	Turn left onto
03:17 pm	3.0	Bear left onto
03:18 pm	3.6	Turn off onto
03:22 pm	5.2	Stay on the
04:40 pm	79.7	At M1 J19 turn off on



**Top** *Autoroute allows you to tab between a route table, a map, or a view of both*



Preferred route: 292.1 miles, 5 hrs 7 min	
Depart Highgate, Gtr London at	02:41 pm
Arrive Holyhead, Gwynedd at	07:48 pm
Driving time	5 hrs 7 min

**Middle** *You get an estimate of journey time*



**Below** *You can zoom easily in and out of maps*

### PCWVerdict

Quart-sized application crammed onto a pint-sized platform, but works well enough to compensate for occasional clumsiness.

**Price** £69.95.

**Contacts** Microsoft 01734 270000, fax 01734 270002; Psion Dacom 0171 262 5580, fax 0171 258 7340

**IN THE REAL WORLD,  
NOTHING STANDS STILL.**

**IN THE REAL WORLD,  
NO TWO COMPANIES ARE THE SAME.**

**IN THE REAL WORLD,  
YOU NEED CHOICES.**

**IN THE REAL WORLD, YOU NEED  
ONE OF THREE NEW SYSTEMS  
FROM APRICOT.**



**MORE POWER  
TO MORE  
PEOPLE  
FOR MORE  
APPLICATIONS  
FOR THE  
FORESEEABLE  
FUTURE.**

CALL FREE ON

**0800 212422**



To: Apricot Computers Ltd. 3500 Parkside, Birmingham Business Park, Birmingham B37 7YS. Please send me information on the Apricot range.

Name \_\_\_\_\_

Company \_\_\_\_\_ Title \_\_\_\_\_

No. of employees \_\_\_\_\_ No. of PCs in company \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Network? Novell  Unix  None

Other \_\_\_\_\_

apricot

MITSUBISHI ELECTRIC

**GET IN FRONT.  
GET IN FRONT OF AN APRICOT.**

Very, very seldom does the PC market witness a launch of this significance.

In one sweeping move, Apricot is launching not one, but three new ranges, based on a careful study of the real-world needs of the end user.

And all built around a completely new range of Apricot motherboards designed to optimise the performance of Intel's family of Pentium® processors and setting new standards for reliability, upgradeability and expandability.

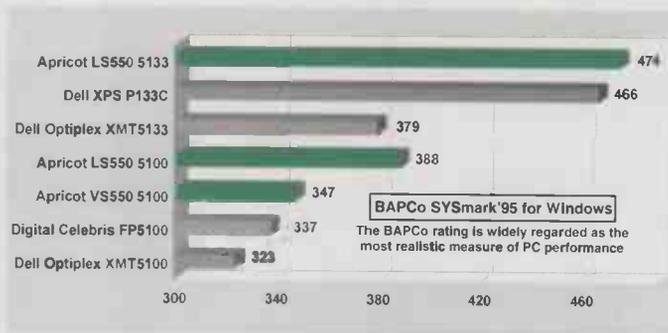
In the Apricot LS series, we've addressed the high-end corporate user. Every model is network-ready, backed by superlative power for handling the rich data types used in workgroup applications. This power is matched by integral features such as quad-speed CD-ROM drives and business audio on most models.

In the Apricot VS series, we've met the need for keenly priced PCs for business with the expandability and advanced feature set necessary to keep pace with ever-more-power-hungry software and guarantee the longest-possible working life for the system.

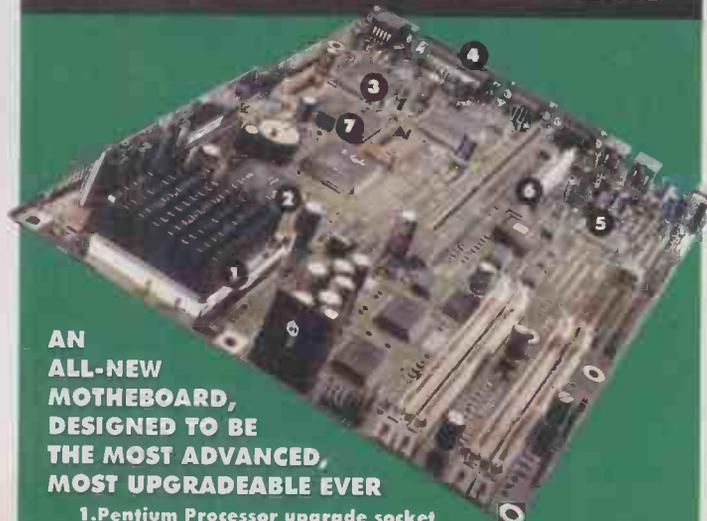
In the Apricot MS range, we've taken the multimedia PC to new heights, with unprecedented power for the domestic environment, backed by gilt-edged multimedia components. We've also paid special attention to the system's functionality and ease-of-use, often neglected in so-called "home" PCs.

So examine carefully the specifications for each range. We're confident you won't find a better match for your needs - whatever they are - from any other manufacturer.

Call us now for a full-colour brochure.



**THE HEART OF THE SYSTEMS**



**AN ALL-NEW MOTHERBOARD, DESIGNED TO BE THE MOST ADVANCED, MOST UPGRADEABLE EVER**

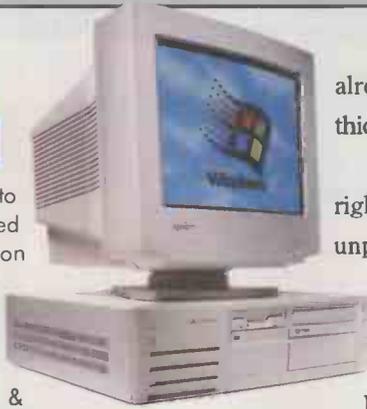
1. Pentium Processor upgrade socket
2. Intel Triton Chipset - Write Back cache architecture and dual PCI IDE ports for excellent bus performance in multimedia applications
3. Cirrus Logic Alpine controller with accelerated graphics and live video support
4. High-speed serial ports
5. Creative Labs Sound Blaster Vibra 16 option
6. Advanced power management
7. Up to 128Mb memory with EDO option.

All trademarks acknowledged. Intel Inside and Pentium Processor Logos are of the typical prices you will pay for Apricot products and do not include VAT.

## THE ULTIMATE INCARNATION OF THE NETWORKING BUSINESS PC.

### APRICOT LS 550 FROM £1499

Intel 75, 100 or 133MHz Pentium® processors • Up to 128Mb EDO RAM • Intel Triton Chipset • Socketed pipeline burst cache memory upgradeable to 256Kb on 100 & 133MHz models • Cirrus Logic Alpine GD5436 graphics accelerator with 2Mb DRAM on 100 & 133MHz models • High performance network interface from pre-installed 3Com 3C509B Ethernet card • Integrated quad-speed Sony CD-ROM & SoundBlaster audio on all models except LS550e • PCI & ISA expansion bus with 4 free slots (2xPCI) • 640 to 1.2Gb HDD • Power-saving standby mode with 2-second recovery



With networking from the market-leader 3Com already built in, you can literally "plug and go" on thick, thin or twisted pair networks.

Powered by Pentium processors from 75MHz right through to 133MHz, the Apricot LS series offers unprecedented futureproofing, with socketed video and cache memory for instant expansion and a motherboard immediately switchable for future processors.

In all but the entry level models, it boasts a quad-speed Sony CD-ROM, backed by the SoundBlaster Vibra 16 to create a cost-effective business multimedia platform.

## THE NEW STANDARD FOR BUDGET-PRICE PERFORMANCE.

### APRICOT VS 550 FROM £1249

Intel 75, 100 or 133MHz Pentium® processors • Desktop or mini tower configuration • Up to 128Mb EDO RAM • Intel Triton Chipset • Up to 256Kb socketed cache memory • Cirrus Logic Alpine GD5454 graphics accelerator with 1Mb RAM • 640 to 1.2Gb HDD • Dual high-speed serial ports • Multiple drive bays • Power-saving standby mode with 2-second recovery • PS/2 mouse & keyboard interfaces • Futureproof motherboard design with 5 free slots (2 x PCI)



Exceptional build-quality has always been a hallmark of Apricot PCs and the Apricot VS series is no exception: our Japanese-trained engineers supervise one of the most stringent quality management systems in the PC industry.

In desktop or tower configuration, the series represents the perfect balance between value-for-money and futureproofing, giving users a cost-effective system that can be easily expanded to meet their needs.

The advanced technical specification also includes a "low power" mode, activated either by a standby button on the front bezel or automatically. This switches off monitor, fan and hard disk to save both power and wear-and-tear.

## THE FIRST MULTIMEDIA PC YOU CAN REALLY FEEL AT HOME WITH.

### APRICOT MS 540 FROM £1399

Intel 75, 100 or 133MHz Pentium® processors • Up to 128Mb EDO RAM • Intel Triton Chipset • Up to 256Kb socketed cache memory • Cirrus Logic Alpine GD5436 graphics accelerator with 2Mb DRAM on 100 & 133MHz models • PCI & ISA expansion bus with 4 free slots (2 x PCI) • 850 to 1.2Gb HDD • Quad-speed Sony CD-ROM • Creative Labs SoundBlaster Vibra 16 processor • External 20-watt speakers • Power-saving standby mode with 2-second recovery • Futureproof motherboard design • Free software titles: WordPerfect Home Works, Lotus Organizer, Hutchinson Multimedia Encyclopedia, 3D World Atlas, Hi-Octane, Magic Carpet, Wing Commander III, Audition



The Apricot MS series is not only the best multimedia PC ever developed for the home, it also looks the part, with its stylishly curved front bezel concealing floppy drive and CD-ROM, plus a pair of independently amplified, high-performance speakers.

Its looks are underpinned by the same advanced technology as the

Apricot LS & VS series and backed by industry-leading multimedia components: a quad-speed CD-ROM from Sony and Creative Labs SoundBlaster audio technology.

trademarks of Intel Corporation. Microsoft, Windows and the Windows Logos are registered trademarks of the Microsoft Corporation. The prices shown will give you an indication. The motherboard featured is an Apricot LS550 motherboard. Windows®95 pre-installed as standard. Windows for Workgroups & MS-DOS 6.22 are available on request.

**PCW How You Can Contribute To The Long Term Tests Section**

We welcome contributions from readers for our Long Term Tests section. If you've been using a piece of hardware or software intensively for some time, just write a 450-word article (for hardware) or a 750-word piece with screenshot — GIF format — for software and send it on disk, in MS Word (Mac or PC) or ASCII format, to: The Editor, *Personal Computer World*, VNU House, 32-34 Broadwick Street, London W1A 2HG. Mark your envelope clearly "Long Term Tests". We'll pay for any contributions we use.

**HARDWARE****Epson GTi-8000 24-bit colour scanner****1** YEAR  
TEST

Marc Hindley has pushed his GTi-8000 to the limits. Speedy and reliable, it has proved up to the task every time.

I find it unusual that mechanical, electronic and household items are given vehicular names. I'm just waiting for turbo vacuum cleaners with intercoolers. But perhaps the 'i' suffix here is an apt analogy. While Epson GTx scanners come with a cut-down version of Adobe Photoshop, GTi scanners are bundled with the full version — fuel injection as standard, you might say.

My specification for this, my third scanner, was that it had to be 24-bit and bundled with the full version of Photoshop, so it was a case not of what software do I get with an Epson, but more what kind of scanner do I get with Photoshop. Sorry, Epson, but there's more difference between software than hardware here.

After installation, Adaptec SCSI in this case, calibration is the first thing you need to conquer, and I do mean conquer, because Epson seems to make a habit of bad documentation; and while printer installations are more or less self-navigable, scanners are not. In this case it's best to read right through the calibration procedure, then bear it all in mind as you go through the stages for real.

Having said that, once set up, the

scanner is reliable, sturdy and accurate, and has given uninterrupted performance over the past 12 months. If I were to reveal that I do up to 90 scans a week in mono and two in colour which are colour corrected, adjusted or edited, and separated within Photoshop, printed on a paper page printer with remarkable end results, most people in the media would find it hard to swallow; but it's absolutely true. This is why I must have Photoshop, and also why accurate calibration is essential.

Colour depth is a problem for all 24-bit scanners with dark images. The way to get round this is to alter the curve before you scan rather than after. It's easy to go too far, but you'll soon notice after scanning — nothing but experience will help. Rather than manually alter the curve, I find that between one and four clicks on the scroll bar (note, not the button) will give amazing results to dark pictures. Relying on software curves will not give the same results.

A tiny amount of space is claimed around the top and left edges of each scan — worthwhile bearing in mind but hardly ever a problem. The TWAIN front-end is comprehensive and allows individual setups to be named and stored, ideal if you have a large workload with differing requirements.

I may not have chosen the GTi-8000 for its own merits, but I cannot fault its speed and reliability. I push it to the limit, and it never fails.



*The GTi-8000 has been superseded by the GTi-9000, pictured here, which has won our Editor's Choice accolade*

**PCW Verdict**

The Epson GTi-8000 scanner has been discontinued and is very difficult to find. Interested users should look for the more recent and much improved GTi 8500 and GTi 9000 models, the latter winning Editor's Choice in our last scanner group test.

Price Epson GTi 8500 £769,  
Epson GTi 9000 £869  
Contact Epson UK 01442 61144

## HARDWARE

## Logitech Scanman 32

A bit long in the tooth it may be, but the venerable Scanman 32 can hold its own in low-cost, low-resolution scanning. Jonathan Thaw praises its usefulness.

The Logitech Scanman 32: outdated, outperformed and outclassed, maybe, but still on the market at a rock-bottom price. Computer operators may want scanners for one of three reasons: for scanning-in photographs, diagrams, or for OCR work. The Logitech Scanman can satisfy anyone's needs in terms of diagrams, some people's needs for photographs and a few people's OCR work. Thus is the dilemma of a scanner: what is it going to be used for? One thing the Scanman is not suitable for is

scanning large, high-quality photographs, but with a little improvisation and a bit of effort it can fulfill most of your needs.

The Scanman 32 was one of the first hand scanners on the market. It has a 10.5cm (4.25in) scanning area and can scan in black and white at up to 400dpi resolution. This means that it cannot, of course, scan full A4 pages of text in one go. These must be done in two strips, which is a good idea, but in practice, scanning a page in two strips is a little fiddly. However, surprisingly good results are obtained if you put a little effort into it.

The scanner achieves 32 levels of grey, unlike its big brother, the Scanman 256, which can handle 256 shades of grey. It is TWAIN compliant, meaning that it will work with almost all applications requiring a scanner. It is available for DOS and Windows. The Windows version was always a better buy due to the superior standard of the software included, and with the advent of Windows 95, the Windows version is essential. It comes complete with a dedicated controller card which fits into a spare 16-bit expansion slot.

Getting the thing to work is as easy as Microsoft intended plug-and-play hardware to be, as long as you don't have any conflicts with other cards. It comes with three main programs: the actual scanning utility, which is run from

inside other applications; Fototouch Colour, a photograph-editing program; and OmniPage Direct, a not half-bad attempt at an OCR application.

If, for example, you want to put a photograph into a piece of work, the process is quite straightforward. You tell

your word processor to insert a Fototouch Colour object. Once Fototouch Colour is loaded, you click on Acquire, the Scanman window opens, and you're ready to start your first scan. This is nearly always the first of several, as it can be

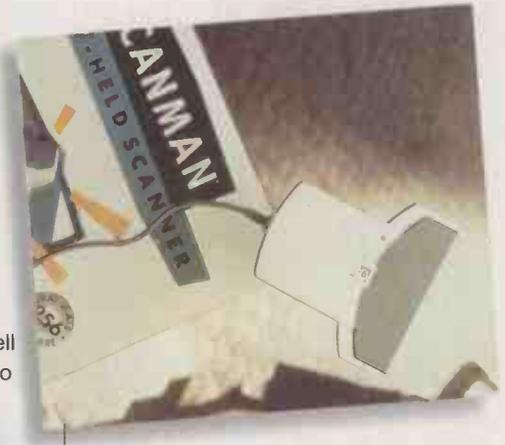
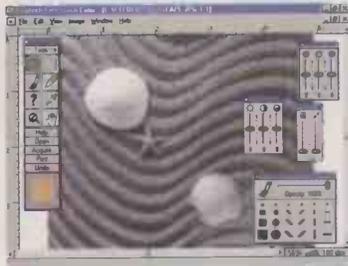
quite difficult scanning straight, at the right speed and at the right brightness.

Although a little primitive, the Scanman software allows you to select the paper orientation, calibrate the scanner and set whether it is Line Art (for diagrams) or Greyscale (for photos). The scanned image then appears magically in Fototouch for editing. Although a bit clumsy, this utility is quite useful and I usually use it to get rid of the stuff around the picture that I don't need; but if photo editing is your game, you would be better off using something like Photoshop.

When Fototouch is closed, the image is pasted into the word processor (usually in the form of a black & white blob, the quality of the printout being far superior). For diagrams, the Scanman could fulfil your every need (except colour) and with a little perseverance, the quality of scanned photographs is surprisingly good.

OCR work is a different matter. Omnipage Direct is a little application which sits quietly in your memory and "registers" itself with your applications, with the words "Acquire Text" appearing on your file menu. This is all very well if you are using Windows Write or Notepad, but when it comes to registering applications like Word, your whole computer is liable to give up.

The simple solution is to scan your



*Don't underestimate handscanners. They may not be so great for OCR, but small line art and photographs are fine. Here's a scan made with the Logitech Scanman 32, loaded into the supplied FotoTouch software. It may only support 32 grey levels, but remains a bargain buy while stocks last*

work into Notepad and copy it to the other applications. On selecting "Acquire Text", you are asked what type of text it is: it may be either continuous or in columns. Then you are confronted with the familiar Scanman window, which has the same settings as before. The groups of little black blobs scanned are then recognised by Direct (the speed depending on the resolution) and appear as text in Notepad. The quality of recognition varies from awful to quite good, but never stunning. The Scanman is only useful for occasional OCR work but can be handy and convenient when scanning smallish chunks of text.

If your use for a scanner is on an occasional basis, and you require diagrams, black & white photos and a bit of OCR, the Scanman is a must. It is simple to install, easy to use and, on the whole, produces good results. And at a knockdown price of about £60 you really can't go wrong.

### PCW Verdict

Multi-talented no, multi-useful yes; the Scanman 32 offers extraordinary low-cost, low-resolution scanning and at times can be incredibly useful.

Price £69

Contact Logitech 01344 894300

2 YEAR  
TEST

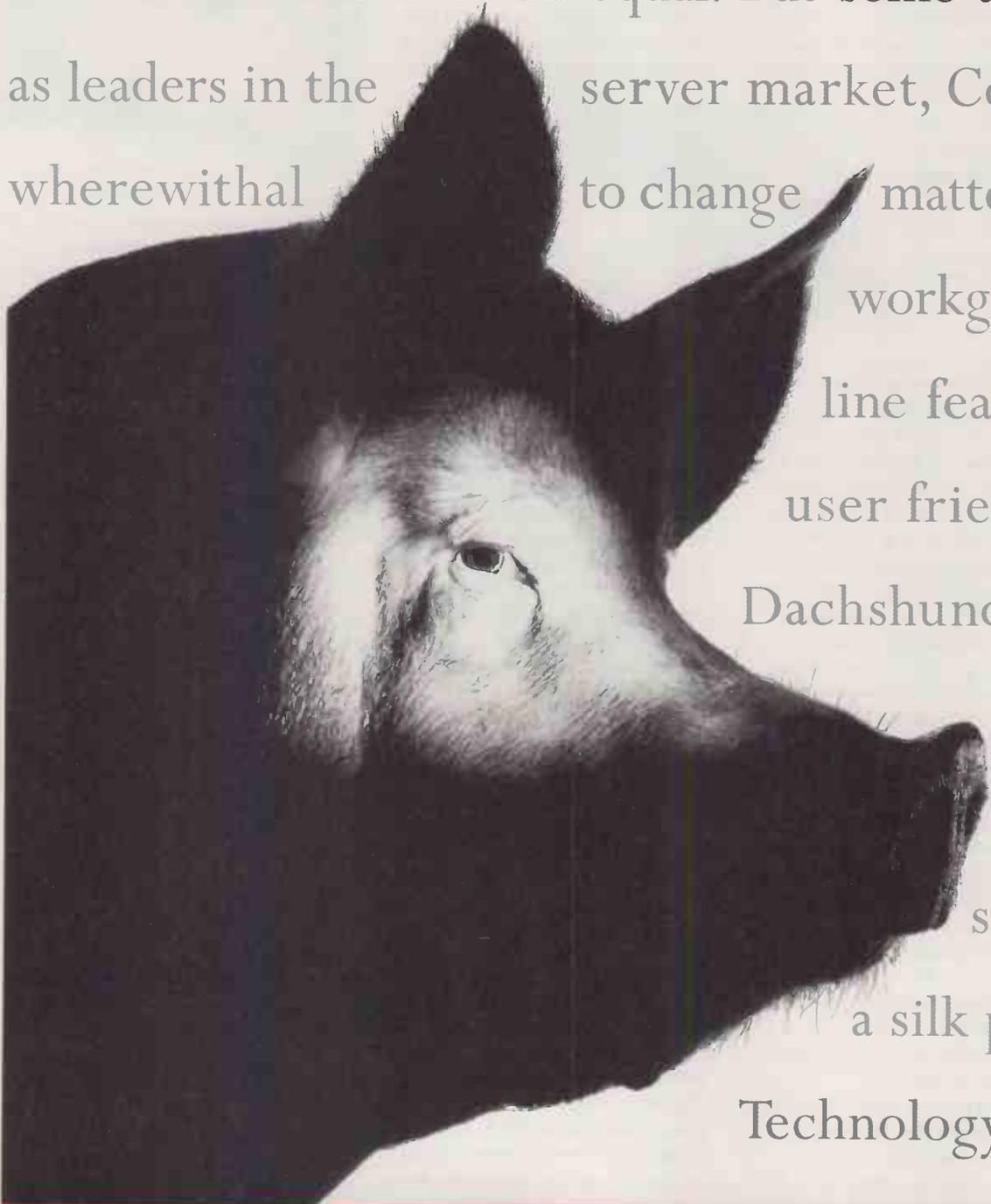
Running a workgroup is as important as running a mainframe. Why do computer manufacturers make workgroup servers on their major network servers? Surely everyone needs a server whatever the size of network. Apparently not.

"All animals are created equal. But some are more equal than others." As leaders in the server market, Compaq has decided to change matters. To workgroup servers.

workgroup servers. The new line features to make them user friendly. All the features of a Dachshund. You can't get a sow's ear.

workgroup servers. The new line features to make them user friendly. All the features of a Dachshund. You can't get a sow's ear. It's as vital as your own server, it's a silk purse in a pig's ear.

workgroup servers. The new line features to make them user friendly. All the features of a Dachshund. You can't get a sow's ear. It's as vital as your own server, it's a silk purse in a pig's ear. Technology gone saucer.



For more information, complete the coupon or

major network. So why do most  
 without the features available  
 deserves a powerful, reliable  
 not. As George Orwell put it;  
 equal than others." Happily,  
 had the owl-like wisdom and  
 it, the Compaq ProSignia. A  
 ver with a host of top-of-the-  
 make it reliable, powerful and  
 at a price as low as a legless  
 n't make a silk purse out of a  
 ar. So for something as  
 our workgroup  
 s better to buy  
 the first place.  
 ne. **COMPAQ**



THE IT MANAGER'S GUIDE TO A BETTER LIFE...THE COMPAQ PROSIGNIA FAMILY.

PROCESSOR



75, 90, 120MHz Pentium

MEMORY & STORAGE

16MB ECC RAM standard. Expandable to 208MB. Maximum total disk storage of 240.8GB.



SYSTEM ARCHITECTURE



64 Bit Triflex/PCI Architecture. Compaq's Triflex architecture provides excellent performance today and allows for upgradeability to future Pentium technology.

SMARTSTART

CD-based tool for integrating and installing systems software and databases to ensure optimal system configuration. Included with every ProSignia server.



INSIGHT MANAGER



Comprehensive SNMP-based server management tool for monitoring and controlling Compaq servers over the network or remotely. Included free of charge.

SERVICE AND SUPPORT

Three year warranty includes three years on site repair service and Compaq Uptime Pre-Failure warranty on memory and drive subsystems. If you identify a potential problem, we will replace the part free of charge, even before it fails.



AUTOMATIC SERVER RECOVERY



Automatic Server Recovery features enable Compaq servers to alert you in the event of a failure (by pager if necessary), and restart themselves.

SECURITY FEATURES

All ProSignia servers are equipped with a wide range of security features, including Diskette Boot Control, Serial Interface Control and Administrator's Password.



PRICE



From £2,315. (ProSignia 300 5/75 Model 1050 - 16MB ECC RAM, 1.05 GB fast - SCSI disk, 32 Bit NIC, CD - ROM)

For more information, complete the coupon or telephone us on **0990 23 24 25.**

Mr/Mrs/Ms (Initials) \_\_\_\_\_ Surname \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Telephone \_\_\_\_\_

Number of employees at your place of work?

We'd like to advise you of future products and offers. If you do not wish to receive these, tick here.  Send to Compaq Computer Ltd. FREEPOST, Mitre House, Canbury Park Road, Kingston-Upon-Thames, Surrey KT2 6BR.

PROS18

telephone us on 0990 23 24 25.

# Take 5

Print it, fax it, and copy it — three different machines; three times the outlay and three times the problems. The new, hybrid fax-cum-printer-cum-scanner machines for small or home office use combine all three functions in one and make a lot of sense, says **Simon Rockman**. Here, he tests a selection, from the easy-to-use to the high tech, and there's something to suit all pockets.

It makes a lot of sense: why buy three printers when you can have one? Whether you are setting up a small office as a sole trader, a regional branch or just working from home you'll need a computer, printer, fax machine and a photocopier. The likelihood is that you could end up with a tatty thermal printer spewing out rapidly browning paper from your cheap fax machine, a workaday printer (probably inkjet) attached to your computer and the expensive bits of a laser printer in your photocopier.

The systems reviewed here offer all the functionality of the basic office hardware. The devices from Hewlett-Packard, Xerox, Lumina, Canon and Ricoh each take a slightly different approach.

If you have a computer and a printer you might argue that all you need is a scanner and a fax modem, and from a technology point of view you'd be right. But leaving the computer on all the time in anticipation of an incoming fax is a far from satisfactory solution. And, while most systems will send and receive faxes while you work they slow down the rest of the functions so much that the system becomes pretty well unusable. Fax modems are fine for sending computer originated messages but once you want to include a hand-drawn diagram or annotation, the hassle of scanning, saving to the hard disk and then using the fax software is so great you usually don't bother. A British Telecom executive once said "Fax machines are not high-tech because they are easy to use." It's much

easier to feed a page into a slot rather than mess about with scanners. The machines reviewed here bridge the gap between easy to use and high technology.

## Lumina 2000

The Lumina 2000 is a very sensible device. It attacks what is currently the sweetest spot of the computer market and gets it just right.

The SoHo (small office/home office) market is more than just a fad. Many people will have a computer and a printer. They will want a fax machine and think it a crazy idea to buy a thermal fax when they already have a printer. The Lumina provides the missing bits: a scanner and modem which can observe the fax protocols.

Without a computer attached it's a send-only fax. Attach a printer and it becomes a fully-fledged fax machine — if you want a laser fax, this is the cheapest way to do it. Buy a Lumina and a very cheap laser printer: you will also reap the benefits of the low-priced consumables of a cheap laser. With an H-P Laserjet 4L at under £400 in the shops, it's a bit of a bargain. The printer varieties supported are LaserJet 2, 3 and 4, PostScript, Epson, ProPrinter and BubbleJet.

Hook up a PC (IBM compatible only, as unfortunately there is no Mac or odd-ball option) and you have a far more powerful machine. You can use it as a fax modem and access all its functions from Windows. The Lumina control panel runs under Windows and offers basic function

control, and you can edit and manipulate the phone book in the printer which saves a lot of hassle in bulk faxing. Especially so, as the alphabetic keyboard on the device is in alphabetical order (rather than QWERTY) which makes it very annoying to use.

With a Lumina 2000 at either end of the phone line you can send files using a binary transfer mode. This conforms to the T.434 standard so, in theory, you could also send data to a suitably equipped PC. A variation on this is a remote print option. Instead of sending a bitmap down the phone lines, two Lumina 2000s can communicate at a data level so that the phone line becomes a long printer cable. The result is that the print quality at the far end is as good as it would be locally.

You can scan images into memory and into the PC. TextBridge OCR software is included and works quite well. The communication between the computer and the Lumina is through a parallel cable, with a second parallel cable connecting the Lumina to the printer. Only one cable is supplied as Lumina assumes that if you already have a printer, you also have a cable.

There is sensible software scaling to allow for a non-printing area all around the image and this can be set to auto-detect the image before printing. In our tests the scan quality proved to be comparable with that of the H-P OfficeJet but not as good as the Xerox 3006.

As part of its home office repertoire, the Lumina has a phone connector for a

telephone answering machine, but as BT only charges £99 for a second line it is a sensible option for anyone who wants a fax at home — at least that way the ring can be silent so you won't get woken by faxes from overseas during the wee small hours of the night.

The documentation is excellent: it covers the hardware and software in one easy-to-follow guide. Its only downfall is the lack of an index.

The Lumina 2000 is an excellent product, but it does have one serious problem; the price. Small distributors are selling it for £550, which is £50 more than the OfficeJet with all its major features and a printer built in. You could argue that some people would rather have the

option to add their own printer, but to expect customers to pay more for less is

a trick only the marketing departments of flash German sports cars can pull off.



### PCW Details

#### Lumina 2000

Price £550

Contact Westwood Distribution  
01753 887161

**Verdict** A clever and well-engineered device. With a lower price it could be the market leader.

Whatever you do...

# Suit Yourself With Windows

## The Savile Row Pedigree

WinAccs is an exclusive suite of accounts software and it was the UK's first true Windows financial package. Since 1988, the authors have worked closely with Microsoft as a Beta test site and now as a Solution Provider, to provide businesses with powerful data sharing and multi-tasking capabilities.

## The Classic Style

The WinAccs report generator allows you to create your own style of management reports, invoice layouts, payslips and much more. It's so easy and simple to drag and drop the information into the layout that suits you.

## The Suit

This is where WinAccs really comes into its own, as you can fit WinAccs to your business needs with powerful and extensive add-on modules such as project costing or the fully integrated payroll.

## The Trend Setters

WinAccs is developed using the latest Microsoft tools so sharing and exchanging data with other applications (Microsoft Office) is simplicity itself. WinAccs looks and feels like the fashion leader it is!

WinAccs provides you with an off-the-peg solution to fit your individual needs.



Whatever you do, call today on 01442 870234 so you too can be dressed for serious business

**Microsoft**  
SOLUTION PROVIDER

Authorised by Microsoft

This should be £150 cheaper if it is to take on the might of Hewlett-Packard rather than compete at the edges.

### Hewlett-Packard OfficeJet LX

Whenever a Hewlett-Packard printer is included in a group test we secretly hope that there will be another printer able to give it a run for its money. It can be slightly dispiriting to begin a test in the frame of mind that the most obvious choice will in fact turn out to be the winner. But with this multifunction round-up there was some hope.

The Lumina and Ricoh machines each offer different approaches but ultimately it's the H-P which will suit most of the people most of the time. This is partly attributable to high standards of quality control but mainly due to the huge volumes in which H-P kit is manufactured. This makes it very difficult

for rival manufacturers to compete on price. The big mail-order discount companies work to very tight margins on Hewlett-Packard equipment which further reduces the price to the customer.

The OfficeJet LX uses the same 300dpi print engine as the DeskJet 520. This can be improved to 600 x 300 using H-P's resolution enhancement software but the final results are still not as good as the substantially more expensive Xerox. With the H-P, the areas of black fill in badly, making reversed out text difficult to read.

The device was supplied with comprehensive software support in the form of fax manager software and Eclipse which

allows the OfficeJet to work as a faxmodem. This saves on paper (although the running costs for this machine are already reasonable) and provides OCR. It allows the OfficeJet to work as a scanner, too.

You cannot use it as a modem — although much of the hardware is there you'll need a separate modem if you want to log in for a data call. This should not be much of a problem as even fast modems are now sensibly priced and, unlike the Xerox, the OfficeJet does not use a serial port, hence the connection is unencumbered. General faxmodem software can be used as the fax manager captures a virtual com3: and assigns it to the serial



### PCW Details

#### Hewlett-Packard OfficeJet LX

Price £650 RRP; £499 street

Contact Hewlett-Packard 01344 369222

Verdict Excellent value for money. It's the perfect solution for a growing number of people. A laser-based version would be even better.

port. The modem can, however, be used by H-P technical staff to exercise remote diagnostics, trouble-shooting down the line.

The documentation is excellent. Installation of the software and hardware is easy: the printer cable attaches deep underneath the OfficeJet which means turning the machine onto its side. Thus, if you want to swap leads to use another printer, it's easier to have several leads and disconnect at the computer end.

As a printer it works well, but as with all inkjets it is sensitive to the quality of paper. You might be best off keeping cheap photocopy paper in the tray for fax usage and replacing it with "best" chalk coated paper when you have an important document to print.

Most people will want a printer and fax and this machine performs those functions admirably. It's competitively priced against standalone plain paper faxes. You have the additional advantage of computer control over the phone book and the fax sending, which is all very much easier than fiddling about with a

keypad on the front of the unit. This alone would make it a good buy for many people.

The advantages of OCR and scanning are not quite so marked, but anyone who handles a lot of contracts by fax (or deals with a lot of drawings, for instance) will find it useful. It is not very good as a copier: the inkjet may be impressive for text and show no signs of banding, but it fills in shapes and therefore isn't a patch on a proper photocopier.

In the SoHo market, the size of the hardware is very important: people working in a box room or a cupboard under the stairs don't want to give up their limited space to hardware. The OfficeJet

may be substantially bigger than a simple inkjet printer but it nevertheless provides a good space saving over a printer and a separate fax.

### Canon B360

Canon is the company which seriously rivals H-P in the printer market, so the B360 with a similar specification to the OfficeJet was of particular interest.

A small, solid device; it is easy to set up with a photocopier-style paper tray, which affords it the greatest paper capacity (around 150 pages) of any inkjet reviewed here. With a cut-sheet feeder you cannot receive pages longer



### FCM Details

#### Canon B360

Price £1,295 RRP; under £1,000 street; software £100 (free until Christmas)

Contact Canon UK 0500 246246

Verdict A good buy, but just pipped at the post by the better value HP machine.

# Larger Monitors Higher Resolutions Higher Refresh Rates

How is

that possible???

It's easy:

## More Colors

with a

Stop the bottleneck in your PC with a

64- or 128-bit Graphic Accelerator from Number Nine.

## 64- or 128-bit

For any application – from Windows 3.1 to Windows 95, Multimedia to games, DTP to CAD, Warp to NT or complex picture publishing and for any budget – graphic boards from Number Nine speed up and accelerate your PC's performance.

## Graphic Accelerator

## from Number Nine!!!

NUMBER NINE  
VISUAL TECHNOLOGY  
2 Station Cottages  
Bagmore Lane  
Herriard, Hampshire, RG25 2PY  
Phone 01256-381194  
Fax 01256-381194



PERFORMANCE RAISED TO THE POWER OF 9.

**Imagine 128 / Pro**  
For power hungry Pentium users and graphic professionals who demand only the best performance

- 128-bit Graphic Processor
- 2, 4 or 8 MB VRAM
- Resolution up to 1600 x 1200
- with 16.8 Mio. colors
- RAMDAC up to 250 MHz
- Refresh Rates up to 200 Hz
- PCI Bus
- HawkEye for Windows

**9FX Motion 771**

The ultimate 64-bit VRAM card for demanding Windows and multimedia applications

- Graphic Processor S3 Vision 968 with Video Acceleration
- 2 or 4 MB VRAM
- Resolution up to 1600 x 1200
- True Color up to 1152 x 864
- 220 MHz RAMDAC
- Refresh Rates up to 150 Hz
- PCI or VESA Local Bus
- HawkEye for Windows
- MPEG Software Decoder

**9FX Motion 531**

Perfect for Windows, Multimedia and Games

- Graphic Processor S3 Vision 868 with Video Acceleration
- 1 or 2 MB DRAM
- Resolution up to 1280 x 1024
- True Color up to 800 x 600
- 135 MHz RAMDAC
- Refresh Rates up to 150 Hz
- PCI or VESA Local Bus
- HawkEye for Windows
- MPEG Software Decoder

**9FX Vision 330**

Ideal boost for Windows performance and DOS games acceleration

- Graphic Processor S3 Trio 64
- 1 or 2 MB DRAM
- Resolution up to 1280 x 1024
- True Color up to 800 x 600
- 135 MHz RAMDAC
- Refresh Rates up to 150 Hz
- PCI or VESA Local Bus
- HawkEye for Windows

For more information please send coupon to: Number Nine Visual Technology  
2 Station Cottages, Bagmore Lane, Herriard, Hampshire, RG25 2PY or  
fax to 01256-381194  
We are:  Enduser  Dealer  Distributor

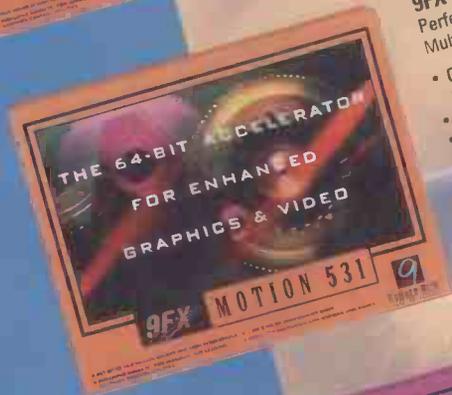
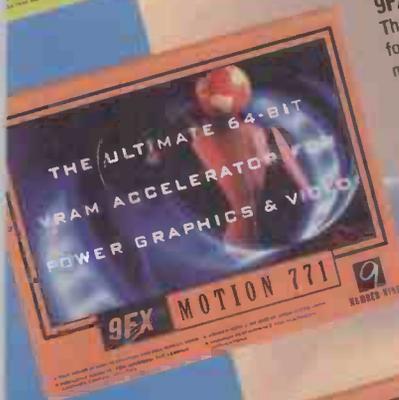
Name \_\_\_\_\_

Company \_\_\_\_\_

Street \_\_\_\_\_

Post Code, City \_\_\_\_\_

Phone / Fax \_\_\_\_\_



# Are YOU ready to dream?

Save £££s on Ray Dream's superb graphics programs now. Hurry, these prices only last until 31st October 1995.

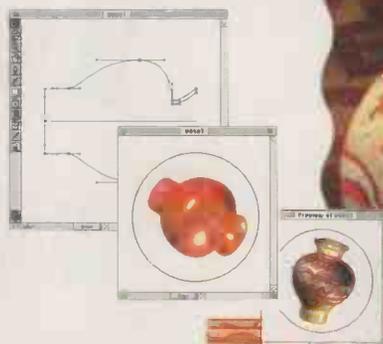
## Ray Dream Designer

"The quality of its rendered results are second to none", PC Pro



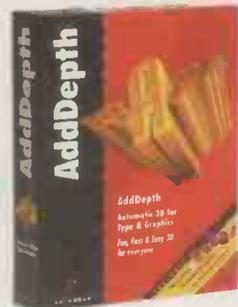
Highly acclaimed as the perfect multitasking graphics package for anyone who's serious about 3D art. Ray Dream Designer will lift your illustrations to another dimension, effortlessly. A tremendous bargain.

RRP ~~£275~~  
**£99.95**



## AddDepth

"If you want a 3D version of something flat, this is one of the simplest ways to do it", PC Pro



Let your ideas jump off the page with AddDepth, Ray Dream's high-res package that transforms flat art and drawings. This really effective 3D effects program is the best value you'll find.

RRP ~~£59.95~~  
**£39.95**

## JAG

"For anybody working with images, JAG is well worth investing in", MacUser



Turn jagged pixels into clean, crisp enhanced lines at a single mouse click with JAG – and enhance colour and brightness too. An absolute must for every graphics professional.

RRP ~~£39.95~~  
**£29.95**

## The Dream Pack

Save even more money when you buy all three together. The Dream Pack is the most incredible value in 3D graphics software today.

RRP ~~£334.95~~ **£129.95**

Contact the Reseller of your choice below to take advantage of these great prices. But hurry. This offer MUST end on 31st October 1995.

**window**line

Tel: 0181 401 1177  
Fax: 0181 401 1178

**Carrera**  
TECHNOLOGY

Tel: 0500 123486  
Fax: 0171 830 0286

**inmac**

Tel: 01344 301144  
or 01928 579345  
Fax: 0800 611116

than A4 onto a single sheet: the B360 will either split the fax across several pages or reduce it to fit, scaling either in proportion or vertically. This can be set from the front panel.

Both scanning and print quality are good: print quality proved to be better than that of the OfficeJet with less filling-in on reversed out text. (All tests were conducted using the same grade of paper.)

All communication between the B360 and the PC is down the parallel cable using proprietary MultiPASS software. This consists of two executables: the MultiPASS server and the MultiPASS Desktop Manager. You don't need to run the Desktop Manager the whole time but you do need to have the server running if you want to receive faxes to the PC (use the B360 printer drivers, or use the fax driver). In order for this to happen automatically, the server software is put into the Windows 3.11 startup group. If you disconnect the B360, a warning pops up. Repeatedly. The only way to stop this is to take the icon out of the program group. Canon is clearly used to people deleting the icon and then needing it again because a spare is provided in the Canon utilities group.

The MultiPASS software allows you to set up the fax with its number and your company name (much easier than using the keypad), but unfortunately these details are used only on the cover sheet. The page header information is still controlled by (and has to be set up on) the B360. The receiving fax option in the Desktop Manager allows the incoming

fax to be received in either PC memory, B360 memory, or printed. Pages can be scanned and saved as .BMP, .PCX or .TIF files. A meaningful file name of up to 24 characters can be used, even under Windows 3.11, although this needs the Desktop Manager to extract the name. The scanning ability is particularly useful for logos and signatures, which can then be sent in paperless form, from the PC. The Desktop Manager saves the huge waste of paper usually encountered with fax machines which insist on printing reports. The PC can read a log of messages.

Overall, the B360 falls somewhere between the H-P and the Xerox. It's better than the former but not as good as the latter, and the price reflects this. It looks good and occupies less desk space than the others. It did have a small problem with feeding a heavyweight original (all the others, bar the Ricoh, did too) but ultimately it's neither fish nor fowl.

Consider whether you are prepared to pay the extra for better print quality. Alternatively, if you want the best option but don't want to give up a serial port, the B360 is a good alternative to the Xerox. For some users, the higher paper capacity and a longer-lasting ink cartridge might appeal but it's bad enough being met by a small pile of papers on a Monday morning, let alone a large one.

In the home office, its small size, together with its ability to add a telephone answering machine are a bonus, and generally the excellent manual is worthy of praise even though computer operation is split between manuals for hardware and software.

### Xerox 3006

This is the slickest of the devices reviewed here and, in our tests, proved to have the best print and scanning quality. The 3006 is closest in mien to the H-P. It has a centronics parallel port at the back and can be set up as a fax or printer astonishingly easily. The point at which it differs is its ability to act as a scanner, or to fax from the PC. This is an optional extra, as with the Ricoh (and was supplied with the review machine). Setting up was simple and the documentation easy to follow. The printer drivers for the H-P 500 compatible printer option proved to be reliable under Windows 95 but had to be installed using a custom print program rather than the Windows '95 Add Printer option.

Upgrading to PC connectivity requires

a separate board and a serial lead. This means that anyone who has a modem and a mouse connected to their serial ports will need a third port to add the connectivity. The H-P solution of using the parallel port and trapping a virtual COM3 is cheaper and neater.

The 3006 is designed to be left on; it will receive faxes to memory while you are printing. The memory can hold 35 pages and can be expanded, with a 1.5Mb upgrade, to hold 115. This is battery backed up and will hold information for 24 hours.

The two-line LCD gives sensible reporting of the problems the device may be incurring and there is a menu system which is easy to follow. Although there are lots of buttons on the machine they make things less confusing since

### Conclusion



If all you want is a fax machine, go and buy one. A cheap fax machine costs less than £300 and will happily sit on a phone line and churn out thermal paper. If you need a photocopier you'd better buy one of those, too — none of the systems reviewed here really rival a proper office copier. There are much more expensive systems from Rank Xerox but they don't really compete in the small and home office sector. This is a shame, because of all your equipment needs, it is the one piece of machinery which will cost the most to run and need the most attention.

But if you sit somewhere in the middle ground, if you want something better than the crudest of fax machines and can live with the inadequacies of the copier functions of these machines, or if you're prepared to nip out to a local copy shop to get the more arduous work done, then these systems represent excellent value for money.

No-one should consider buying a fax machine and an inkjet printer when the OfficeJet and Canon will do the same job, better and cheaper. It's a plain paper fax machine at a competitive price and you get computer control, scanning, OCR and a decent inkjet printer thrown in.

If you already have a printer, the Lumina is an excellent system. You should make sure that it's a printer which will work well with the device but you'll have to pay for the privilege. The Xerox is the best money-no-object option but is it really worth paying more than double the HP price for a slightly better machine?

In judging the best compromise it is the HP OfficeJet which comes out top — it's a great machine to use and the cheapest both to buy and run.



most have only one function each (a welcome departure from the Sinclair Spectrum approach of having buttons with multiple functions).

The machine is very versatile: it can scan to its own memory while printing from the PC, copy a document while sending a fax from memory, and scan a document to memory while sending a fax from the PC. There is a comprehensive selection of polling and documentation features — the kind of thing no-one uses — and some useful features like the copy function which asks how many copies of a document you want.

The 3006 is supplied with three programs for use with the Connectivity option. The Fax/Printer setup lets you program the telephone directory, mailbox, fax and printer options. These can be uploaded into the fax's memory. So if you are a major corporation with regional offices, this feature alone may save a huge amount of time: it's the kind of

feature you'll love if, in another fit of lunacy, Ofcom decides to mess with the phone number of every fax machine in the country.

The PC fax software acts as an interface between the Xerox and the supplied copy of Delrina's Winfax Lite. This saves the cost of a fax modem but since that hardware is triflingly cheap compared with the Xerox it's no reason to buy the interface card.

The PC Scanning software uses the industry standard TWAIN driver — you should mention this at every opportunity because it sounds so silly, but it works well and allows you to save bitmaps by using a TWAIN compatible program. Xerox supplies the Textbridge OCR software, which works well.

The Xerox 3006 is the best device here. It has the best print quality, the biggest document memory and is very

### PCW Details

#### Xerox 3006

Price £1,139 RRP (PC interface £149)

Contact Xerox 0800 787787

**Verdict** Solid, well built and a good performer with easy-to-use controls. A bit pricey, though.

solidly built. But being the best is not the only criterion for buying something: it costs twice as much as the H-P and that seems too great a premium to justify the advantages. It is complicated to set up, too. The H-P puts the onus on the software which runs all the control through the parallel port. The Xerox requires a separate cable.

If you are in the market for a more sophisticated machine you should look at the laser-based Xeroxes. Again, they are expensive but offer even better print quality.

# TEXTBRIDGE

## PROFESSIONAL EDITION

Purchase TextBridge Professional  
between 24.08.95 & 31.12.95  
and receive a FREE upgrade to our  
Windows 95 version. Upgrade  
to TextBridge Pro from any OCR  
package before 31.12.95 for  
**£129**  
Call our upgrade centre on  
01743 814230



## True document understanding

In any OCR package the true test is accuracy.

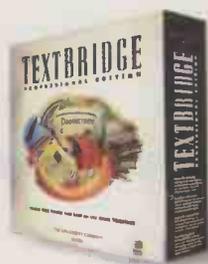
TextBridge Professional Edition not only delivers the highest quality of accuracy but also does much more besides. It actually re-constructs your documents just as if they had been re-typed – that goes for tables, columns and graphics as well as text – so not only do your scanned documents look the same, but you can edit them as well!

That's *true* document understanding.

- Advanced technology from Xerox delivers true accuracy

- One key stroke is all it takes to recognise faxes, photocopies and dot matrix pages
- Exclusive DocuRT™ technology re-creates cell tables to match the original, and even allows you to edit them
- Instant Access OCR™ enables you to use TextBridge from within your current Windows™ application

Call now on +44 (0)1734 668421 to learn about the latest OCR technology from Xerox.



THE DOCUMENT COMPANY  
**XEROX**

Unit 8, Suttons Business Park, Reading RG6 1AZ  
Tel: +44 (0)1734 668421 Fax: +44 (0)1734 261913

## Ricoh 2700L

The Ricoh 2700L is a fax machine — a big, industrial fax machine designed for high-volume work with a £2,000 price tag to match.

Ricoh has taken the approach that once you have the laser printer engine *in situ* it makes sense to add the electronics necessary to turn the device into a printer. This takes the form of a box hanging on the back of the machine, to provide a standard centronics port. The addition is very new and was supplied in pre-release form. A more comprehensive add-on — which adds control of the fax machine, faxing from and to the computer and scanning to the agenda — will be available soon. At present, the only way to send a fax from the computer is to use the printer, print it out, and then fax it.

Even on its own terms, the 2700L proved to be a disappointment. As a printer it's a very ordinary 10ppm laser at an extraordinary price. But as a fax machine it's an abomination. The user interface is impossibly crude. There is a menuing system but none of the options are presented in any kind of logical sense. The result is that you have to resort to the manual — a book which elevates patronisation to an art form — and type in long and meaningless strings of numbers. Ricoh technical support intimated that this was a security feature, "a password" which meant that unauthorised users (i.e. anyone with the manual) couldn't use the machine. In practice it was such a pain to use that it seems unlikely anyone but the most

obsessed fax user would bother to set up the advanced features.

Unless the software with the forthcoming multifunction device offers a huge improvement — and Ricoh is about as well known for its software as Microsoft is for its pasta — the machine remains an expensive techies' toy.

This is a shame, because as a fax machine it works well. You can only feed in single sheets so it's not much cop as a copier, but if you want to send and receive a lot of sheets it's great once it's set up; but the setup takes a lot more effort than just wrestling with the user interface.

The transit packaging has what appears to be an entire roll of Sellotape holding bits in place. Removing the tape, and making sure that you haven't missed a length, which will gum up the whole thing, is an operation akin to taking the pins out of a freshly unwrapped shirt: you know that if you miss just one, it'll get you later. (The toner and drum are separate units.)

It's difficult to know at which market this is aimed. A cheap laser printer and a cheap thermal fax machine are substantially cheaper to buy and run. They are also easier to use. Only if you are about to buy a laser printer and a high-capacity fax machine does the 2700L make sense.

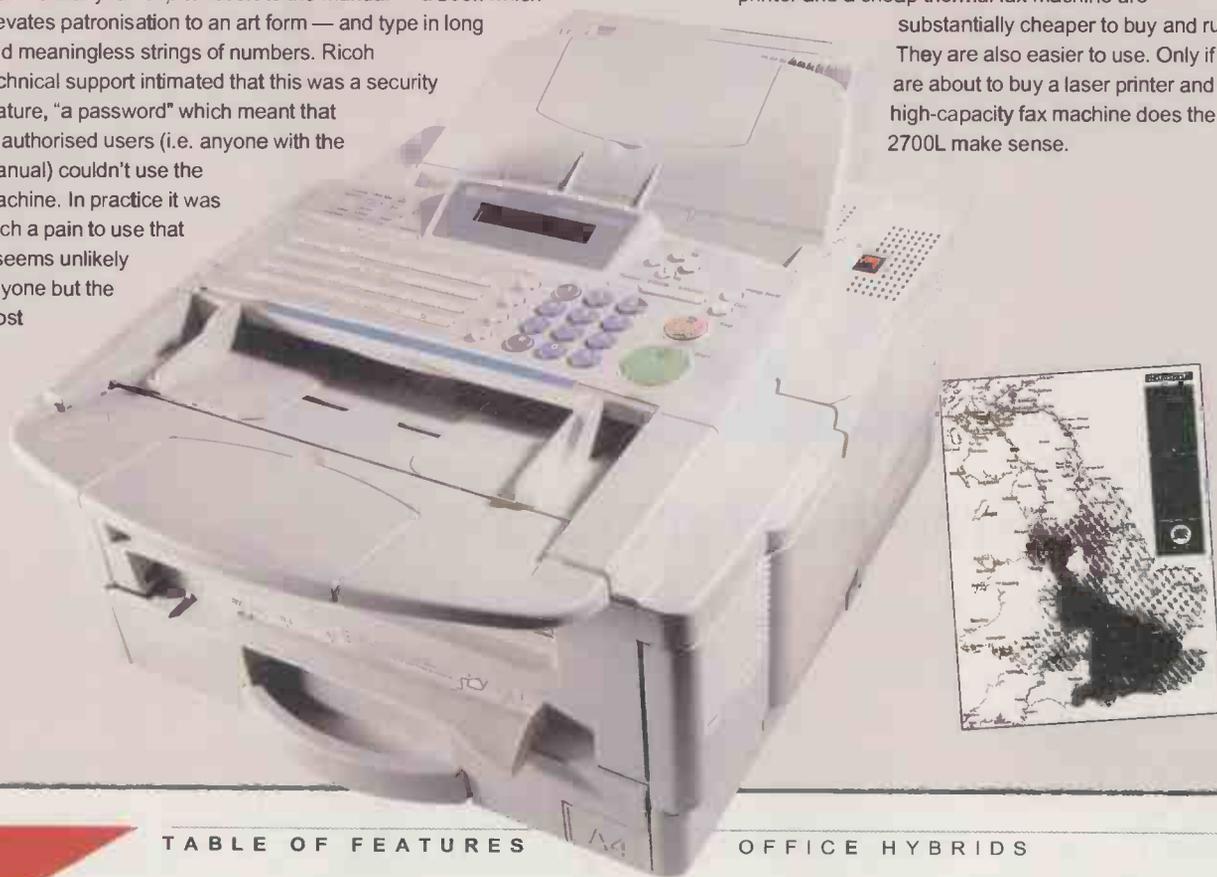


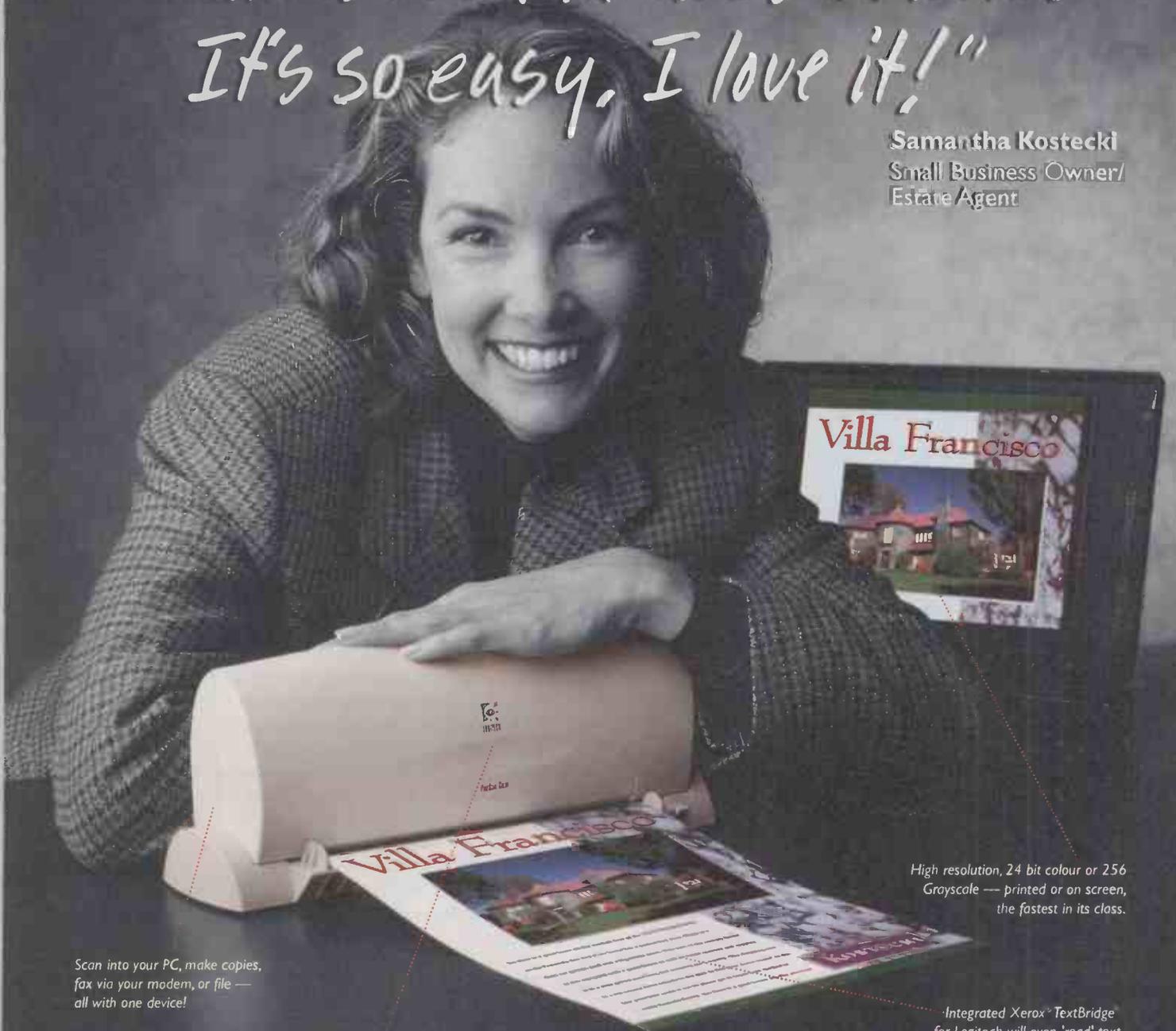
TABLE OF FEATURES

OFFICE HYBRIDS

Product	Canon B360	HP OfficeJet XL	Xerox 3006	Lumina 2000	Ricoh 2700L
Manufacturer	Canon	Hewlett-Packard	Xerox	Westwood Distribution	Ricoh
Fax	Yes	Yes	Yes	Yes	Yes
Copies	Yes	Yes	Yes	Yes	Yes
Scan	Yes	Yes	Yes	Yes	No
Printer	Yes	Yes	Yes	No	Yes
Price	£1,295 (RRP) under £1,000 (street price)	£650 (RRP) £499 (street price)	£1,139 (£149 PC interface)	£550	£2,000
Contact	0500 246246	01344 369222	0800 787787	01753 887161	0181 261 4000

"It scans, copies, types, files,  
faxes... and does colour.  
It's so easy, I love it!"

Samantha Kostecki  
Small Business Owner/  
Estate Agent



Scan into your PC, make copies,  
fax via your modem, or file —  
all with one device!

Backed with a 1 year warranty.

High resolution, 24 bit colour or 256  
Grayscale — printed or on screen,  
the fastest in its class.

Integrated Xerox® TextBridge®  
for Logitech will even 'read' text  
directly into your wordprocessor for editing.

Whether you manage a small office, home office, or work in a corporate office, the **Logitech™ PageScan™ Color** is what you need. This full page scanner is powerful and easy-to-use, offering personal document management, colour, and flatbed versatility. See the difference at one of the following locations: Byte, Micro Anvika, PC World, Silica, Software Warehouse, Staples, and all leading Computer Suppliers — or call **LOGITECH 01344 894300**.



One-click operation to scan,  
type, file, copy, or fax.



Scan sheets or bound  
materials in no time!



Flatbed capability in a compact  
size that fits neatly next  
to your PC.



The only colour sheet-fed scanner  
to plug into any PC parallel port — no  
need to open your PC.



Logitech, the Logitech logo and PageScan Color are trademarks of Logitech.  
All other trademarks are the property of their respective owners. Requires a PC with DOS 3.3 or Windows 3.1 or higher.

# Kombat rules!

Games used to be... well, games, before they became "cross-cultural phenomena" attracting multi-million dollar licensing deals and spin-offs.

Tim Green talks to Ed Boon, creator of Mortal Kombat, and looks at the cunning marketing strategy surrounding the launch of MK3 on the PC.

**E**very morning, Ed Boon sorts through his postbag and waits for the full horror to emerge. There, among the bills and the junk mail, are letters from youngsters describing sickeningly explicit death scenes. Nothing makes Boon happier. The letters are proof that kids really love his special creation: Mortal Kombat.

Boon is the programming genius who gave gamers "THE FATALITY": that moment in Mortal Kombat where a fighter is impaled, garrotted or decapitated as the soundtrack shrieks "finish him!!!" Parents and churchmen might like not it, but the kids do — hence the postbag full of

helpful advice. Fatalities, along with other original touches, helped make Boon's game so successful that it went from being a decent piece of software to a licensing phenomenon along the lines of Power Rangers and The Simpsons. Official figures say the MK (Mortal Kombat) series and all its merchandised spin-offs have earned a staggering \$2bn so far.

How things change. Four years ago MK was an idea inside Boon's head; an attempt to cash in on the mammoth success of the first international beat-em-up blockbuster, Streetfighter. The concept gathered momentum when the programmer and his game designer partner, John Tobias, decided that the combat element

would be enhanced by an atmosphere of mystery and legend. They set the game in a mythical domain called Outworld and gave each of the fighters a history and a purpose. Visually, the tone was dark and foreboding. The concept was coming together — all that was needed was a name. After Kunitay, Dragon Attack and Combat were adopted and dropped, Mortal Combat was finally agreed. At the last minute, Boon changed the C to a K for absolutely no reason at all and a cross-cultural phenomenon was born.

In October, the "licence" reached its zenith. MK3 was released on the PC as the focal point of a marketing bonanza which also features the Hollywood movie,

## And you thought it was just a game...

Mortal Kombat's publicity material reveals its subject to be "a multi-media licensing bonanza" and "a cross-cultural phenomenon that has generated excitement and interest worldwide". Too bloody right: in all, 60 licensees have produced more than 100 products. Here are some of the spin-offs:

### The movie

In the late summer, New Line's Mortal Kombat topped the US box office chart against all odds. New Line appeared to be the perfect studio to make it, with a track record that boasted Teenage Mutant Ninja Turtles and The Mask. But stacked against it were two mighty negatives. First, none of the films-based-on-games that came before it had distinguished themselves. Second, neither the stars (a fading Christopher Lambert and a rarely seen "Bond girl", Talisa Soto) nor the director (Paul Anderson, a Brit whose only other feature was the flop Shopping), had any kind of crowd-pulling appeal.

Unlike its game-based predecessors, Mortal Kombat emerged as a pretty good action movie. But the sheer power of the name cannot be underestimated. Producer Larry Kasanoff says: "Our film is a high-density companion to all the media formats. It offers the back story that

helps define the characters and explains why they have been singled out for this incredible mission."

### The animated video

Riding on the back of the live-action film comes the \$15 video, featuring a 15-minute "making of the movie" short followed by an hour of animated "latest 3D techniques". The full weight of the merchandising machine has already kicked in Stateside where \$3m has been spent on advertising the video. Each purchase additionally contained a voucher book entitling the owner to discounts on all the other spin-offs.

### The live tour

Not content with stealing Rock'n'Roll's fans, video games are now stealing its venues too. "Mortal Kombat — The Live Tour" started at New York's historic Radio City Music Hall in September and will go on to more than 200 cities worldwide.

The show features actors who appeared as digitised warriors in the game itself. They take part in what the organisers describe as an "extravaganza that features martial arts, gymnastics and stunts plus

the animated video, the roadshow, the toy range, the comic book and (inevitably) the Web site.

### Marketing genius

Classic mass-market promotions have been put in place already. In the US, fans who buy the video receive a free watch offer and \$70 worth of vouchers towards Mortal Kombat merchandise. But the *coup de grace* takes the so-called "synergy" between licences to new levels.

It works like this: six original Kombat Kodes have been devised to unlock secret moves that can empower the player against enemy warriors. The Kodes are cracked by arranging six out of a series of ten weird symbols. The clever bit is that clues have been hidden throughout the game's TV and print advertising campaign and within the video, live tour and movie.

Boon explains the concept: "When we created Mortal Kombat we filled it with mystery and intrigue. Since the beginning, fans have been obsessed with discovering its secrets and finding its hidden characters. So with MK3 we went further and put in an encryption code which can be unlocked by putting the symbols in the right order to reveal secrets. Then we thought; why stop at the game? We decided to put the Kodes into the movie, the video and the roadshow."

Kunning or what? These hieroglyphics appear in a panel at the bottom of the screen while the game is taking place. In the film and video, they are harder to spot. The idea of course is that their whereabouts will be discussed

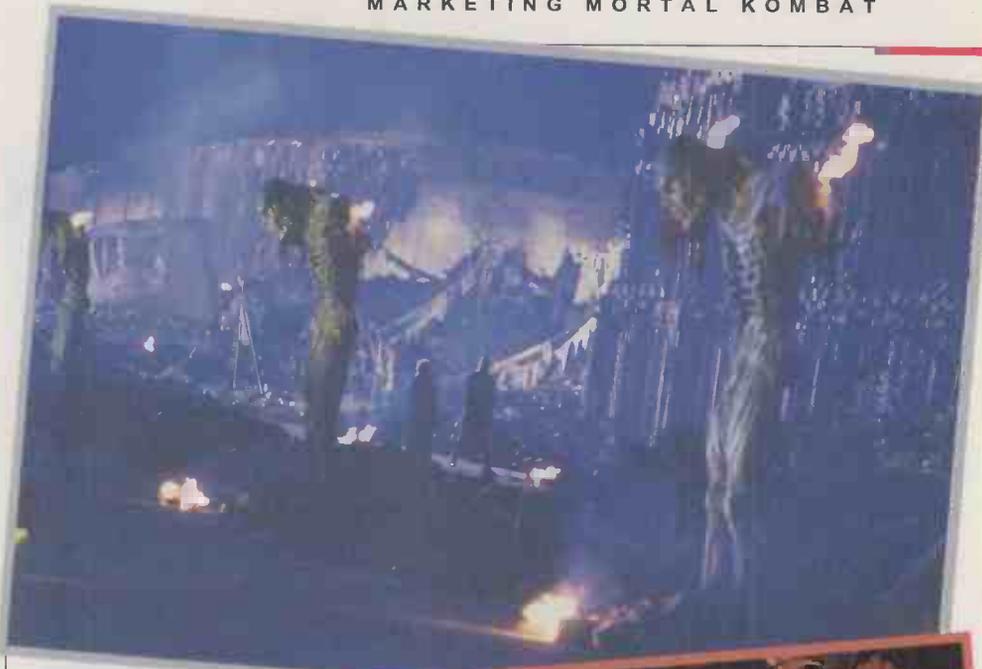
hi-tech audience interaction, state-of-the-art special effects and illusion." Parents are advised that it's safe to go with their kids. They won't have a clue what's going on, but they can be sure that the bad guys will end up getting a good hiding.

### The figurines

No licensing bonanza can qualify for the name without its figurines — foot soldiers in the battle to win the hearts and minds of the younger consumers. The Mortal Kombat range includes a poseable Sonya Blade complete with her own missile launcher.

### The web site

"More like a game" is how New Line's marketing president, Chris Pula, described the Mortal Kombat web site. From May until August, New Line challenged browsers to find the extra information it had been feeding into the site. The central conceit was that MK baddie Shang Tsung wanted to shut it down and prevent the film opening. Only browsers could stop him by solving the riddles that lined up alongside real-time video and audio clips, photos, interviews and competitions.



**Above** *Outworld*. A nice place to visit, but you wouldn't want to live there. Ed Boon and John Tobias felt the combat would be intensified by a mythical backdrop. Our heroes come here to face the sinister forces of Shang Tsung. **Right** A genetically-enhanced Jax thinks Sheeva is a real knockout. It could turn out to be a fatal attraction



voraciously in the playgrounds of the world. Cinemas will fill up with children carrying notebooks. The hype has already helped the Mortal Kombat movie gross over \$50m and top the US box office chart.

The stroke of marketing genius which threw up the idea of the Kodes has made

Boon central to the licensing activity surrounding his game. Suddenly, the man with the programming nous has been required not just to finish the game on time, but also to make sure all the other spin-offs feature the correct Kodes. Fortunately, Boon still programmes every algorithm of the MK series single-handedly.

Boon's solitary position at the forefront of the MK story has made him something of

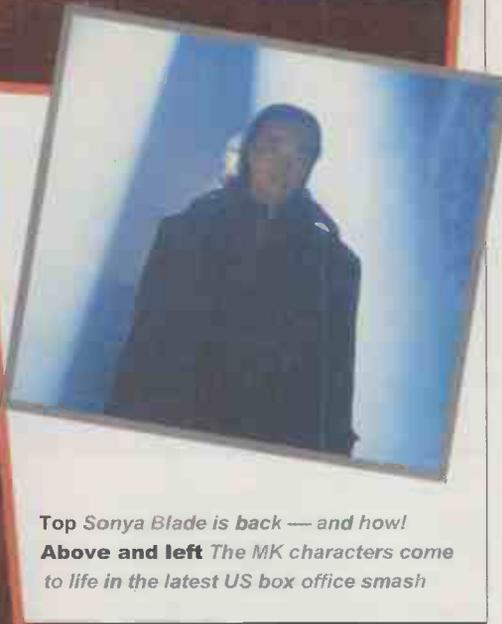
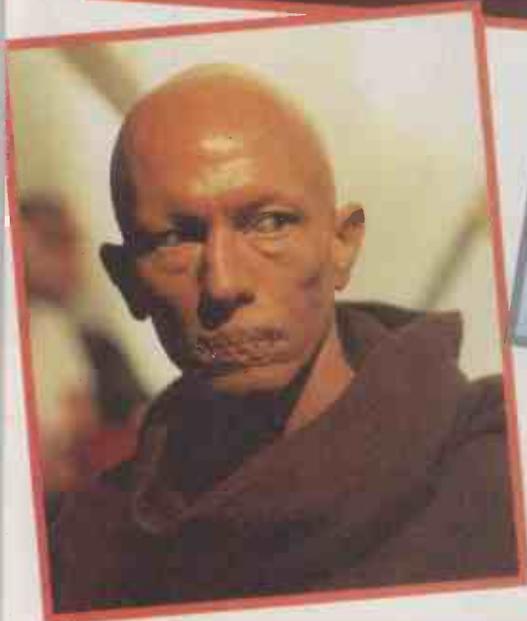
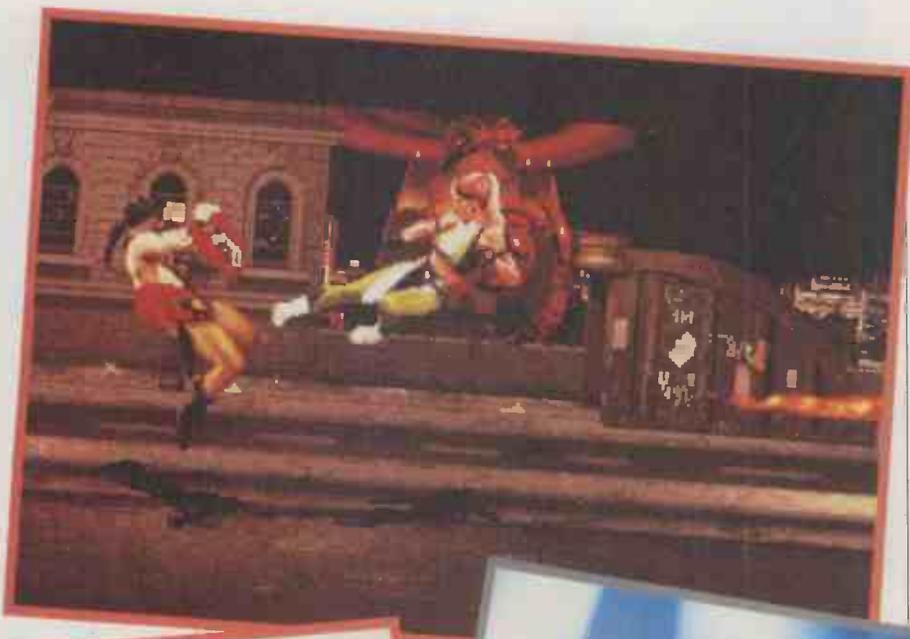
an expert (to say the least) on the changing technologies of the games business. The factor that staggers him above everything else is the evolution of the PC as a games format. He marvels at the version of MK3 playing on his 486 laptop: "The PC version is the best: it's closest to the arcade game, which is amazing really. It's all to do with the access times — running off a hard disk is quicker than running off a CD on a console.

"I still think back to the roomful of equipment we used to program the game and I'm always amazed to look at the one square foot of machine we have here, running it perfectly," he says. The PC version benefits from a networking facility which allows users to "daisychain" machines to play their own tournaments.

### Getting in on the act

Developing technology has led programmers in all sorts of directions. Now that motion pictures can be captured and video can be compressed, Boon and Tobias find that they spend more and more of their time in the film studio coaching actors.

Boon would rather be programming. To him, filming is boring. But it's not just the tedium that puts him off; he's wary of



Top *Sonya Blade is back* — and how! Above and left *The MK characters come to life in the latest US box office smash*

**Games into movies — success at last**

When video games began stealing children, Hollywood reacted in time-honoured fashion: it bought the rights to the biggest, and made films of them. Unfortunately, the film makers botched it big time and, until *Mortal Kombat*, they all flopped.

In 1992, Disney unveiled the *Super Mario Bros* movie, confident of blockbuster success. It had every reason to think *Super Mario* would be as much of a crowd-puller on the big screen as it had been on the small one. Here was a major motion picture event: a \$50m film based on a series of video games which had so captured the imagination of American children that *Super Mario Bros 3* alone had earned Nintendo \$500m — more than any film except *ET, The Extra-terrestrial*.

But the blockbuster never came. Instead, *Super Mario Bros* grossed just \$20.9m while its close rival, *Jurassic Park*, romped to \$340m.

Chastened by the *Mario* episode, Hollywood didn't put any more video games on screen for 16 months. And when a second attempt was made, it provided more evidence of how *not* to do it. *Double Dragon*, a futuristic romp based on a 10-year-old arcade classic, skulked into video stores after earning less than \$3m at the US box office.

Earlier this year *Streetfighter*, featuring Jean-Claude Van Damme and Kylie Minogue, showed box office promise. It grossed over \$30m but then quickly disappeared as audiences cottoned on to the stars' inability to act.

Despite this abysmal track record, Hollywood will not be deterred. *Myst* is being talked about as a possible movie, and Ivan Reitman (of *Ghostbusters* fame) is developing a script based on *Doom*. Let's pray he doesn't call Rick Moranis.

**The PC comes out on top**

By the programmer's own admission, the PC version of *MK3* is the best. Here's why.

- The PC version contains all the features found in the arcade version. This includes all the characters, play modes, finishing moves and hidden codes. A hidden game appears after 50 plays.
- New features include modem and network play, which allows up to eight players to take part. Participants can play round-robin tournaments and join in games-in-progress.
- Up to seven levels of multi-tiered background scrolling, and all background animations from the arcade version, are exactly as they were in the original.
- The program code runs at the same speed as the coin-op so there is no slow-down in gameplay, no matter how fast the PC.
- The game's graphics are VGA. Two modes are used, 320 x 200 and 320 x 240 — so, no problems with video-card compatibility.
- The average amount of compressed memory for each character is just under one meg. This fits the game completely in RAM.
- Background music is streamed off the CD during play.

anything that could make a games designer become slave to a schedule: "I think the danger with high-cost projects is that spontaneity is lost. For example, we didn't come up with the idea of the *Mortal Kombat* fatality until we were halfway through the first game. But it was such a good idea that we reworked the game to accommodate it. You couldn't do that with, say, an interactive movie."

As for the future, Boon acknowledges the impact that rendered 3D beat-'em-ups like Sony's Playstation hit *Tekken* and Sega's Saturn flag-bearer *Virtua Fighter* have had. But he's wary of following the 3D route blindly: "I've watched kids playing these games and they seem to get bored after a while. You can't argue with the visual effects, but in my opinion the gameplay doesn't match the 2D of *Mortal Kombat*."

**Animal magic**

So we can expect *MK4* — and there *will* be an *MK4* — to continue in the same vein as its predecessors. The worldwide marketing machine demands it. As Boon says: "*Mortal Kombat* has become an animal that must be fed."

**PCW Details**

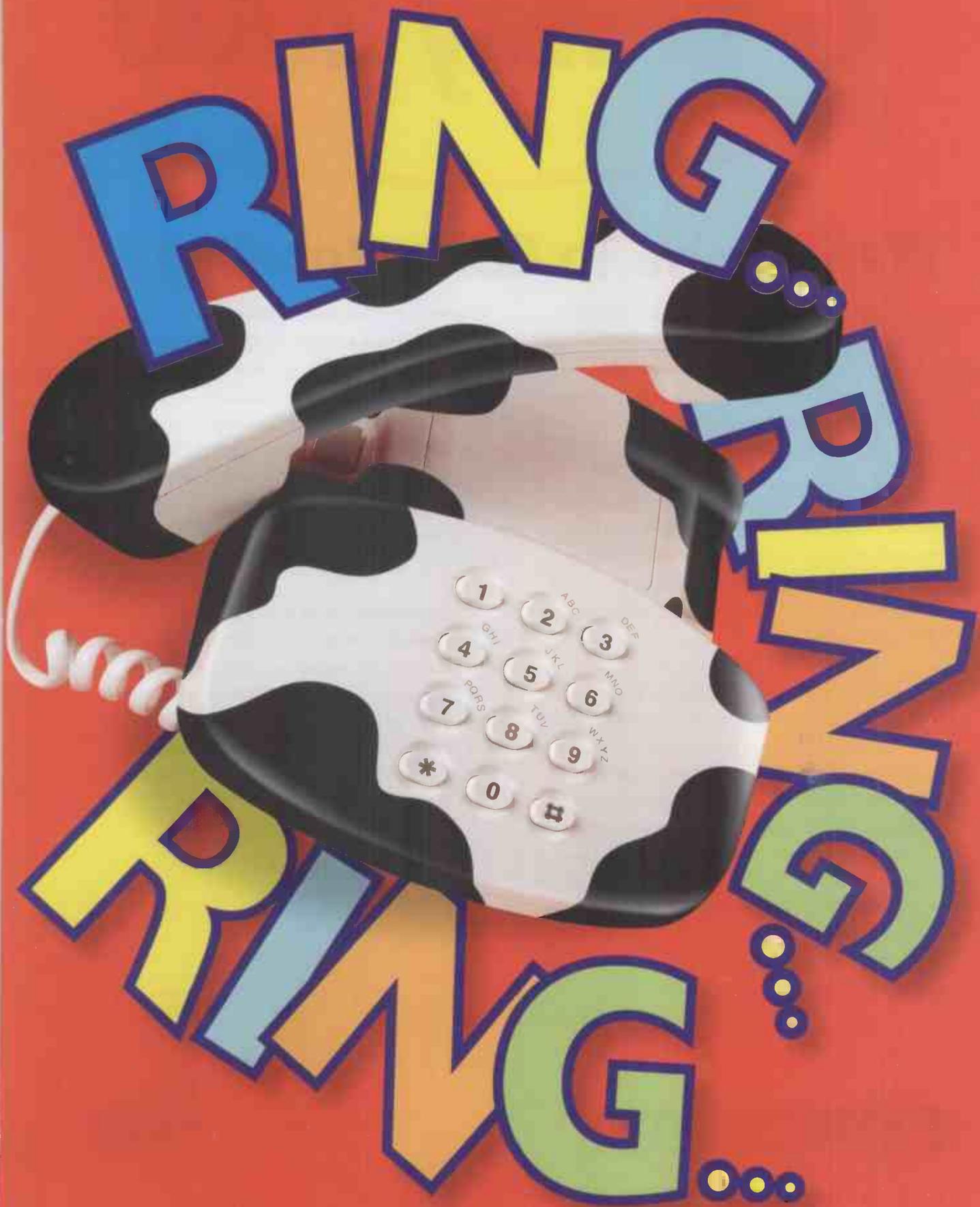
*Mortal Kombat* is distributed by GT Interactive on 0171 258 3791.

RING



RING...

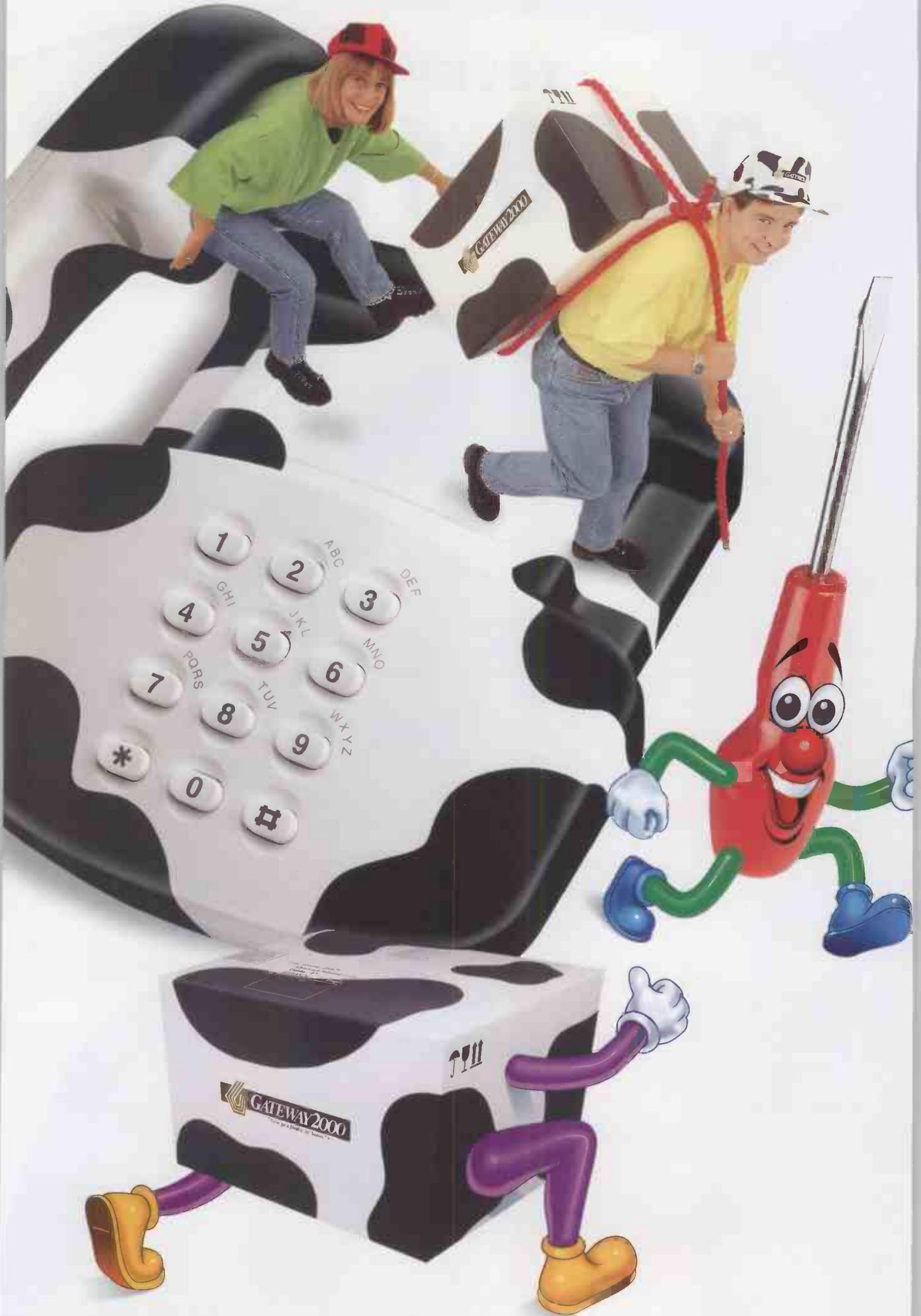
WHEN YOU



**TELEPHONE:**

**0800 172000**





# Gateway 2000

## We Promise To Come Running!

It's all part of the service from Gateway 2000®. A level of service that supports our pledge to bring you not only the latest technology at the best prices, but also the finest quality components from the world's leading manufacturers together with true value-for-money in every system we sell. That's what makes us the industry's price-performance leaders.

It's these values that made us America's number one direct sales PC manufacturer (Source: IDC) – and a Fortune 500 company with worldwide sales in 1994 of over \$2.7 billion. In just two short years in Europe, those same values have seen us rise to become the second fastest growing PC company here too (Source: Dataquest).

When you buy direct from Gateway there are no wholesalers, retailers or other middle men to take their cut and you deal directly with the people best placed to help you – the people who manufacture, supply and support your system. At Gateway you simply talk by phone to our skilled and highly professional sales staff who make it their personal business to see that you get all the help you need in selecting the system that's best suited to your individual requirements. And after you've bought, you have access to our Customer Services and Technical Support teams. And it's these Gateway people, the people behind the phones, who make the difference. Thanks to them and their knowledge and skills you can buy with confidence and peace of mind.

We understand just how important after sales service and support is to our customers, that's why we're so proud to announce a radical enhancement of new support services. Services featured as standard with the purchase of all Gateway PCs include lifetime free technical phone support, a three-year parts warranty, industry leading on-site services including extended on-site hours for evenings and weekends, next-business-day on-site service and lifetime support of all Gateway supplied software – including Windows 95 at no extra charge.

In a recent press statement Ted Waitt President and CEO of Gateway 2000 said, "Although many companies are cutting back service and support programs and even charging for software technical support calls, Gateway is committed to add more support options, not less. We've been listening to our customers' support needs and Gateway support was developed to meet those growing needs by wrapping industry leading service around every PC to provide the best total package."

Need we say more?

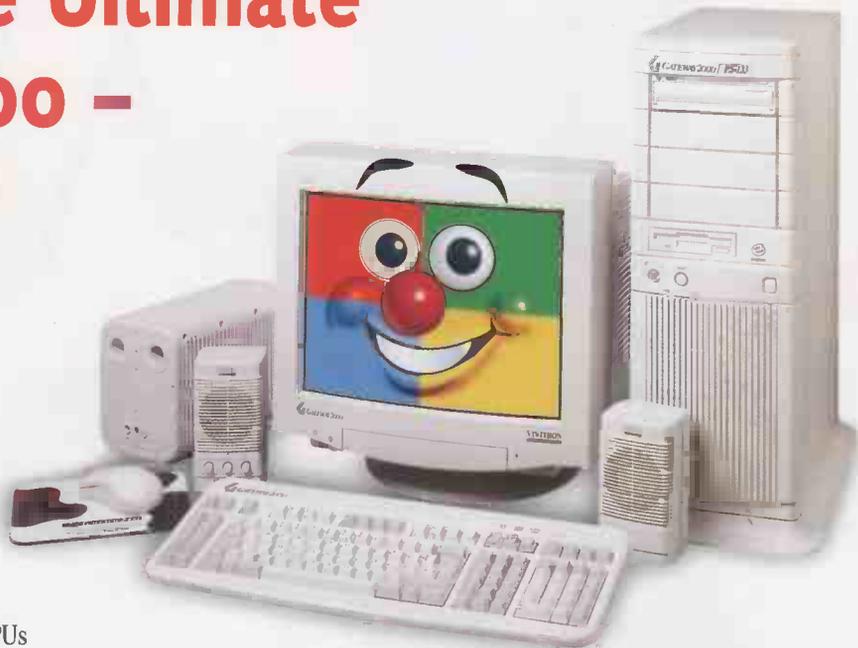


*"You've got a friend in the business."*

0 8 0 0 1 7 2 0 0 0

# The Ultimate In Power, Performance And Value - And Now The Ultimate In Support Too - Even On Our Software

At Gateway 2000, we've built our reputation by providing the best value-for-money and the best quality in high-tech, high-spec PCs. And now our top-of-the-range systems are even better value. Just take a look at our P5-133 Elite and P5-120 Elite models. They're based on the fastest CPUs currently available from Intel®, the 133MHz Pentium® processor and the 120MHz Pentium processor.



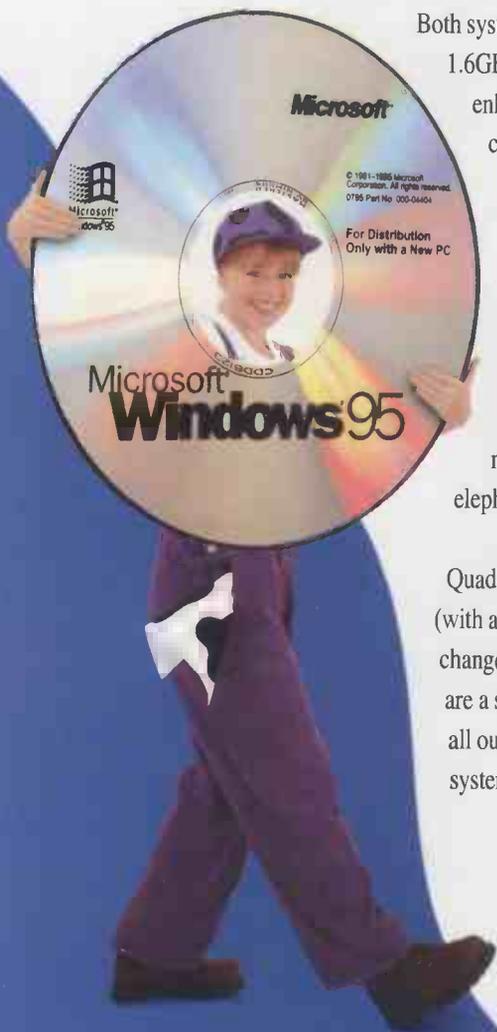
Both systems feature huge 1.6GB hard drives with PCI enhanced IDE interface, combined with 16MB EDO RAM and 256KB Pipeline Burst Cache to give you the power of a steam-hammer, the speed of lightning and the memory of an elephant!

Quad-speed CD-ROMs (with a triple-deck CD changer on the P5-133) are a standard feature of all our desktop and tower systems and Matrox

Millennium video cards with 2MB WRAM on the P5-120 and 4MB WRAM on the P5-133 combine to give you brilliant colour and superb resolution – all perfectly rendered on the 17-inch Vivitron™ monitor. These monitors use the latest Sony® Trinitron™ tube technology to give you pin-sharp focus and an unsurpassed range of colours. Thanks to Ensoniq Wavetable sound card, Altec Lansing speakers and a separate sub-woofer, these systems sound as good as they look too. Add to all this a simply amazing range of software: MS Windows® 95, MS Office™ Professional 95 and MS Encarta '95 at just £2,199 for the P5-120 and £2,399 for the P5-133, now you know what we mean by value!

All Gateway systems are now shipped with Windows 95 for faster, easier and more reliable computing. But if you prefer, you may opt for DOS® 6.22 and Windows for Workgroups™ 3.11 instead. It's up to you, the choice is yours – the price is the same. Either way, Gateway 2000 is the only PC company to offer FREE lifetime technical support not only on hardware but on all the software bought with it.

So what are you waiting for?



GG



# In The Office, At School, At Home, We're Only A Phone Call Away



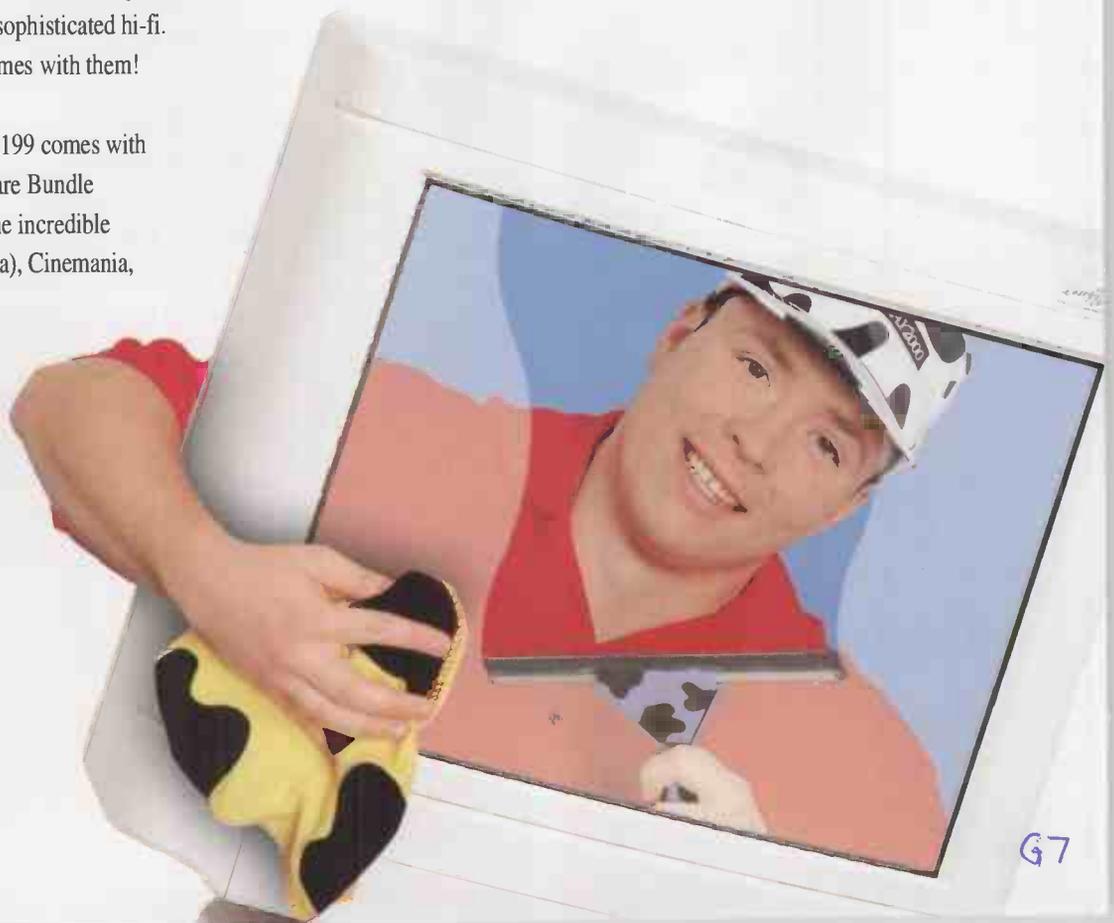
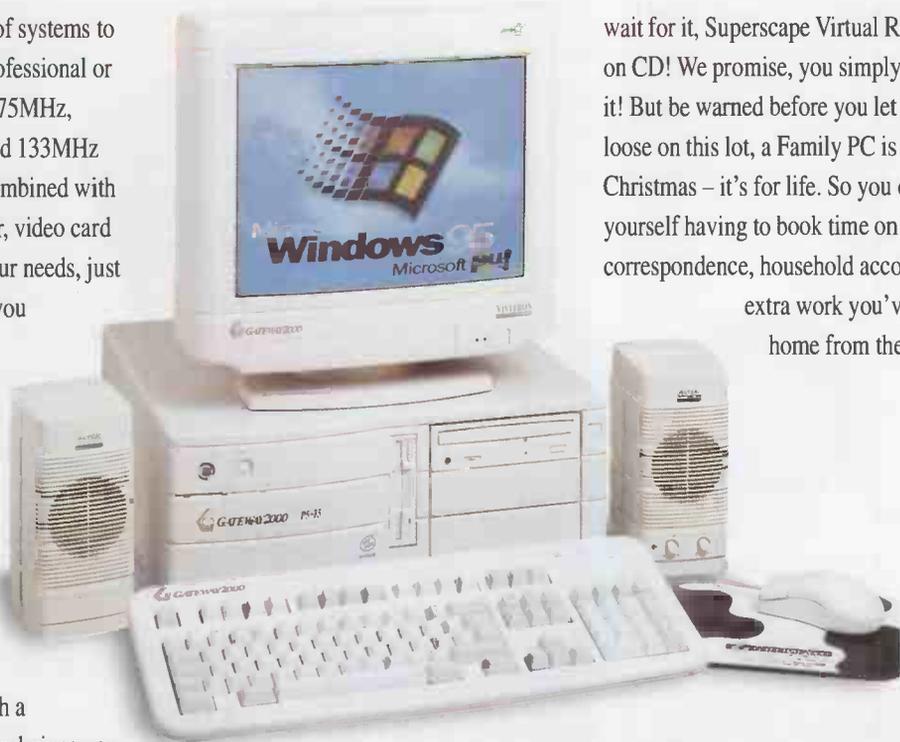
At Gateway we've a range of systems to suit almost every situation. Professional or multimedia systems based on 75MHz, 90MHz, 100MHz, 120MHz and 133MHz Pentium processors may be combined with almost any hard drive, monitor, video card and software. So, whatever your needs, just call us and we're sure to find you the perfect solution.

For home use, our P5-75 and P5-90 Family PCs will take you into the amazing world of multimedia with everything you need for work, education and entertainment.

The quad-speed CD ROM with a throughput of 600KB per second gives you full-screen, full-motion video from a CD (without jerks!) and the sound quality rivals many a sophisticated hi-fi. And just look at the software that comes with them!

The P5-75 Family PC for only £1,199 comes with Windows 95, MS Generation Software Bundle including: MS Works, Encarta 95 (the incredible interactive multimedia encyclopaedia), Cinemania, Golf and Money. Then there's a fantastic Games Bundle and,

wait for it, Superscape Virtual Reality Software on CD! We promise, you simply won't believe it! But be warned before you let the children loose on this lot, a Family PC is not just for Christmas - it's for life. So you could find yourself having to book time on it to do your correspondence, household accounts or the extra work you've brought home from the office!



# Introducing The Gateway Solo Multimedia Portable PC

The new Gateway Solo® is everything you ever wanted in a portable, and more. Wherever you need to use it, whatever you want to use it for, Solo delivers – it's the portable that thinks it's a desktop. In the office, at home, out on location its a serious PC that's a lot of fun too. Just look at the spec! Choose from 75MHz or 90MHz Pentium processor, up to 1.2GB removable hard drive, minimum 8MB RAM, modular bay for 3.5-inch floppy or CD-ROM drive, full

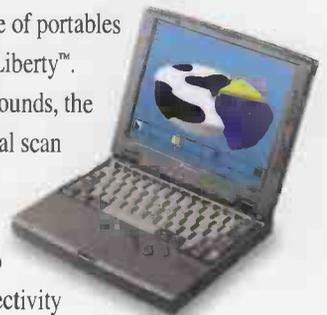
sized keyboard with Windows 95 keys, 10.2-inch VGA Active Matrix Colour display and that's just for starters. There's an optional docking bar for easy connection to external monitor, keyboard and printer, built-in microphone and speakers, lithium ion battery giving hours of use and still the spec goes on!

Solo is the ultimate Windows 95 portable, kitted out by Gateway to be your primary PC. Of course, we're not suggesting that you never show your face in the office again, but you certainly won't need to be tied to your desk to do a good day's work. Take it into the office if you must, after all, it only weighs around 6 pounds, but with all this computing power and a fax modem, maybe its time to think about going Solo!

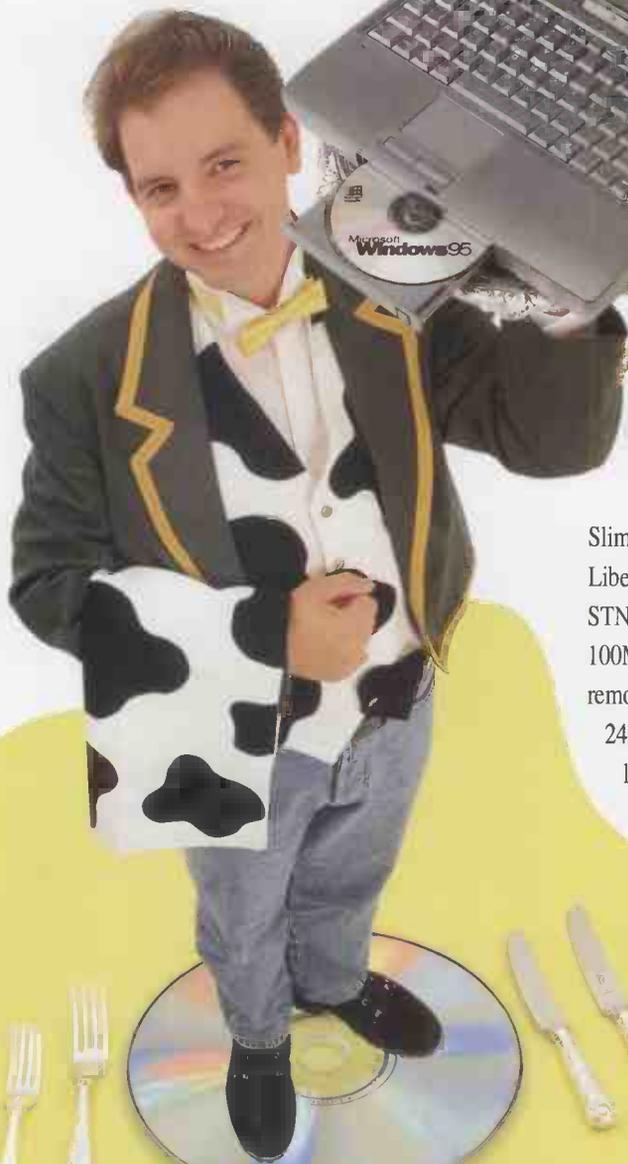
## The Gateway 2000 Liberty

Completing our line of portables is the Gateway 2000 Liberty™.

Slim, compact and a trim 4.2 pounds, the Liberty features a 10.4-inch dual scan STN colour display, Intel 100MHz DX4 processor, removable hard drive and up to 24MB RAM. Infra-red connectivity lets you swap files, download data and go straight to print without any wires.



All Gateway portables are backed by a one-year back to base service warranty and lifetime technical phone support.



# Our Service Has Reached New Heights

At Gateway 2000 it has always been our policy to lead while others follow and when it comes to service, no-one is doing more to help their customers to be entirely happy. Whether you're a corporate buyer making a multi-system purchase or a home user, we want you to know that you've got



**30 DAY  
MONEY  
BACK  
GUARANTEE**



**3 YEAR  
WARRANTY  
ON DESKTOP  
& TOWER  
SYSTEMS**

**ON-SITE SERVICE,  
6 DAYS A WEEK**

someone you can turn to if you should have any sort of problem with hardware or software you've bought from us. We promise you lifetime free technical phone support on all Gateway hardware and software - and that includes Windows 95.

If you have any problems or queries, please call. Our technicians have been comprehensively trained to answer questions and provide solutions over the phone. They have been equipped with industry leading support systems including case based reasoning tools with a database of every question ever asked. You may call them at any time between 8am and 9pm weekdays and 9am to 6pm Saturdays.

All components of Gateway 2000 desktop and tower PCs are backed for a full three years (portables include a one-year back to base warranty). During the warranty period we will replace all parts free of charge and pay for overnight delivery. You only have to pay postage on the part back to us, we cover the rest. Through our service partners, ICL-Sorbus, if our Technicians determine that you need an On-Site-Service, we will provide a one year, next-business-day on-site service during the hours of 8am to 10pm Monday to Friday and 8am to 8pm Saturday. These hours have been selected to meet your needs. No competitor comes close to matching this level of service. And we'll tell you within 4 hours when to expect their visit. For further information on extended service warranties, please call our sales staff.

We offer a choice of methods of payment, allowing you the facility to choose the one best suited to your circumstances. If you're not completely satisfied with your Gateway 2000 system for any reason, you may return it to us within 30 days under our no-quibble money-back guarantee. We will refund you the amount you paid for the system less the shipping charge.

Our aim is for you to be entirely happy with your system and with the service you receive from us. When you buy direct from Gateway just pick up the phone. Because at Gateway, "You've Got A Friend In The Business."



**GATEWAY2000**  
*"You've got a friend in the business."*

0 8 0 0 1 7 2 0 0 0

# Run With Our Prices

## P5-75 BEST BUY

- Intel® 75MHz Pentium® Processor\*
- 8MB RAM
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 850MB 11ms IDE Hard Drive with PCI Enhanced IDE interface
- PCI Local Bus Graphics with 1MB
- 14" CrystalScan® Colour Monitor
- Desktop Case
- 102-Key Keyboard & MS Mouse
- MS Windows® 95
- MS Works™ 3.0
- MS Money™ 3.0

**£979**

## P5-90

- Intel 90MHz Pentium Processor\*
- 8MB EDO RAM
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 850MB 11ms IDE Hard Drive with PCI Enhanced IDE Interface
- PCI Local Bus Graphics with 1MB
- 15" Vivitron™ Colour Monitor
- Desktop Case
- 102-Key Keyboard & MS Mouse
- MS Windows 95
- MS Office™ Professional 95

P5-90 • **£1299**

P5-75 • **£1199**

## P5-100

- Intel 100MHz Pentium Processor\*
- 8MB EDO RAM
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 850MB 11ms IDE Hard Drive with PCI Enhanced IDE Interface
- PCI Local Bus Graphics, 2MB DRAM
- 15" Vivitron Colour Monitor
- Desktop Case
- 102-Key Keyboard & MS Mouse
- MS Windows 95
- MS Office Professional 95

**£1399**

## P5-133

- Intel 133MHz Pentium Processor\*
- 8MB EDO RAM
- 256KB Pipeline Burst Cache
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 1GB 9ms IDE Hard Drive with PCI Enhanced IDE Interface
- PCI Local Bus Graphics, 2MB DRAM
- 15" Vivitron Colour Monitor
- Desktop Case
- 102-Key Keyboard & MS Mouse
- MS Windows 95
- MS Office Professional 95

P5-133 • **£1699**

P5-120 • **£1499**

## P5-75 FAMILY PC™

- Intel 75MHz Pentium Processor\*
- 8MB RAM
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 850MB 11ms IDE Hard Drive with PCI Enhanced IDE Interface
- PCI Local Bus Graphics with 1MB
- 16-Bit Sound Card with Speakers
- 14" Crystalscan Colour Monitor
- Desktop Case
- 102-Key Keyboard & MS Mouse
- MS Windows 95
- MS Encarta '95
- MS Generations Software Bundle
- Games Bundle
- Superscape Virtual Reality Software

**£1199**

## P5-75 MULTIMEDIA

- Intel 75MHz Pentium Processor\*
- 8MB EDO RAM
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 1GB 9ms IDE Hard Drive with PCI Enhanced IDE Interface
- PCI Local Bus Graphics, 2MB DRAM
- 16-Bit Sound Card with Speakers
- 15" Vivitron Colour Monitor
- Desktop Case
- 102-Key Keyboard & MS Mouse
- MS Windows 95
- MS Office Professional 95
- MS Encarta '95

**£1299**

## P5-90 FAMILY PC

- Intel 90MHz Pentium Processor\*
- 8MB EDO RAM
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 1GB 9ms IDE Hard Drive with PCI Enhanced IDE Interface
- PCI Local Bus Graphics, 2MB DRAM
- 16-Bit Sound Card with Speakers
- 15" Vivitron Colour Monitor
- Desktop Case
- 102-Key Keyboard & MS Mouse
- MS Windows 95
- MS Encarta '95
- MS Generations Software Bundle
- Games Bundle
- Superscape Virtual Reality Software

**£1499**

## P5-100 EXECUTIVE

- Intel 100MHz Pentium Processor\*
- 16MB EDO RAM
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 1.6GB 9ms IDE Hard Drive with PCI Enhanced IDE Interface
- PCI Local Bus Graphics, 2MB DRAM
- Ensoniq Wavetable Sound Card with Premium Speakers
- 17" Vivitron Colour Monitor
- Desktop Case
- Windows 95 AnyKey® Keyboard & MS Mouse
- MS Windows 95
- MS Office Professional 95
- MS Encarta '95
- Superscape Virtual Reality Software

P5-100 • **£1999**

P5-90 • **£1899**

## P5-133 ELITE

- Intel 133MHz Pentium Processor\*
- 16MB EDO RAM
- 256KB Pipeline Burst Cache
- 3.5" Diskette Drive
- Triple Deck Quad-Speed CD-ROM
- 1.6GB 9ms IDE Hard Drive with PCI Enhanced IDE Interface
- Matrox Millennium Graphics, 4MB VRAM
- Ensoniq Wavetable Sound Card with Premium Speakers
- 17" Vivitron Colour Monitor
- Tower Case
- Windows 95 AnyKey Keyboard & MS Mouse
- MS Windows 95
- MS Office Professional 95
- MS Encarta '95

**£2399**

## P5-120 ELITE

- Intel 120MHz Pentium Processor\*
- 16MB EDO RAM
- 256KB Pipeline Burst Cache
- 3.5" Diskette Drive
- Quad-Speed CD-ROM
- 1.6GB 9ms IDE Hard Drive with PCI Enhanced IDE Interface
- Matrox Millennium Graphics, 2MB VRAM
- Ensoniq Wavetable Sound Card with Premium Speakers
- 17" Vivitron Colour Monitor
- Tower Case
- Windows 95 AnyKey Keyboard & MS Mouse
- MS Windows 95
- MS Office Professional 95
- MS Encarta '95

**£2199**

## LIBERTY™ DX4-100

- 1.9kg (4.2 lbs)
- 25.4 x 20.3 x 4.1cms (10 x 8 x 1.6")
- Intel 100MHz 486DX4 Processor
- 8MB RAM
- Infrared Capability
- 720MB Removable IDE Hard Drive
- 10.4" Dual-Scan STN Colour Display
- NiMH Battery & AC Pack
- Instant On
- 2 PCMCIA Type II Slots
- 78-Key Keyboard & Pointer
- Parallel, Serial, VGA & PS/2 Ports
- MS Windows 95
- MS Office Professional 95

DX4-100 • **£2199**

- 16MB RAM
- 2 NiMH Batteries & AC Pack
- PCMCIA 28.8 Fax Modem
- Carrying Case

DX4-100 GOLD • **£2799**

## GATEWAY SOLO® V90

- 10.2" VGA (640 x 480) Active Matrix Colour Display
- 90 MHz Intel Pentium Processor\*
- 8MB RAM (expandable to 40MB)
- 720MB Removable Hard Drive
- 256K L2 Pipelined Burst Cache
- 1MB Video RAM
- Lithium-Ion Battery and AC Pack
- 2 PCMCIA Type II Slots
- EZ Pad™ Pointing Device
- Modular CD-ROM Drive & 3.5" Modular Floppy Drive
- Integrated 16-Bit Sound with Stereo Speakers
- Headphones
- 86-Key Keyboard
- Parallel, Serial, Keyboard, Mouse, VGA and PS/2® Ports
- Built-in Mic, Headphone, Line-in Jacks and External Volume Control Dial
- Weight starting at 2.7 kg (5.6lbs.)
- Microsoft Windows 95
- MS Office Professional 95
- Classic Case

**£2699**

All Gateway 2000 systems come with award-winning service and support including:  
 • 30-day money-back guarantee • Three-year limited parts warranty • One-year warranty with factory service for portables •  
 • One-year on-site service on desktop systems • Lifetime Freephone technical support • Extended warranty options available •

PLEASE CALL FOR INFORMATION ON OTHER PROCESSORS AVAILABLE.

At Gateway 2000, if you can't find a system that suits your needs, call us - and we'll be happy to build one for you.



pentium  
PROCESSOR

\*Intel Verified: Upgradable



"You've got a friend in the business."

0 8 0 0 1 7 2 0 0 0

Gateway 2000 Europe • European Headquarters • Clonsbaugh Industrial Estate • Dublin 17 • Ireland

Telephone: 00-353-1-797-2000 • Fax: 00-353-1-848-2022 • FaxBack: 00-353-1-867-0400

Gateway Bulletin Board: 00-353-1-867-0433 • Hours of Business: 8am-9pm Weekdays, 9am-6pm Saturdays

©1995 Gateway 2000 Europe. AnyKey, CrystalScan, Liberty, Solo, EZ Pad, Vivitron, black-and-white spot design, "G" logo, "You've got a friend in the business" slogan, Family PC and Gateway 2000 are trademarks or registered trademarks of Gateway 2000, Inc. The Intel Inside Logo, Intel, Pentium and OverDrive are trademarks or registered trademarks of Intel Corporation. All other brands and product names are trademarks or registered trademarks of their respective companies.

NEW

All prices and configurations are subject to change without notice or obligation. All prices are quoted in Sterling and exclude carriage and VAT.

Printed on Environmentally Friendly Paper

G10

# And Ring For A First Class Service

## SOFTWARE

All Gateway 2000 systems are preloaded with Windows 95, Microsoft's newest operating system. Software masters, are provided on either diskette or CD. Documentation is also provided (either printed or on CD). Software is tested and optimally configured for your system, eliminating potential installation and set-up errors.

### ■ Microsoft® Works™ for Windows™

Many of our systems come with Works, the integrated application that combines all the tools you need to run a business: word processor, spreadsheet, database and electronic communications. It's simple to use, yet powerful.

### ■ Microsoft Office™ 95

This is the very latest version of one of the leading application software suites. It includes new and enhanced versions of Microsoft's most popular applications: Word, Excel, PowerPoint and Access.

### ■ Microsoft Generations Software Bundle

An exciting range of CD based software titles suitable for all the family. Titles include MS Works, Encarta, Cinemania, Golf and others. Something for everyone whether it for work, fun or education!

### ■ Games Bundle

A combination of action, adventure and arcade games. Don't let your kids near this one until they've done their homework!

### ■ Superscape Virtual Reality Software

Now a virtual reality software package that works with standard PC hardware. Explore and experience virtual 3D worlds in real time!

**Call us for information on other exciting software bundles available!**

## PERIPHERALS

### ■ Basic Audio Multimedia Kit

Creative Labs 16-bit Sound Blaster sound card. 2 Altec Lansing ACS5 speakers. **£70**



### ■ Wavetable Audio Multimedia Kit

Ensoniq Soundscape 16-bit Wavetable sound card (compatible with MT-32, FM mode and General MIDI Sound Blaster, AD Lib, Roland MPU 401), Altec Lansing ACS31 speakers. **£170**

### ■ CH Flightstick

Just like a real jet joystick. Includes two fire buttons and seven foot cable. Durable and ergonomic. **£29**

### ■ 28.8 Data/Fax Modem

Internal data/fax modem, 28,800bps modem, V.34bis, 28.8 fax capability. Software included. **£199**

### ■ Network Cards

New PCMCIA Network Cards available. Call us for details on our range of Ethernet or Token Ring adapters.

### ■ Vivitron™ Monitor Upgrades

If your system comes with CrystalScan® 14" monitor you can upgrade as follows:

- 15" Vivitron colour monitor for **£80**
- 17" Vivitron colour monitor for **£340**
- 21" Vivitron colour monitor for **£1160**

### ■ Hewlett Packard DeskJet 600

Here's a high-quality business printer which also offers great versatility and value. Prints 600 x 600 dpi black text at up to 4ppm or add a low cost optional Colour Kit and add colour to your documents. **£249**

### ■ Hewlett Packard 660C Printer

Fast, professional-quality black printing for crisp, sharp characters at 600 x 600 dpi. Also prints clear and vivid colour at up to 600 x 300 dpi. **£349**

### ■ Hewlett Packard LaserJet 5L

HP's best value-for-money laser printer, the 5L runs at 600 dpi, 4ppm. With 1MB memory. **£449**

### ■ Jumbo 1400 Tape Backup Unit

Internal tape backup unit stores 680MB native and up to 1.36GB compressed. Back up speed 9.4MB per minute. **£139**

### ■ 2GB SCSI Bundle

Kit includes 2GB SCSI drive, 4X SCSI CD-ROM and Adaptec AHA-2940 PCI SCSI Controller. **£700**

### ■ SCSI DAT Tape Drive

Colorado Memory Systems drive stores up to 4GB typically on a single cassette tape, at up to 44MB per minute. **£649**

## PORTABLE OPTIONS

- 28.8 PCMCIA Data/fax modem.
- Memory upgrades.
- Liberty 720MB removable hard drive.
- 3.5" 1.44MB external floppy drive for Liberty.
- Padded, soft-sided case custom designed for the Liberty.
- Additional NiMH or Lithium Ion batteries.

**Call us for pricing today!**

## SERVICE

Every Gateway 2000 system comes with excellent after-sales support. Our technical support staff is renowned for being friendly and helpful. When you buy a Gateway 2000 system, you get:

- 30-day money back guarantee.
- 3-year limited parts warranty – first year on-site (desktops only).
- Freephone technical support.
- On-site service (desktops only).
- Extended warranty options available.

If our technical support staff determines that an on-site service call is needed, we will send a technician to most locations in the UK at no charge during the warranty period. Please call for more information on our guarantee, warranty and on-site service programmes.

### WARRANTY OPTIONS

	1 Year	3 Years
Next Business Day On-Site Repair Service At GW Discretion	Free/Std	£150
Same Day On-Site Repair Service At GW Discretion		£210



Payment options include advanced payment and major credit cards. We charge your credit card only when your system is despatched. Net 30-day credit terms are also available to qualified commercial customers.

*The software, peripherals and upgrades listed here are sold only with the purchase of a Gateway 2000 PC.*



0 8 0 0 1 7 2 0 0 0

1 0 1  
PERSONAL COMPUTER WORLD  
DECEMBER 1995

# STRETCH YOUR MIND

Prepare to enter a whole new world. A world with endless possibilities. A world of information and support designed to help you exploit your software to the maximum.



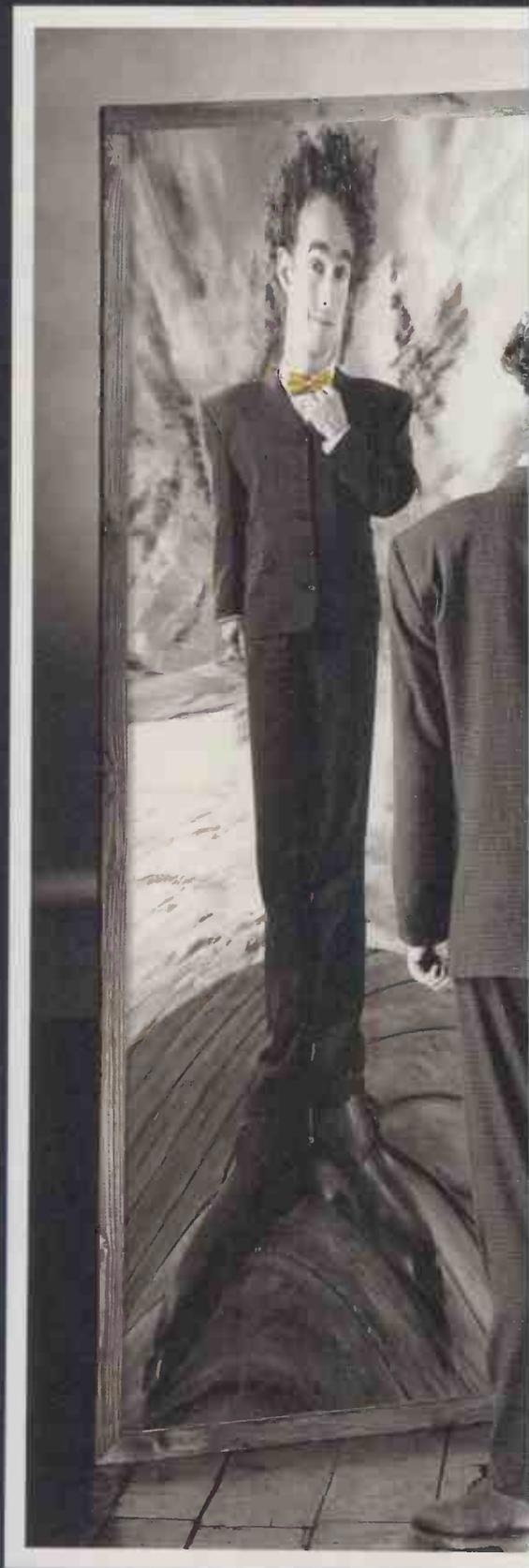
**FREE**  
SOFTWARE  
WORTH  
UP TO **£80**



That world is Microsoft® Advantage, and now is the ideal time to explore it. Because we are giving away free software worth up to £80 to every new member joining before 30th November 1995.

With Microsoft Advantage, you're guaranteed the latest news on maintenance releases for desktop applications as they are developed. What's more, you have access to the exclusive Microsoft Advantage Forum on the Microsoft Network, bringing you the most up-to-the-minute information available.

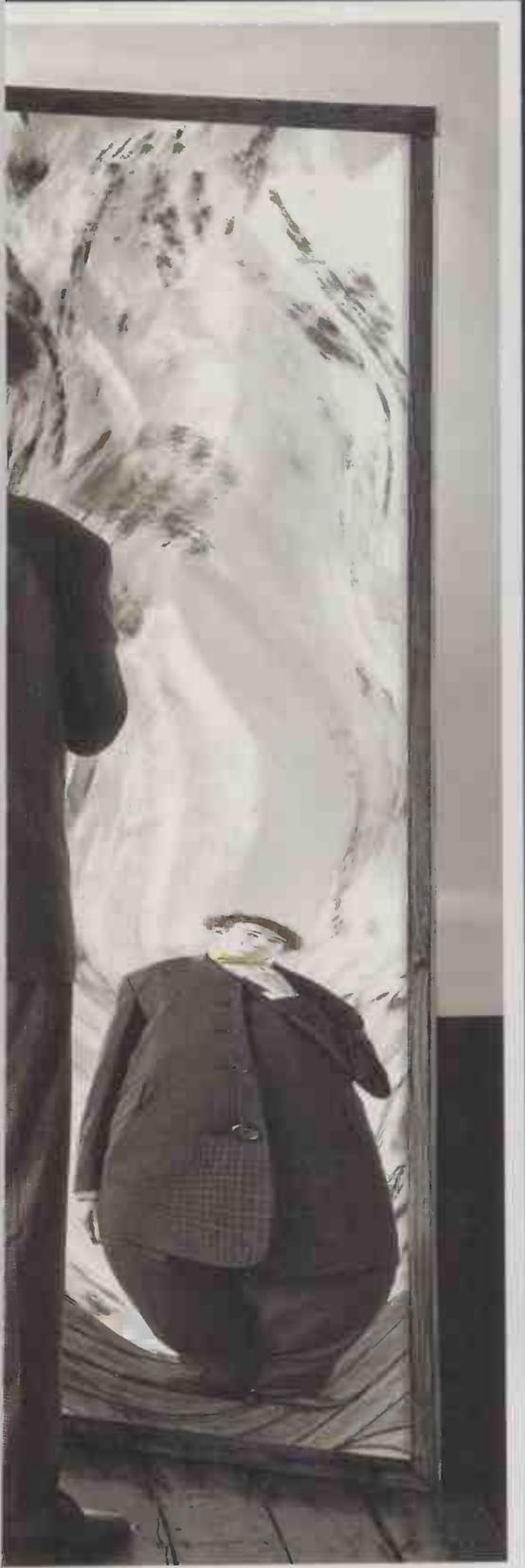
You'll be the first to know about new product



**Microsoft**  
**Advantage**

**0345 00 3000**

Microsoft is a registered trademark and 'Where do you want to go today?' is a trademark of Microsoft Corporation in the US and/or other countries.



launches and special offers, and you can ask questions and receive feedback from the experts – instantly.

As if all that wasn't enough, you'll also receive a bi-monthly Microsoft Advantage magazine. Incorporating software Hints and Tips, a free Tutorial disk, regular workshops and a question and answer section, it keeps you up-to-date with all that's new in the world of information technology.

### FREE SUPPORT AND TRAINING

If you work in a company without in-house support, Microsoft Advantage Gold is for you. As well as giving you all of the above benefits, Microsoft Advantage Gold also offers professional technical support and training free of charge.

So give yourself a competitive advantage, from just £34.95 per year. Call **0345 00 3000** now, or clip the coupon below for your free information pack.

## EXPAND YOUR RESOURCES

Title: Mr/Mrs/Miss/Ms/Dr/Other (please specify) \_\_\_\_\_ First Name: \_\_\_\_\_ Surname: \_\_\_\_\_  
Job Title: (if applicable) \_\_\_\_\_ Company Name: (if applicable) \_\_\_\_\_  
Address: \_\_\_\_\_ Town: \_\_\_\_\_ County: \_\_\_\_\_  
Postcode: \_\_\_\_\_ Tel. No. (day): \_\_\_\_\_ Where do you mainly use your PC? Home  Work  Both

Please return to: Microsoft Advantage, FREEPOST (BS4335), Bristol BS1 3YX.

Microsoft and its marketing partners would like to inform you of future relevant products and offers. If you would prefer not to receive such information, please tick here.

**Microsoft**

WHERE DO YOU WANT TO GO TODAY?™

PCWI



# Going Pro

PCW Photography by David Whyte



Intel's Pentium Pro chip has been designed to provide the rest of us with the kind of power previously enjoyed by high-end workstations and servers — and Viglen has already produced a system firing on this force. Nick Lawrence reports.

**T**he Pentium Pro has a staggering 5.5 million transistors compared with its predecessor's 3.1 million. The first version will run at 150MHz and faster speeds will follow. In development since 1990 (and known until recently as the P6), the Pentium Pro is Intel's successor to the Pentium processor.

Opting for Pentium Pro is not a straightforward case of "it's new so it must

be bigger, faster and more powerful". For some older applications, P6 will be slower than a Pentium. The Pro comes into its own when running 32-bit applications. The first machines are likely to be used as graphics workstations or network servers, and it will be a year or two before they migrate down to home or office use.

**Far left** *The Pentium Pro***Left** *Viglen's pre-production Pro-driven system***Right** *Once again, UK-based Viglen is one of the first to support new PC technology. The Pentium Pro contains a staggering 5.5 million transistors*

When Intel began designing the chip, it assumed that everyone would be running 32-bit software by 1995 and so designed it to perform particularly well when faced with a 32-bit environment. The rate of change in the industry hasn't been as fast as Intel envisaged, and most users are stuck with Windows 3.x and the partially 32-bit Windows 95. The Pro will be no faster than a Pentium when running these programs and 16-bit applications: in some cases, it will be significantly slower.

**Computing power**

The Pentium Pro is best suited to true 32-bit software such as Windows NT which is particularly popular among two groups of users: system administrators, who enjoy its robustness and security as a server platform; and 3D graphics designers, who use its OpenGL architecture to speed up 3D graphics calculations.

Intel is aiming the Pentium Pro squarely at these two markets, which have traditionally been dominated by workstations such as Sun SPARC-stations and servers such as Digital's AlphaServers. The Pentium Pro should deliver this level of computational power to the rest of us.

**Inside the Viglen PC**

Viglen has built up a reputation as one of the best of the UK's home-grown PC manufacturers. Its ability to get systems out early is now well established; initially with the Pentium 133 and now the Pentium Pro. The company's close relationship with Intel has enabled it to obtain engineering samples of the new chip, and its accompanying Intel motherboard and chipset, before most other UK companies.

This pre-production model of the Pentium Pro was housed in a desktop case (a mini-tower will also be available) which has been altered from Viglen's usual design to meet the new ATX design specifications. There are two 5.25in and two 3.5in device bays positioned at the front. Beneath the 3.5in bays is a blind bay for a hard disk. At the top right of the case is the power supply with a modified design to fit the requirements of ATX.



The motherboard (made by Intel) is officially entitled the "Performance/AU" although it has been known for some time as the Aurora. The chipset is the 82450GX (previously known as the Orion), which supports multiple PCI buses and up to four processors. The

use of the GX variant of the 82450 is somewhat surprising: Intel has clearly positioned the GX as a server chipset, and the KX as the workstation chipset for this type of system. That is, until the Mars chipset appears for the lower end of the market.

**You should be looking at P6 systems if you satisfy these criteria:**

- You are running mainly, or exclusively, 32-bit code — for example, Windows NT running Windows 95 applications. If you are running Win95 you can expect some performance benefits but not enough to justify the price premium. Microsoft has left a lot of legacy code in the crucial USER and GDI segments. Legacy code slows down the Pentium Pro: in some cases to the point where it is slower than a Pentium.
- You need SMP (Symmetric Multi-Processing) or may do at some point in the future. The Pentium Pro and its accompanying Intel chipsets support glue-less SMP of up to four processors.
- You are looking for better data integrity than the Pentium/Triton combination can offer. Both versions of the Orion chipset support ECC on the memory bus, and the server version (82450GX) supports parity checking on the system bus as well.
- You are willing to take a small, but real, risk: just as early Pentiums turned out to have an FPU bug, the Pentium Pro could have any number of nasties that escaped beta testing.
- You have enough money to be an early adopter — the latest and greatest always comes with an inflated price tag.

## Let's get technical

The first Pentium Pro will run at 150MHz (rather than 133MHz as Intel had originally promised) and will feature 256Kb on-board L2 cache, and is just one of the improvements Intel has made to its new baby. The siting of the L2 cache on the chip, rather than on the motherboard (as was popular with Pentiums and 486s), enables signals to get between the two on a 64-bit data path, rather than the 32-bit path of Pentium system buses. Their physical proximity also adds to the performance gain. The combination is so powerful that Intel claims 256Kb of cache on the chip is equivalent to over 2Mb of motherboard cache.

### Dynamic execution

An even bigger factor in the Pentium Pro's performance improvement, over the Pentium, is down to the combination of technologies known as "dynamic execution". This includes branch prediction, data flow analysis and speculative execution. These combine to allow the processor to utilise otherwise wasted clock cycles, by making predictions about the program flow to execute instructions in advance. RISC-like features such as pipelining are being used to their full potential in the Pentium Pro, for the first time in the x86 family.

Yet the Pentium Pro's performance gain over the Pentium when running 32-bit software represents only half the story for its high-end users. One of the worst frustrations suffered by many designers of Pentium-based servers was the difficulty of putting more than one processor in the same system and making them work together. The Pentium Pro makes it much easier to design SMP (Symmetric Multi-Processing) systems, as they are known, and both variants of Intel's first chipset support more than one processor.

The workstation version of the chipset (whose proper name is the 82450, commonly known as Orion) supports one or two Pentium Pros, whereas the server version supports up to four, as well as multiple PCI buses.

### Raw speed

The Triton chipset, popular among Pentium systems, is not particularly suitable for server applications because it does not have ECC or parity (both methods for detecting memory errors). Both variants of Orion support ECC on the data bus, and the server version additionally supports parity on the system bus for enhanced error detection. The Pentium Pro and Orion chipset pairing therefore offers advantages for system designers as well as those users who require raw speed for their applications.

There is more good news for speed demons, with the announcement of two more Pentium Pro chips. There will soon be two 166MHz versions: one with 256Kb on-board L2 cache, available before the end of the year, and another with 512Kb. The latter will be manufactured using a 0.35 micron process instead of the 0.6 micron process used for the first two chips.

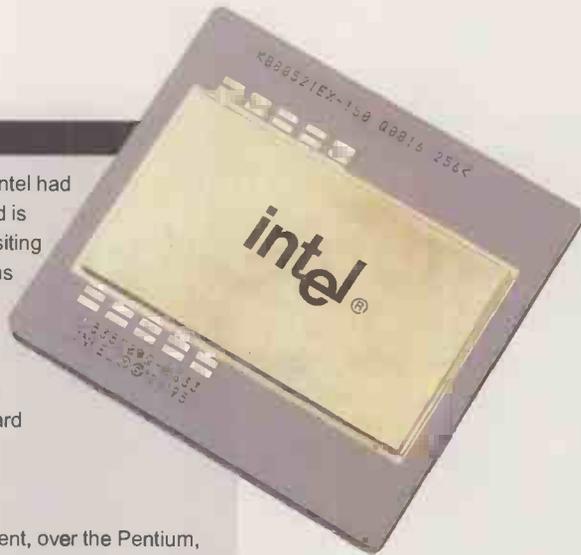
The Performance/AU, Intel's first ATX board design, has some surprises for those used to the Baby AT style. The slots — four PCI and three ISA, with one shared — are still positioned at the back left of the case facing towards you as you lift the lid, but their path is no longer blocked by the processor so all the slots will take full-length cards. The processor, in a ZIF socket 8, has moved

## Availability and pricing

At the time of writing, the release date for the 150MHz Pentium Pro was 1st November, priced at \$974 in quantities of 1,000 (a UK price had not been announced). The first 166MHz chip will cost \$1,066 in 1,000-unit quantities — no price indication was available for the second variety of 166MHz processor. The workstation (82450KX) and server types (82450GX) of Orion will cost \$209 and \$291.60 respectively in Quad Flat Packaging. A low-cost chipset aimed at desktops and codenamed "Mars" is expected to hit the market early next year, although details are not yet available.

to the top right of the case, where it can be cooled directly by the power supply unit fan sitting above it.

There are four SIMM slots, but instead of being hidden away underneath a drive device at the front right of the board, they are positioned next to the PCI slots for easy access. The two EIDE connectors and single FDD connector are positioned directly underneath the drives to which



they connect, enabling shorter cable lengths and a less cable-strewn case interior. Another feature of the ATX design is the ability to stack the I/O connectors at the back of the case so that they rise directly off the motherboard instead of being connected via cables. This looks neater and frees up space at the back of the casing for the possible addition of serial-bus connectors like the USB (Universal Serial Bus).

### Processor and graphics card

Although the specification of the final machine will vary, this is the sort of thing you can expect. The processor will be a Pentium Pro 150 with 16Mb RAM, 1Gb hard disk, and 4X CD-ROM drive on Enhanced IDE. The graphics card will probably be a Diamond Stealth 64 Video VRAM with 2Mb, driving a Viglen 15in monitor.

This bundle will cost around £2,700 and will have been available from the launch date of the Pentium Pro — almost certainly 1st November, at the time of writing.

### Fitting in

This machine fits into Viglen's entry-level Pentium Pro range. The company is also working on an enterprise-level server with a minimum of four Pentium Pros to be available in 1996, and will offer Pentium Pro daughterboards for its Intel-designed EX EISA Xpress in the near future.

It was not possible to benchtest this machine as it was still pre-production when we looked at it and some of the silicon wasn't final. Nevertheless, with the right software, it is sure to fly.

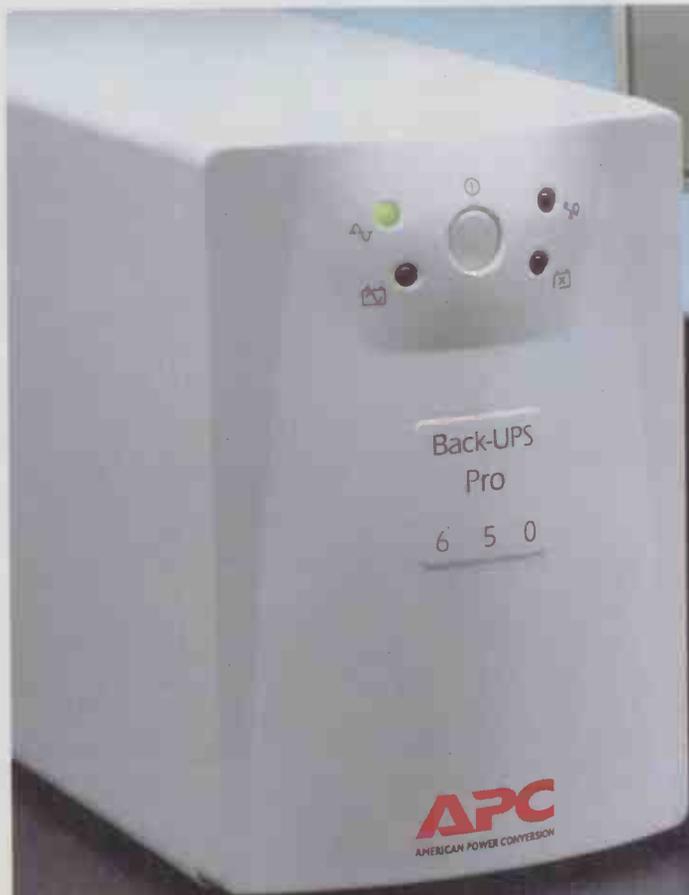
## PCW Contacts

Intel 01793 40300.  
Viglen 0181 758 7000.



IT'S NOT IF, IT'S WHEN

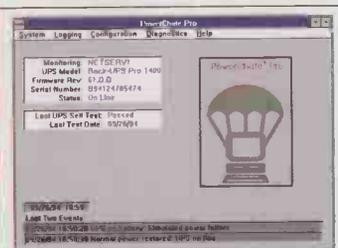
# Windows® 95 puts the power of a server on your PC. The new Plug & Play Back-UPS® Pro™ will keep it there...



If you're about to invest in a new multi-tasking operating system like Windows 95, experts say it may be time to invest in APC protection. Why? Because bad power is the largest single cause of data loss, and on a multi-tasking system, your vulnerability is multiplied. When full protection is as affordable as a new mouse, it just doesn't make sense to leave your premium machine unprotected.

**NEW!**  
Includes  
**FREE**  
Plug &  
Play  
software!

Software exclusively supplied with APC Back-UPS Pro PnP models (ref BPxxxx PnP). Supports Windows, Windows 95, WinNT, Windows for Workgroups, and OS/2.



Back-UPS Pro Plug & Play comes with the Free PowerChute Pro Software that provides: safe automatic shutdown (whether you are there or not), power event recording for power quality analysis, real time display of UPS status, and certified Windows 95 Plug & Play compatibility for easy installation.

Protect against the inevitable power hit with new Back-UPS Pro, the one and only UPS designed for Windows 95. Automatic Voltage Regulation (AVR) provides the edge you need for full protection against extended brownouts or overvoltages without draining the battery, while CellGuard™ intelligent battery management extends battery life with fast recharge and deep discharge protection. The units even include built-in 10Base-T network cable surge protection for a bulletproof response to anything Mother Nature or Murphy's Law may send in your direction.

All in all, you can't make a bad choice when you choose the company that protects more PC's than all other UPS vendors combined: APC.



“ORGANIZATIONS CAN FURTHER ENSURE RELIABLE SYSTEM PERFORMANCE BY CHOOSING A UPS LICENSED TO BEAR THE DESIGNED FOR WINDOWS 95 LOGO...” MICROSOFT

“★★★★...SHOULD BE STANDARD EQUIPMENT ON EVERY DESKTOP... EFFECTIVE, AFFORDABLE, DESIGNED TO LAST...”  
PC COMPUTING

“[WITH WINDOWS 95]...USERS ARE KEEPING MORE FILES OPEN AT ONCE AND HAVE MORE DATA AT RISK THAN EVER BEFORE... A UPS IS QUICKLY BECOMING A MUST...”  
COMPUTERLIFE

“DON'T TAKE CHANCES. GET THE ULTIMATE PROTECTION... FROM APC.”  
PCWORLD



Equipment to protect	Advised Back-UPS Pro PnP	Battery runtime	Part #
Desktop PC	Back-UPS Pro PnP 280	14 minutes	BP280i PNP
Multimedia station	Back-UPS Pro PnP 420	9 minutes	BP420i PNP
Multimedia station & peripherals	Back-UPS Pro PnP 650	10 minutes	BP650i PNP

**PowerManager™ & ProtectNet™**  
AC and dataline surge suppressors.



STARTING AT £ 23\*

**Back-UPS® & Back-UPS® PRO™**  
UPS for PC and advanced workstations



STARTING AT £ 119\*

**Smart-UPS® & Smart-UPS® v/s**  
Manageable UPS for servers and networks



STARTING AT £ 245\*

**MATRIX-UPS™ & ACCESSORIES**  
Modular UPS for client/server datacenters



STARTING AT £ 3150\*



What are the 10 most common power protection mistakes? Want tips for adding reliability to your PC? Get your **FREE** handbook!

Mail or fax to **APC Fax: (01753) - 511 033**

Name

Title

Company

Address

City  Postcode

Phone (  )  Fax (  )

**APC**  
AMERICAN POWER CONVERSION

The World's Most Reliable Power Protection  
**OVER 4,000,000 UNITS INSTALLED!**

28-32 Church Street - Slough, Berks - SL1 1PJ  
PHONE: (01753)511 022 / FAX: (01753)511 033

INTERNET: apctech@apcc.com  
**NEW! Web POWERPAGE: www.apcc.com**

\* Suggested list price exclusive VAT. Copyright 1995, APC. Trademarks are the property of their owners.

UK-A53-B2



PCW UK A

ViewSonic have won 15 top awards worldwide. We offer advanced colour monitors from 14" to 21" in Economy, Graphics and Professional Series plus multimedia products. Dependent upon model, TCO 92, EPA Energy Star™, MPR-II certified, PC and Mac compatible. Most ViewSonic products have a 3-year limited warranty on the CRT and parts and one year on labour. Please contact us today so we can send you free information and colour brochures. Call 0181-781 6986

# YOU SPEND MORE TIME LOOKING AT YOUR MONITOR THAN THE ONE YOU LOVE. SO BE CHOOSY.

At ViewSonic, we make nothing but monitors. So we concentrate all our efforts on making them as nice as possible for you to live with.

Our monitors are easy on the eye and sweet to the ear. And features like Plug & Play and On-View Controls make it simple to get started.

This single-minded approach has made us one of the 500 fastest-growing companies in the States. Now here we are in Europe, eager to please. Why not call us on 0181-781 6986.



**ViewSonic®**

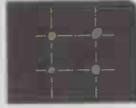
We only make monitors. They have to be the best.



**Super contrast screen.**  
By using glass with a lower transmission rate, we minimise cross-over and colour wash-out. Every pixel is well defined giving you better contrast and brilliant colours.



**ARAAG®** This anti-reflection, anti-glare screen uses a multi-layer process to refract light away from you while maintaining the resolution quality of the image on display.



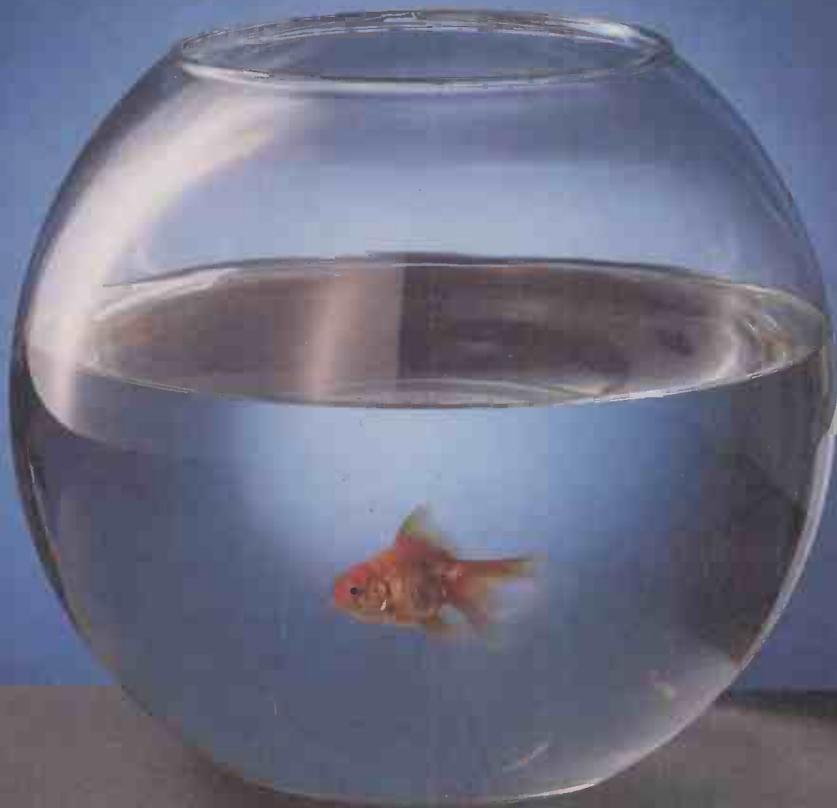
**Double dynamic focus system.**  
By using two sets of lenses instead of one, our focus is improved by over 20 percent and spot roundness increased by 50 percent. This reduces colour bleeding, virtually eliminates moiré and gives you a far sharper, clearer picture.



**AIM.** The beams emitted by the electron guns pass precisely through the holes in the shadow mask. Our Advanced linear mask has tremendous strength and resists shape distortion caused by heat. That gives you better image quality with minimal shifts in focus and colour.

# Homeward bound

Multimedia home PCs are gaining in popularity. These new PCs are designed to make computing more accessible to the wider public who may not know (or even want to know) their ASCII's from their LQ's. Our very own homeboy, **Ken MacMahon**, looks at five models and separates the domestic bliss from the domestic violence.



PCW Goldfish and Product Photography by David Whyte  
For those who may be concerned, the goldfish were returned to a larger, more suitable tank soon after the photo-shoot.

**F**aced with relatively flat sales of office machines, manufacturers are putting big efforts into infiltrating living rooms throughout the world. Their efforts have been fuelled by a spate of reports, as well as the results of their own market research, which anticipates phenomenal growth in the sales of home PCs. It's fair to say that there has never been a better time to buy a computer for your home.

PC manufacturers have very different ideas on what consumers want from their multimedia home PCs. But one thing on which they all agree is the need for a fast CD-ROM drive and a bunch of multimedia CD titles, although quad speed drives are not yet a standard feature.

Another thing that all vendors are at last coming to recognise is that many people are intimidated by a PC. They need plenty of help; not just to get up and running, but with everyday tasks like sending email. Attempts to provide a more accessible interface and improved help, range from the purely cosmetic to GUIs (graphical user interfaces) that are fun to use and easy to operate, even for the novice. So choosing the right machine is as much a question of software as hardware specification.

Some models include extras like fax/modems and TV tuner cards — and there are even those that have been designed to look like existing domestic appliances. Here, we review five of the latest models from IBM, Packard Bell, Olivetti, Apple and ICL.

### Apple Macintosh Performa 5200CDTV

Launched in April, this model is a return to the original Mac design philosophy of a "one box" computer. Aesthetically speaking it's gorgeous, but it's also a supremely functional design which keeps everything neat and tidy.

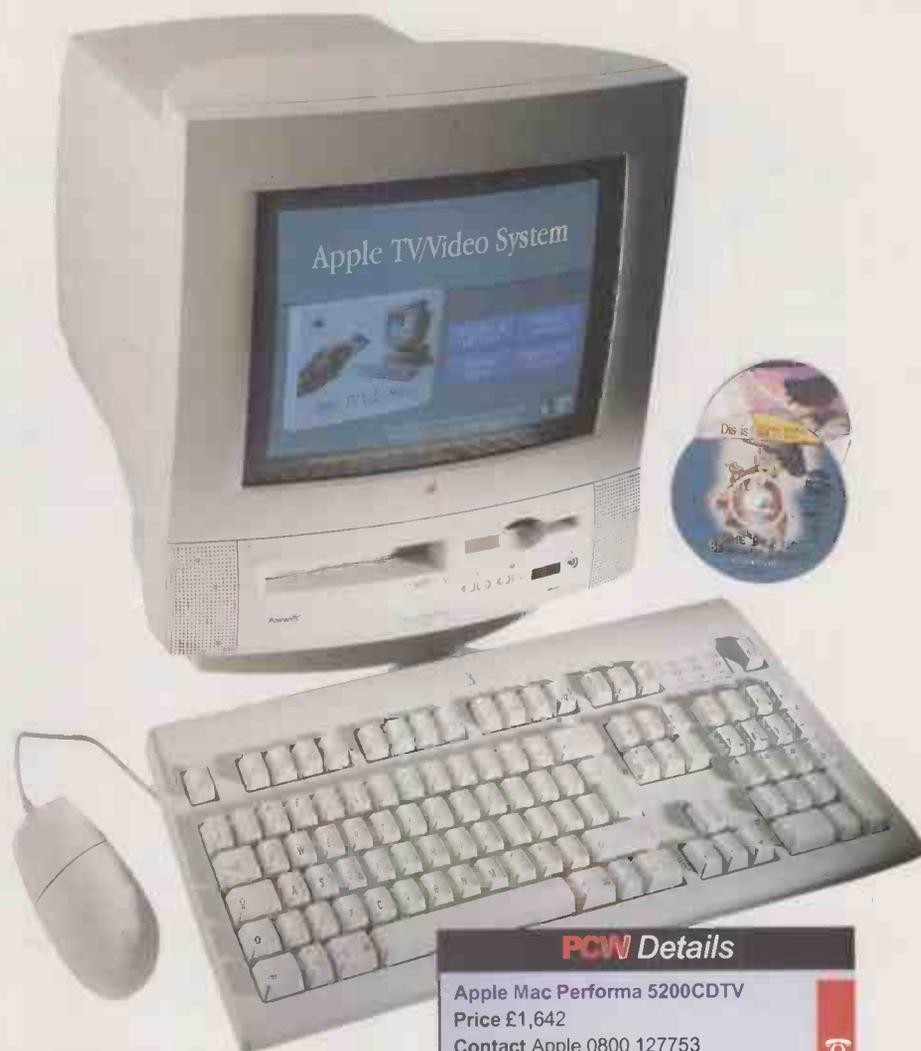
This small box is home to a 15in colour display which offers a palette of 32,000 colours at 640 x 480 resolution and 256 colours — good enough for most games — at the maximum available

resolution of 832 x 624. Stereo speakers sit either side of the screen and a tiny slot at the top betrays the presence of a mono microphone. Slightly larger slots, bottom left and right, provide access to the quad speed CD-ROM and a 1.4Mb "Superdrive" which will read DOS format as well as Mac OS disks.

Beneath the floppy drive, brightness and volume controls and an infra-red sensor label this as being a machine destined for the dining room, rather than the boardroom table. This is a "box" in the original sense of the word: a TV tuner and video card allow you to watch broadcast TV and videos.

Among the bits you can't see are a 500Mb internal hard disk and 12Mb of RAM. The fixed disk is an IDE drive, which is cheaper than the SCSI drives which have been favoured by Apple in the past. The RAM sits in two 72-pin SIMM slots which can be used independently (so you don't have to fit matching-sized SIMMs) and can be expanded to 64Mb.

Around the back you'll find holes for the only two cables you need: the power lead and an ADB (Apple Desktop Bus) port for the keyboard. There are,



#### PCW Details

**Apple Mac Performa 5200CDTV**

Price £1,642

Contact Apple 0800 127753

**Verdict** Without doubt, the best of the PC/TV home machines.

**Bundled Software** MacOS 7.5.1 with At Ease, ClarisWorks, Claris Organiser, Amazing Animation, Spectre Supreme, Mavis Beacon's Typing Tutor, Thinkin' Things, Click Art Performa collection, Mac Gallery Clip Art Treasure pack, Grolier Multimedia Encyclopedia, Leonardo the Inventor, MS Dinosaurs, Rosetta Stone, Benjamin Bunny, San Diego Zoo, Guinness Multimedia Records.

however, plenty of options for "spaghetti-lovers": two serial ports marked for printer and modem, external SCSI, sound input and output and TV aerial socket, just for starters. The video input card provides three RCA phono sockets and an s-video socket. The remaining two ports are covered with removable plastic covers. One is an LC040 compatible processor-direct slot which should work with most PDS cards available from third party vendors. The other is a communications slot which can be used for an Ethernet card or a modem. (Apple has just released a 14.4Kb/sec modem with answering machine and fax capabilities.)

Impressive though it is, the Performa

5200's hardware specification tells you very little about it. It's not until you switch it on that you get any real idea of what this machine is all about. With system software (MacOS 7.5.1) and several applications already installed, you can get to work or play immediately. Pre-installed software is a canny mix of business, education and play stuff including ClarisWorks, Claris Organiser, Mavis Beacon's Typing Tutor, Spectre Supreme and a couple of pre-school play-and-learn packages. When you get bored with those, you can turn to the CDs.

Sooner or later of course, you're going to end up watching TV. But the 5200 is more than just a computer with a TV bolted on: you can use Apple's TV/Video System software to capture still images or video sequences from either a broadcast TV channel or any video source (most likely a VCR) attached to the video-in port. Although much is made of this, most people will probably ignore it. Spicing up your business presentation with snaps of Captain Jean-Luc Picard confronting the Ferengi will soon lose its appeal — at least for your audience, if not for you. And even RISC processing power can seem gutless when faced with the task of digitising and compressing 25fps full-screen

video. Determined Quicktime movie makers will nonetheless be pleased with the inclusion of Avid Videoshop among the lengthy list of bundled software.

Of great interest to parents will be the security features offered by the Video Player, which provides password protection for those channels you might prefer your children *not* to watch. Of course, there's nothing to prevent them watching it on your regular TV but that's hardly Apple's fault. The TV tuner also includes a teletext decoder with a Fasttext facility which stores up to 500 recent pages for quick retrieval — about 490-odd more than the average TV or video.

Lastly, and probably most importantly, there's the ease-of-use factor. The word "intuitive" could almost have been coined specifically to describe Macs. Apple provides lots of help for the uninitiated including an online tutorial in two parts and the Apple Guide interactive context-sensitive help, which takes you through common procedures step-by-step, getting you to press the buttons to make sure you've understood and going over it again each time you screw up. There's At Ease, a much-simplified graphical interface which sits on top of the Finder and allows an administrator, such as a parent or

teacher, to limit access to applications and files for a child user for instance (or even yourself when you've had a little too much to drink!). On one hand, At Ease can provide the non Mac-literate with a simple method of accessing the resources they need from the Performa. On the other hand, it's the best way to stop the kids trashing a week's work in less time than it takes to say "Apple Backup".

In a bid to stay one step ahead of its PC rivals, Apple is launching a new beefed-up Performa, the 5300 CDTV, based on the PowerPC 603e chip. In addition to the TV tuner, the new Performa will be Internet-ready with a built-in 14.4Kb/sec modem and include 16Mb RAM, an MPEG video player and 16-bit stereo sound. Given the current dearth of MPEG video titles and a price tag of £2,375, budget-conscious households might consider a 5200 with the modem card to be a more realistic option.

### IBM Aptiva 941

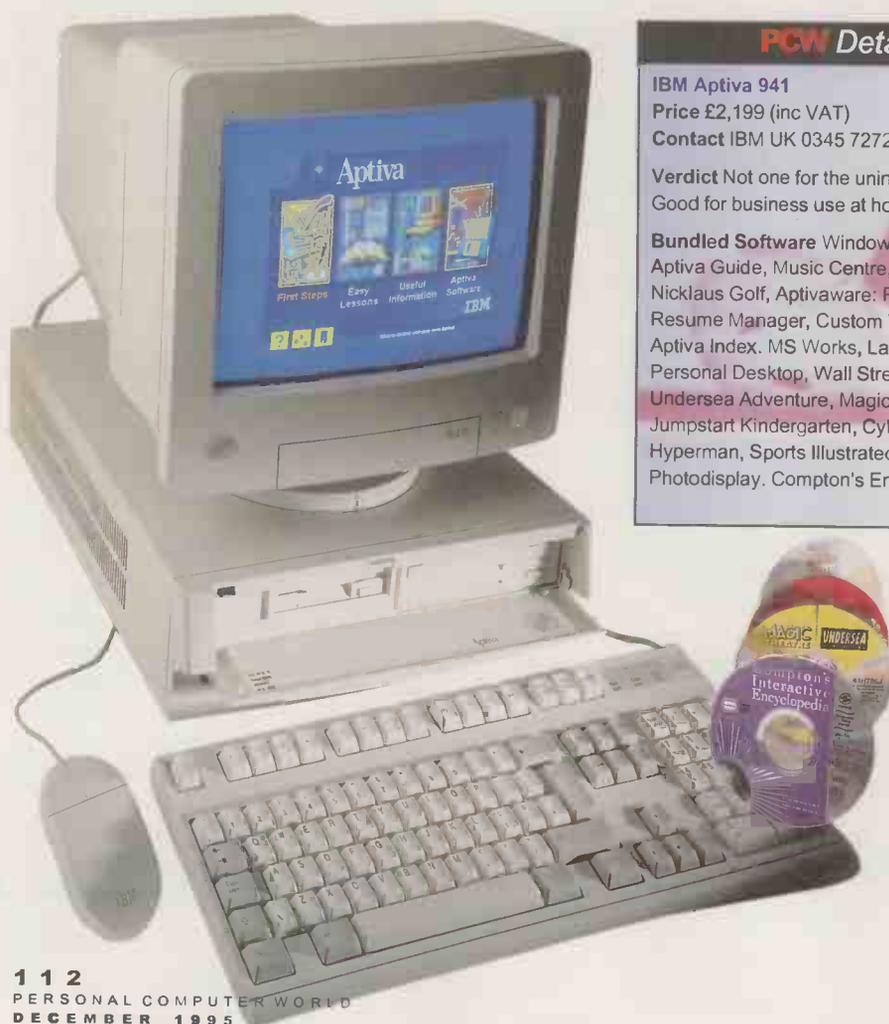
The IBM machine is the most highly specified of the bunch with the exception of the Performa, but also the ugliest apart from the Spectria. Earlier in the year, IBM split its product range into four categories and aimed the Aptiva at the home

consumer. There are nine machines ranging from a DX2/66 to a P120 mini-tower. None of them include a TV tuner — IBM discontinued that model last year because it wasn't selling well. Our review model had Windows 3.11 pre-installed but by the time you read this, machines will have Windows95 and Lotus SmartSuite 4.0 in the software bundle.

The Aptiva 941 is a 100MHz Pentium with 8Mb of RAM and an

850Mb hard drive. An unexceptional-looking 15in tilt/swivel monitor sits atop the processor box which, in design terms, looks more in tune with the office of the seventies than the home of the nineties. A slightly curved front panel drops down to reveal the CD-ROM and floppy drives, but other than that there's not much to see.

The Aptiva is supplied with 30W external speakers, which means you get much better sound quality and volume than with the built-in type, except the spaghetti



#### PCW Details

##### IBM Aptiva 941

Price £2,199 (inc VAT)

Contact IBM UK 0345 727272

**Verdict** Not one for the uninitiated. Good for business use at home, though.

**Bundled Software** Windows 3.11, Aptiva Guide, Music Centre, Jack Nicklaus Golf, Aptivaware: Rapid Resume Manager, Custom Tools, Aptiva Index, MS Works, Launchpad, Personal Desktop, Wall Street Money, Undersea Adventure, Magic Theatre, Jumpstart Kindergarten, Cyberia, Hyperman, Sports Illustrated for Kids, Photodisplay, Compton's Encyclopedia.

The new Olivetti Notebook line  
with the first **11.8-inch\***  
king-size Display.

Global connectivity, with  
**PCMCIA, Infra-red subsystem  
and Docking Station.**



Maximum power with  
**Pentium® processor 90 MHz.** 49mm slim.

Totally multimedia with  
**CD-ROM, optional MPEG board  
and Stereo Sound System.**



64,000 colours TFT Display up to 11.8". Pentium® processor 90 and 75 MHz with PCI Bus. Infra-red subsystem, 2 PCMCIA slots, Docking Station. CD-ROM, optional MPEG board and Stereo Sound System. Pre-loaded Windows® 95 and Windows® for Workgroups. Up to 1.2 GB "Fast IDE" HDU. Standard 8 MB RAM expandable up to 40 MB. Maximum data security with Freeze/Suspend functionality. Reduced energy consumption with no-fan Cooling Technology. Minimum size and weight: 286 x 228 x 49 mm - 2.9kg.

**olivetti**  
personal computers

Call 0800 44 77 99. 9:00am to 5:30pm. Answerphone at all other times.

Please send me further information on Olivetti Notebooks. Is your interest for: Home  Business

Name \_\_\_\_\_ Position \_\_\_\_\_ How many people work in your office? \_\_\_\_\_

Company \_\_\_\_\_ Address \_\_\_\_\_

Postcode \_\_\_\_\_ Tel. No. \_\_\_\_\_

Post to: Olivetti Sales Centre, Olivetti House, Featherstone Road, Wolverton Mill, Milton Keynes MK12 5RF. Or Fax: 01908 203464.  
Please tick here if you do not want to receive information from an Olivetti Authorised Reseller.

factor takes on significance when speaker cables and an external power supply are considered. You need three power outlets in all: one for the processor box, another for the monitor (there's no through connector), and a third for the speakers. A 16-bit SoundBlaster card is fitted and there are two spare PCI-bus slots.

When you switch on you're whisked, via Windows, straight into the Aptiva guide/demo. This multimedia affair gives a reasonable introduction to all the software installed on the machine. The software is divided into four categories: games, multimedia, home productivity and Aptivaware.

The Aptivaware suite is, with one exception, a fairly mediocre collection of utilities that allow you to undertake such exciting and groundbreaking activities as saving your Program Manager setup, setting the resolution and colour depth of the display, and changing power management parameters.

The exception is Launchpad, the interface your children get to play with. The Launchpad screen features a cartoon graphic of a dog sitting in a car that is straight out of the Jetsons. And if the dog looks familiar, it's because you've seen him on a screensaver somewhere. Launchpad is written by After Dark authors Berkeley Systems. Unfortunately, we couldn't gain access to the parent section where you set kiddies' access privileges and so on, because the password had been previously set and we didn't know what it was.

A trio of educational applets accompanies Launchpad. Kids Clock is a talking analogue clock which tells you the time when you move the hands, but unfortunately there's a second hand so the time is always something like "half past three and twenty three seconds". There's a talking calculator as well, and a tape player which records your voice and replays it with wacky distortions applied.

IBM has made little effort to disguise what is, in its basic format, an unreconstructed office PC bundled with some children's software and a few CD-ROMs. It is an unquestionably powerful machine but although the build quality is superior, it suffers from the same problems as the Spectria; namely that it's not a home consumer electronics product. This is really more a machine on which to work at home than a genuine "home PC".

### ICL Fujitsu PCTV

Three things set the PCTV apart from other models: its sleek, curvaceous charcoal grey casing, the trackball on the keyboard, and the fact that the TV functions are completely divorced from the PC. This means you can't watch TV in a window while you do other work and you can't grab digitised frames or video clips. In every other respect the TV works as well as, if not better than, the other models reviewed here.

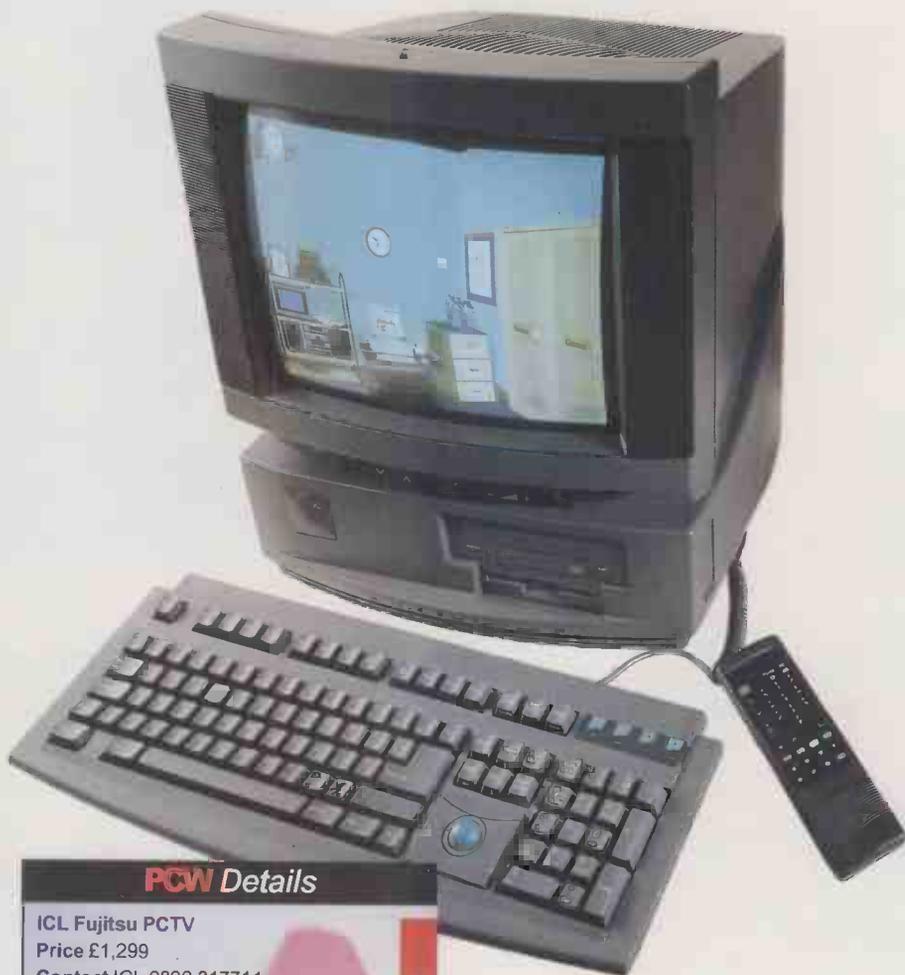
It will receive teletext and you can create "magazines" containing your favourite teletext pages (although if you are the sort of person who has favourite teletext pages, you should perhaps consider seeking professional help!). You can also program reminder alarms so you don't miss your favourite programmes.

The interface which sits on top of Windows follows the popular room

metaphor; in this case the starting point is the disconcertingly-named "Den". That's the only transatlantic twaddle you'll have to put up with, though: the voiceover on the tutorial is reassuringly BBC English.

"The Den" looks rather like one of those room settings you get at MFI or Ikea stores where everything from the books, to the TV and the hi-fi, are really just cardboard boxes with pictures on the front. A click on the PC takes you into Windows, the hi-fi pulls up a CD audio player and sampling application, the bookshelf provides access to reference manuals and CD-ROM material. The light switch shuts down and you can probably guess what the TV, games cupboard, filing cabinet and diskette box are for, but then, that's the whole idea.

A rather revolting-looking picture hanging on the wall provides access to your personal file details. Parents and



#### PCW Details

**ICL Fujitsu PCTV**  
**Price** £1,299  
**Contact** ICL 0800 317711

**Verdict** Quite a nice PC with a TV stuck on top.

**Bundled Software** PGA Tour Golf 486, Putt Putt joins the Parade, Wing Commander, Privateer, MS Works, Encarta 95.

guardians can make use of the channel barring feature which prevents minors watching what's not good for them.

The PCTV isn't short of connections to the outside world, there are two serial



# Why gamble on your database design?

*"Finally, after 20 years,  
there is a database  
design tool with real,  
practical usefulness"*

Richard Finkelstein  
Performance Computing

*"InfoModeler is the  
ideal business analysis  
and modelling tool. It  
is fast, productive and  
easy to use.  
Put simply, it helps me  
do a better job"*

Colin Inglis  
IS Controller, Adams Childrenswear

*"InfoModeler's  
sound theoretical  
underpinnings make it  
ideal for the teaching of  
database theory and for  
practical system design"*

Graham Welford  
Lecturer in Information Systems  
University of Wolverhampton

Now there is a tool for business analysts and system designers that can transform the way you think about database systems.

It's a design toolkit that helps make sure your database applications truly reflect business requirements.

InfoModeler takes the guesswork out of business analysis and database design. It starts from basic principles - facts about the business process. Facts are expressed in terms everyone can understand - plain English sentences. From the 'factbase' you assemble InfoModeler automatically generates the database model. InfoModeler uses examples, again expressed in English, to validate your model, checking that the database design conforms to sound relational principles.

So there's no more guesswork.

Because InfoModeler automates routine, but essential, tasks such as normalisation, table generation and system documentation, development is faster, errors are fewer, maintenance is easier and a lot less expensive.

And at only £99\* for the desktop version, InfoModeler is better value than ever.

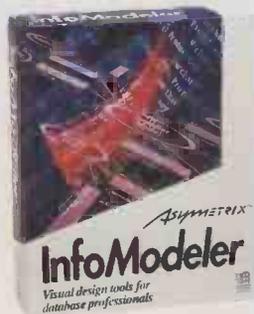
Now, by using InfoModeler, you can be sure your database applications are correctly designed. To order call 01256 469460, or fax or post the coupon for a FREE information pack.

*ASYMMETRIX™*  
**InfoModeler**

**UK Distributor:**



To order call  
**01256 469460**



**at £99\* there's no  
need to gamble!**



Please send me a  
**FREE** information pack

Name \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Post Code \_\_\_\_\_

Tel \_\_\_\_\_ Fax \_\_\_\_\_

Return to ICS Solutions FREEPOST BZ152  
Kingsclere Road, Basingstoke RG21 2BR Fax 01256 842362

\* Limited offer only, price excludes VAT & shipping  
all trademarks acknowledged

- More Sound
- More Dynamics
- More Value
- More Fun



PC REVIEW  
OCTOBER 1995



PCX  
OCTOBER 1995

# NuSound PnP

## New Sound for Today's PCs

Forget the snap, crackle and hiss of old sound technology. Experience the brand-new sound of NuSound PnP.

### Soundpower for Gamers

OK, we admit it, we love playing games too! That's why we paid particular attention to making NuSound PnP a gamer's delight and we reckon we've succeeded. 100% compatibility because NuSound PnP understands your need for all the important sound standards, including SoundBlaster Pro. Nearly 400 vibrant, dazzling sounds, and with a 3D spatialiser we'll put you right in the middle of the action.

### High-End Audio Built-in

But not forgetting the budding maestros amongst you, NuSound PnP hosts features your home Hi-Fi equipment would love; features such as 64 times oversampling, high signal/noise ratio and improved bandwidth. All of which means greater precision at high frequencies and impressively punchy bass notes.

You can even expand the sounds and drumkits further with our WaveBooster add-on cards.

Finally, we've added Panasonic and IDE CD-ROM interfaces. The Plug and Play installation and no driver with Windows 95, means you'll be up and playing with our complete audio software bundle in no time at all.

And at an amazing £129 we bet you'll be up and running down to your nearest Orchid dealer today.

- Plug and Play compatible
- Hi-Fi quality with 18-bit Wavetable
- Nearly 400 musical instruments

*Orchid – Simply more Sound*



ports and a parallel printer port. Of the three spare expansion slots two are EISA and the third is PCI bus. Installation of cards or additional RAM doesn't require so much as a screwdriver: you simply turn a key at the back and the entire chassis slides out. Video in and out facilities are provided in the form of RCA phono sockets on a panel at the back next to the aerial socket, and there's a SCART (Syndicat des Constructeurs des Appareils Radio Récepteurs et Téléviseurs) connector too, for video equipment. But don't forget, all this is for your viewing pleasure only — you won't be able to do any digital recording from external video devices. I very nearly missed the joystick/midi port and the mic and headphone sockets, which are mounted conveniently close to the front on the left-hand side.

It's clear that Fujitsu ICL has taken a much more consumer-orientated approach to the home PC than most other manufacturers. The PCTV is very accessible: it has good tutorials and documentation written by people who understand that readers may never before have set eyes on a PC. The whole concept has been well thought out and implemented, from the dialogue boxes that warn unsuspecting users they are about to leave the cosy security of "The Den" and enter Windows, to the thoughtful placing of the joystick port. It won't suit everyone though. The lack of digitised TV in a window will rule it out if you want to grab stills off the TV or play with digital video, and the lack of a modem renders it an Internet-free zone.

### Olivetti Envision 400

The Envision 400 marks Olivetti's entry into the domestic market. The Italian company is probably better known for its office products and its PC range includes the Pentium-based M6 Suprema range. The Envision has only just gone into production at the company's Scarmagno plant, so our PCW review model was a pre-production prototype.

It may not be the epitome of Italian style but the Envision 400 certainly looks the part. The matt black box bears more resemblance to a VCR than anything else and would certainly not look out of place underneath the TV or the hi-fi stack. The first surprise, which is evident from the size of the box, is that there is no monitor. In a rather neat inversion of the prevailing philosophy, instead of providing a PC with a built-in TV Olivetti has decided that as most people already have a TV, they



### PCW Details

**Olivetti Envision 400**

Price £1,399

Contact Olivetti 0181 780 8032

Verdict Innovative, fun, a real home PC... can I keep it?

**Bundled Software** Windows95, Olipilot 2.0, MS Works 3.0, Cheyenne Bitware, Midisoft Recording Session, Incat Magic Lantern 2.0 (Photo CD), Willow Pond MediaRack, Kid Desk, Millie's Math, Thinkin' Things, King's Quest VII, Uncle Archibald, Incredible Machines 2.

might as well make use of it.

It doesn't stop at the TV though. The Envision has sockets to accommodate virtually all your home's electrical appliances with the possible exception of the Hoover. There are two SCART sockets: one for the TV connection and another for your VCR. Additionally there are audio in and out minijacks and RCA connectors for your hi-fi, midi in and out sockets, and a VGA connector for an optional monitor.

Surprisingly, the keyboard is a cordless IR (infra-red) model about half the size of a conventional keyboard and incorporating a thumb-operated trackball. It has sculpted handles at either end and two buttons at the front just where your index fingers rest when you're holding it. This makes it ideal for couch-potato-mode operation but if you want to look more businesslike you can rest it on the table in front of the Envision. The IR receiver has a range of over six metres and a wide angle of view which, in practice, means you can move so far away you can barely see the screen without

the aid of binoculars. The keyboard powers down after a couple of minutes' inactivity to save battery power and this can be a bit irritating, but a single key press revives it once you realise what's happened. For some reason the trackball takes about five seconds to kick in.

Another surprise comes when you switch on. The Envision was the only one of the home PCs we reviewed to be shipped with Windows 95, though you don't see a lot of it because the first thing it does is to launch Olivetti's own GUI — the lamentably-named "Olipilot". The first thing to say about Olipilot is that it looks and works a lot better than its name suggests. It follows the room metaphor in a similar fashion to the Packard Bell Spectria, only better. You start out in the hall, where three doors lead to the study, the kids' room and the living room.

The kids' room contains objects such as the TV bookshelf, camera and hi-fi, which appear in the other two rooms as well. These objects launch commonly-used applications like online manuals, a Photo CD viewer and the hi-fi stack. Clicking on the desk takes you into Kid Desk, a separate interface for small people with a propensity for deleting all your files. Here kids can customise the desktop, launch their own applications, and even send each other email and leave voicemail messages for other Kid Desk users. Two excellent applications are

**NEW**  
**20" XGA**  
**ONLY**  
**£1054+VAT**

# Up the Resolution!



**£289 + VAT**  
15" FST XGA  
GoldStar 1527

**£1054 + VAT**  
20" XGA  
GoldStar 2010

**£569 + VAT**  
17" FST XGA  
GoldStar 1727

Workers of the world unite - upgrade to a high performance quality GoldStar monitor and see a revolution on your screen.

We're talking pin sharp, rock steady, non-flicker image, enhanced by a superfine dotpitch to ensure a crisp picture evenly across the screen.

An Invar shadow mask and non-glare AR-ASC screen, ensures you get the full benefit of the high contrast, vivid colour capability. And GoldStar monitors also incorporate the latest environmentally friendly DPMS power saving technology.

Now enjoy the bigger screen. The expanse of the increased working area. The benefit of reduced eye-strain. Oh and the type is larger too.

We have also given you some clever buttons to play with. Fine tuning and picture adjustment to the nth degree, all at the touch of a button. And it's all visible on screen. "That's on screen display."

So comrades. Take a closer look. The GoldStar range of monitors won't take your eyes - or bank balance into the red.

For details of your nearest supplier, telephone the GoldStar Hotline: 01753 500 426.

2 year manufacturers warranty included

**GoldStar**  
Technology with the human touch

 LG Electronics U.K. Limited, LG House, 264 Bath Road, Slough, Berks SL1 4DT.  
Tel: (01753) 500400 Fax: (01753) 693061

pre-installed, Thinkin' Things and Millie's Math House, and there's a further selection of Sierra CD-ROM titles.

There's not much in the living room that you can't access from elsewhere, though you obviously have the option of associating your chosen applications with various objects. The software cupboard is disappointingly bare but Willow Pond's Media Rack is a functional Wav/midi/CD audio player and there's a Midisoft Recording Session, too.

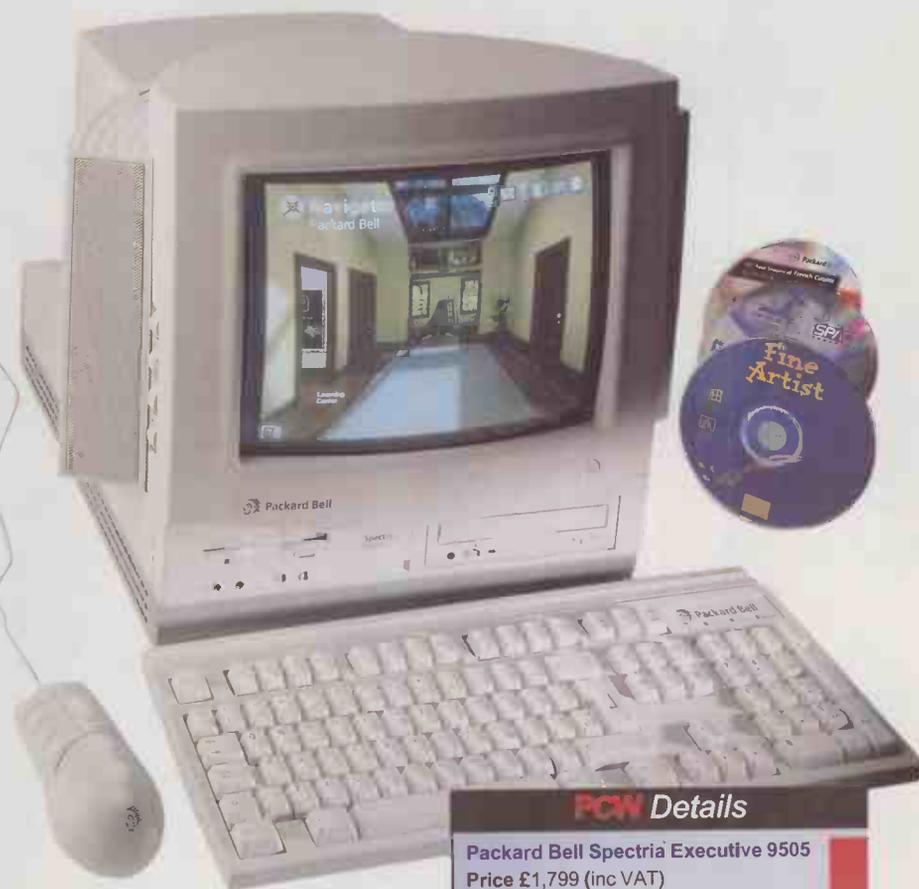
Moving through to the Office, things start to look more interesting. The office suite is MS Works, accessed from the notepad on the desk. But it's the presence of the telephone and fax which hint at the Envision's superior communications capabilities, supported by the LC144 14.4Kb data/fax/voice modem card. Software support is provided by Cheyenne's Bitware suite of comms utilities which include fairly comprehensive facilities for managing fax and voicemail.

There's very little to criticise about the Envision. You can't really get on with Works using a TV (at least not the 12in portable we tried), so if you intend to spend a lot of time looking at text you'll need a decent monitor. And the documentation could be better. Other than that, I can't find a bad word to say about it. It has a good specification: the 400 is a 486DX4 100 with 8Mb of RAM and a 630Mb IDE hard drive and quad speed CD. It's expandable to 24Mb and has one VL and three spare ISA slots. If you want more power, there's a Pentium 75 model with MPEG card for an additional £500. The software is genuinely home-orientated and it offers communications facilities that you can actually make productive use of.

Olivetti has tried very hard to get every detail right — even down to the inclusion of batteries for the keyboard and remote. But if you're looking for something on which you can watch Neighbours while finishing off your accounts, this isn't it.

### Packard Bell Spectria Executive

Like the Performa, Packard Bell's Spectria range of home PCs was launched in April too. The Spectria Executive is an all-in-one design with a 15in monitor moulded onto a base, housing the motherboard and drives. The monitor doesn't tilt or swivel so you need to be positioned right in front of the screen, at the right height to get a good view. It's nowhere near as stylish as the Apple or ICL machines and has a shoddy, cobbled-together look and feel. The screen is



bulbous by today's flatish, squarish standards, with elongated speakers emerging from either side and extending almost to the depth of the screen.

A quick look around the back does little to boost your confidence. A rather feeble attempt has been made to colour code the cables and ports, so you know that you must plug the purple keyboard cable into the purple socket, and likewise for the green mouse cable. The serial and parallel ports are also colour coded, but as this model is supplied with neither a printer or a modem it's largely irrelevant.

The processor behind all this is a 486 DX2 66MHz, with 8Mb of RAM and a 500Mb IDE hard drive. The CD-ROM drive is a dual speed Matsushita unit. So, nothing spectacular on the inside either then.

Three expansion slots are occupied by a sound card, TV tuner/video grabber and the FM radio tuner. Here, non colour-coded black cables run everywhere. There's an anonymous-looking black lead from the sound out of the TV card, to the sound card's line in, and an identical lead from the FM tuner's speaker port to the sound card's mic socket. A VGA connector runs from the VGA port on the motherboard to the TV card and three leads run off this,

### PCW Details

**Packard Bell Spectria Executive 9505**

**Price £1,799 (inc VAT)**

**Contact Packard Bell 01753 831914**

**Verdict** Kidspace is good, but poor overall design and non-existent documentation means this machine is best avoided.

**Bundled Software** WFWG 3.11, MS Works, Lotus Organiser, Sage Moneywise, PB Navigator, PBTv, PB Radio, Voyetra Audio Station, Cyberia (limited edition), Four Seasons of French Cuisine, 3D Body Adventure, MS Fine Artist, Knowledge Adventure: Speed, Space and Undersea, Encarta 95, Language Learning with Asterix.

terminating in RCA phono sockets — presumably for video capture.

This might be less intimidating were some kind of hardware documentation provided, but you are expected to get by with a generic "486 personal computer User's Guide". Here, no attempt has been made to disguise the material as fit for home consumption: this is a typical user manual of old, full of incomprehensible jargon and pages of help for those interested in advanced configuration of serial ports, configuration of motherboard jumpers and so on — completely useless.

It gets a little better when you start up the Spectria. A button on the front boots up, launches Windows 3.11 and starts PB Navigator — Packard Bell's attempt



## Get involved!

Go for it. Let your emotions loose. Quad Speed has never been better. The new GoldStar 540B CD ROM. Great handling, breathtaking acceleration - the fastest in its class! After all, it's not the winning that counts - it's the taking part.

For details of your nearest supplier, call the GoldStar Hotline: 01753 500 426

GoldStar CD ROM drives are covered by a 1 year replacement warranty.

# GoldStar

Technology with the human touch

 LG Electronics U.K. Limited, LG House, 264 Bath Road, Slough, Berks SL1 4DT.

Tel: (01753) 500400 Fax: (01753) 693061

540B  
Quad speed  
£124.00+VAT

to protect the innocent from Microsoft Windows. Navigator's entry point is a hallway with four doorways leading off, each providing access to a different work area: Software, Workspace, Kidspace and Learning Centre. Each of these provides an appropriately configured front-end to application and data files, with big buttons for individual applications or application groups.

Perhaps the best of these is Kidspace, which provides a secure but fun environment for small computer users. Applications are stored as objects on shelves and files are tidied away in big drawers labelled "homework", "letters", and "personal". It's all wrapped up with wacky animation and sound effects and, speaking as an overgrown child, I thought it was pretty good.

Workspace provides the same thing for grown-ups, and the Learning Centre gives a guided tour complete with a female American talking head. Information, however, is not Packard Bell's forte and a lot of this is general to the point of uselessness. Generally, Upgrade Information tells you that you can upgrade your machine by changing the processor, adding more RAM or cache — call your dealer for more information.

It proved impossible to get any kind of picture on the TV tuner using a portable aerial, and reception on the FM radio was poor using the antenna supplied. While reception in our VNU Labs is not wonderful, we were able to obtain a viewable picture on the other machines with a TV tuner. There was no information on how

## Editor's Choice

Prior to having seen the Envision, there was no question that the Apple Mac Performa 5200CDTV was the pick of the bunch. Firstly, it is beautifully designed: the all-in-one unit needs only one power supply and the built-in speakers means there are no cables to worry about. Plug and play was a reality on Macs a decade before Windows 95, so you'll have no



problem installing a modem card or any other third party upgrade. On the software side, MacOS 7.5.1 is such an easy-to-use interface it requires very little in the way of additional material to make it suitable for home consumption.

But then the Olivetti Envision arrived and we had to change our minds and make this the Editor's Choice. This machine has a very high "wow" factor indeed. The cordless keyboard is a real delight to use. It has

some exceptional children's software and the communications software makes the most of the built-in fax/modem. What sets the Envision apart is that it has been designed as a home consumer product from the ground up, unlike the Aptiva and the Spectria for instance, which are simply office products with a new coat of paint.

to use the TV tuner, and limited help as far as the radio was concerned.

If Packard Bell is as serious about cornering the home market as it claims, it needs at the very least to provide comprehensive, clear documentation that

tells you exactly what the machine can do and how you do it. The Spectria range is due for an update soon: if Packard Bell is to maintain its reputation as a market leader, it will need to provide home consumers with better than this.

TABLE OF FEATURES CONSUMER PC'S

Product name	Apple Macintosh Performa 5200CDTV	Packard Bell Spectria Executive 9505	ICL Fujitsu PC/TV	Olivetti Envision 400	IBM Aptiva 941
Price	£1642 ex VAT	£1799 inc VAT	£1299	£1399 (P75 with MPEG £1899)	£2199 inc VAT
Contact	Apple 0800 127753	Packard Bell 01753 831914	ICL 10800 317 71	Olivetti 0181 780 8032	IBM UK PC response centre 0345 727272
Screen size	15in	15in	14in	n/a	15in
Built-in speakers	Yes	Yes	Yes	Yes	No (external)
Processor	PowerPC603 75MHz	486 DX2 66	486 DX2 66	486 DX4 100	Pentium 100
RAM (fitted/max) Mb	12/64	8	8/64	8/24	8/128
Hard disk (Mb)	500	500	350	630	850
Modem built in	No	No	No	Yes	No
Internet ready	No	No	No	Yes	No
Free expansion slots	Yes	No	Yes	Yes	Yes
CD-ROM	Quad speed	Double speed	Double speed	Quad speed	Quad speed
TV tuner/video card	Yes	Yes	Yes	No	No
Infra-red remote control	Yes	No	Yes	Yes	No
Windows95?	N/A	No	No	Yes	No

# The Fastest Draw in the West

CorelDraw 6 is bigger, bolder and more bundled than ever. Dual editing views, new tools, beefed-up photo editing, animation and 3D mini-applications, Windows 95 compatibility... you name it.

**Alex Gray** takes you on a guided tour of this new supersuite.



**T**he CorelDraw 6 suite is the latest in a venerable product line, in which each new version has topped its list of new features only by the number of bugs from which it suffers.

This latest version is a 32-bit suite that relies upon the Windows 95 operating system. Draw 6 seems significantly less bug-ridden at first release (6.00.118) than was version 5. The extensive range of Windows graphics calls made by Draw seems to expose weaknesses in a number of otherwise satisfactory video drivers, especially for the more advanced cards. It's a moot point whether this should be laid at Corel's door or blamed on the video driver suppliers; but the net effect for Joe User is the same — crash.

Since version 5, a major change to this package is that as fast as it joined the bundle, Corel Ventura has now left the standard product again and will appear later in a separate deal with PhotoPaint. This will raise some complicated pricing and upgrade issues.

## Suite dreams

The CorelDraw bundle is bigger than ever, with some parts old, some new, and others renamed. First, there are

the two major applications of long standing, Draw and Photo-Paint, plus three new secondary applications for version 6: CorelDream 3D, Motion 3D and Presents. Then there are nine utilities, mostly integrated by way of OLE, covering OCR and tracing, font and clipart management, application automation, and a few other items along for the ride.

As if all that weren't enough, there are Corel's legendary (and now bigger than ever) sets of fonts, photos and multimedia bits and pieces. These include 100 quaintly named "floating objects" (their logo is a hot air balloon, after all). The whole kit comes in a large box along with manual, clipart/fonts reference book, colour calibration photo and other useful bits and pieces.

Some recent 32-bit packages have been compiled to run under 32-bit native systems such as Windows 95, and under the old 16-bit Windows with the support of the Win32s library. CorelDraw 6, however, is full 32-bit only — the whole bundle has been compiled for Windows 95 and cannot be run at all under Windows 3.1 or 3.11. (Ironically, one good example of Win32s programming, Xara Studio, will shortly be reappearing under the Corel brand.)

Windows 95 offers standard benefits not easily available under 16-bit Windows, and the Corel suite provides extensive support for its new features and working methods. These include support for long filenames, extensive right mouse button context-sensitive menus, use of tabbed dialogues and property sheets, and the new help system.

The CorelDraw suite majors on complete OLE support, in-place editing (so, for example, a Corel graphic can be edited in place in a Word document), and automation with a Basic-like language and full script recording. It provides full drag-and-drop support for moving objects between documents as well.

### Installation

No serious user of the CorelDraw suite should be without a CD-ROM drive, and to emphasise that point there is no longer a floppy disk option. The 80 or more floppies that would be required are impractical for installation and too costly to produce by comparison with the four CD-ROMs supplied as standard.

A minimal installation of Draw and PhotoPaint will set you back around 90Mb of hard disk space, while a complete installation of all the components and a representative selec-

tion of fonts tops 170Mb. It is possible to install the package to run from CD-ROM, but performance suffers terribly and Corel doesn't recommend it. CorelDraw is one of the few programs I have found which supports the new Windows 95 add/remove programs dialogue, so that the package may be modified or uninstalled smoothly if required.

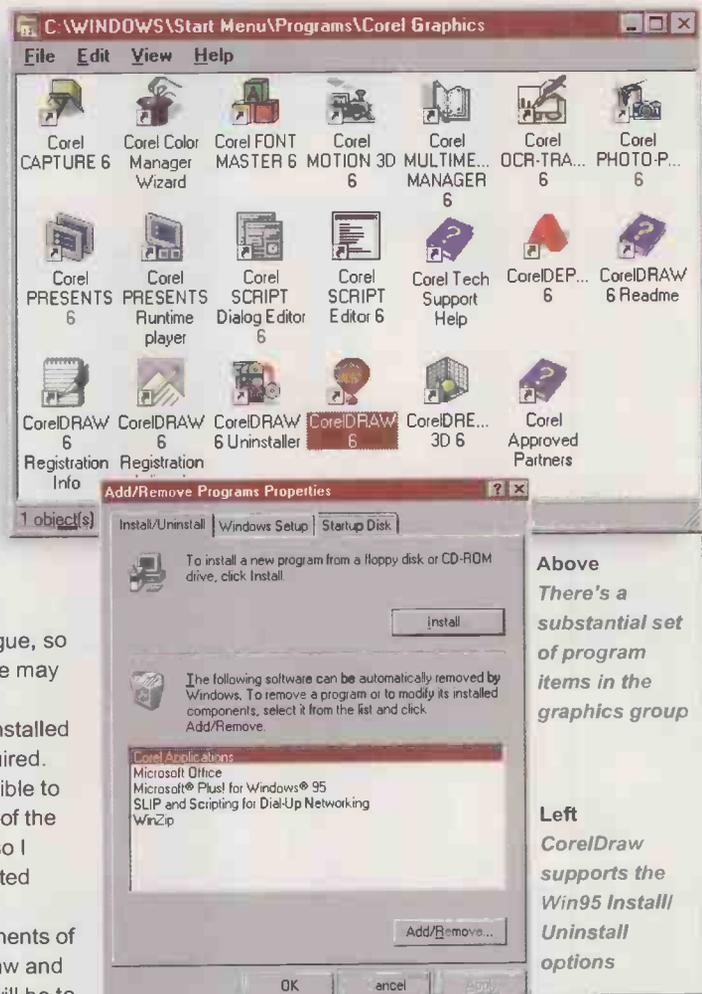
It is not possible to review all parts of the suite in depth, so I have concentrated here on the two primary components of the system: Draw and Paint. My aim will be to look at where it differs from version 5.

### CorelDraw 6

Draw is a classical vector-based drawing package, providing comprehensive shape, pattern and text creation and manipulation. It has an extensive range of tools and features which make it the definitive PC package for display graphics, leaflets, typographic effects and logo creation, and even some technical drawing.

A new initial dialogue provides a guided start to a new or existing document, or to take you on a tour of the system. The most obvious improvements to Draw 6 are support of the Windows multiple document interface (MDI), and a huge dual improvement in the maximum drawing size, with greatly enhanced precision. Redraw speeds are greater than the previous version and the package has a smoother feel to it all round. On the downside, large bitmap-and-blend object redraws are still noticeably slow compared with those achieved in Xara Studio, for instance.

As well as providing for more than one



**Above**  
There's a substantial set of program items in the graphics group

**Left**  
CorelDraw supports the Win95 Install/Uninstall options

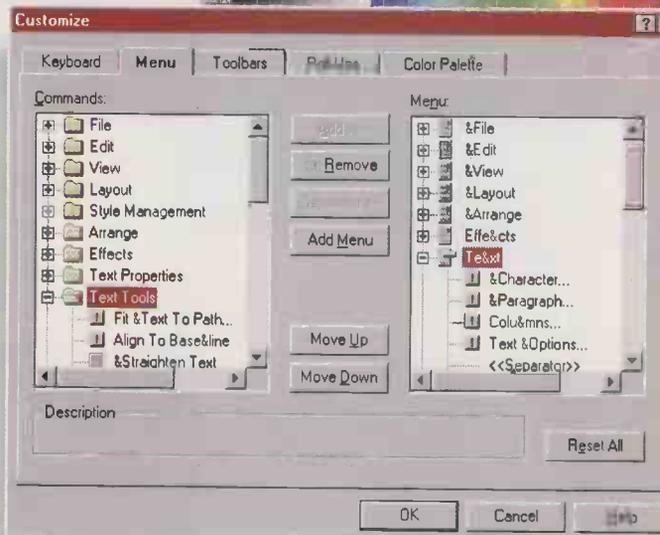
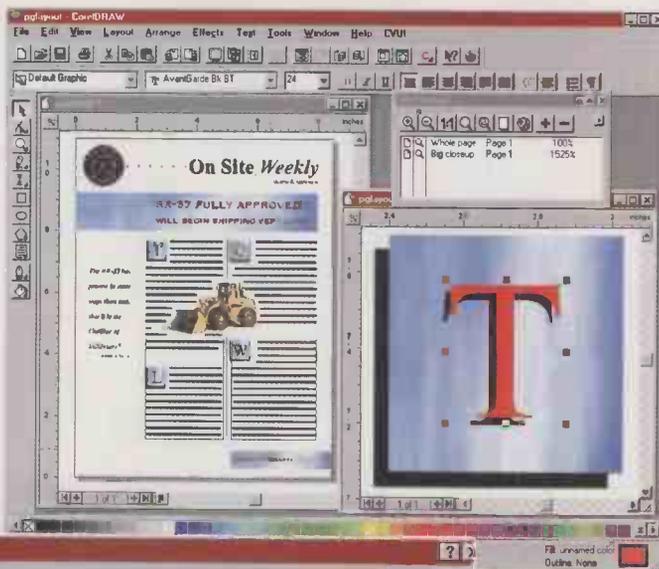
drawing to be opened at a time, MDI support within Draw allows several independent views of the same drawing to be open at once. This is very useful, for example, in allowing precise magnified editing in one window, with a wider view in another which remains synchronised with changes in the drawing. A new View Manager allows alternative magnifications and page locations to be stored, with meaningful names for quick recall. Objects may be dragged and dropped directly from one open document to another; this is much faster than import/export or cut and paste.

Documents can now extend to an almighty 45sq metres, with precision to 0.1 micron. Previous versions had a problem with inaccurate placing of fine detail, owing to rounding errors in the arithmetic, but this version seems to have put the problem behind it (unless you're in the business of drawing life-size bacteria). The zoom range is vast, and even when working on the largest "page" size you still get a decent pasteboard area around the edges.

The user interface is similar to the

Right MDI allows several views of the same document, with a View Manager to assist with rapid navigation of pages and magnifications

Below Every aspect of Draw's menus, toolbars and roll-ups can be reconfigured to your preference



previous version, and to other high-end graphics programs, but with the Win95 look and feel. There are standard menus, toolbars, floating palettes, and a Corel speciality: roll-ups. These are mini dialogues for controlling a related group of functions, that you can "roll up" (reduce to just a small title bar) with one click when you don't need them. Draw 6 provides more options for grouping the roll-ups in such a way that they automatically arrange themselves, avoiding the previous difficulty of making sure they don't obscure each other when rolled down.

The entire user interface (drop-down menus, toolbars, roll-ups) can be customised to the last degree, using a consistent set of hierarchical command trees to select and arrange the controls. Thankfully, there is also a command to restore default layouts. Comprehensive edge rulers and layout guidelines are provided and include, for the first time, slanted layout lines for unusual alignment.

the node editing tool. The polygon tool is particularly powerful as it maintains the regularity of the whole shape as you edit one point, or side. The spiral tool is a real time-saver if you should happen to need spirals as they are tedious to construct any other way. The grid tool provides a shortcut to graph paper and other cellular layouts.

Once the shapes are in place, there are new ways to destroy them. Knife and eraser tools provide methods for separating or erasing parts of objects almost as if they were simple bitmap objects, yet maintaining the integrity of their outline and fill properties.

Draw 5 introduced lenses. These are processing functions that can be applied within shapes overlying other objects, to give effects such as a magnifying glass or regions of transparency. Version 6 has extended them to offer fish-eye effects, wireframe rendering, and custom remapping of colours. You can now freeze the lens image or apply it to a fixed viewpoint,

allowing you to move it so that it no longer lies over the subject, but maintains the lens image.

## Bitmaps

Bitmap processing has been considerably enhanced, particularly with irregular cropping and colour masking. Irregular cropping is simple; the bounding box of the bitmap can be node edited just as if it were any shape drawn on the page. Colour masking allows the selection of one or more colours from the bitmap to be the only ones shown, or to be rendered transparent. A tolerance control lets you remove a band of shades: a typical use of this would be quick cropping of a character from a uniform background such as sky, without laborious hand masking or imperfect auto-tracing. A wide range of bitmap file formats is supported for import and export.

## Text handling

Draw continues to handle text in two modes: "artistic" for small blocks of text requiring a high degree of manipulation, and "paragraph" for long runs of body copy. Artistic text objects may now contain up to 32k characters. Paragraph text may comprise a maximum of 32k frames of up to 32k paragraphs, each with up to 32k characters. The previous unseemly collection of dialogues and roll-ups necessary to set all text attributes has been replaced by a toolbar integrating all text-related matters. Draw can also gen-

## System requirements

For efficient use of CorelDraw 6, a sensible starting point would be a system with:

- DX2/66 processor running Windows 95
- 16Mb of RAM
- 420Mb hard disk
- Mouse, tablet or pen
- SVGA display (256 colours)
- CD-ROM drive

These requirements are in line with a sensible minimum for any Windows 95 system. Although Draw 6 could be run on a somewhat lower specification, anyone with less would probably get better performance from Win 3.11 and Corel 5.

For complex graphics work, a display resolution of at least 800 x 600 would be advisable, and for multimedia work the CD-ROM should be at least double-speed. Photo-Paint, in particular, needs all the memory it can get so don't skimp on this if you plan to do a lot of bitmap paint work, otherwise you could be in for a lot of tedious swapping to disk.

erate and insert bar code label areas in the seven most widely used codes.

Draw already had powerful multi-page facilities, with paragraph text flow from one page to another. It now handles these more smoothly than before, has improved word-wrap, tabs, justification and irregular text wrap around other objects. Full proof-reading facilities are provided, which work in a similar way to those in Microsoft Word, and include substantial foreign language support and statistical functions.

### Object placement

Before being moved around, objects must be selected. Draw 6 allows you to select objects according to their properties (for instance, all the yellow rectangles on the page, or all the pieces of paragraph text). This can be a real time-saver when, say, you want to recolour all the text on a page, or copy all the rectangles from one page to the next.

Routine interactive object movement and overall scaling, such as shearing and rotation, are unchanged from the earliest versions of Draw with grab handles appearing around the selected object(s) to drag as you want. For more accurate actions, the Effects roll-up offers numerical dialogues for moving, rotating or scaling, envelope editing, applying lenses, skewing, resizing, intersections, trimming and welding. The last three provide for one shape or group to be used to add to, or subtract from, another shape or group.

The standard alignment functions (left, right, top, bottom, centre) are provided for lining up multiple objects in respect to one another. Draw 6 now adds distribution functions to align multiple objects, or copies of an object, at equal intervals across the selected objects or across the whole page, vertically or horizontally.

### Printing

Draw and Photo-Paint print options are superb and apply across the suite. Open Pre-press Interface (OPI) is now supported, allowing you to work at speed with a low-resolution copy of bitmap images (such as photos), with a matching high-resolution copy inserted automatically at printing/image-setting time.

Comprehensive options are available for the control of colour separation plates, non-printing colours, job information, crop marks and registration targets. Different print setups can be stored on disk for repeated use as standard "recipes". Almost 850 standard label printing formats are built-in, and limited

"mail-merge" is available for printing things such as labels or certificates.

The layout options reflect Corel's support of independent document page size and printing paper size. The dialogue includes interactive cloning, scaling and placement of the print area on the page with a visual preview. Multi-page documents may be printed as basic impositions, ready placed and organised for example as A5 booklets on A4.

### Corel Photo-Paint

Photo-Paint was considerably beefed-up in version 5 to provide more credible competition for Adobe Photoshop and other standalone bitmap editing packages. That approach has been continued and refined with version 6. It sports the multiple document interface and

now offers unlimited file size editing, although the practicality of this is constrained by system memory. Many of the enhancements to this version of Photo-Paint are package-wide improvements that I have previously described under CorelDraw; particularly the interface and printing details. Photo-Paint images can be dragged and dropped into other documents, including Draw and Ventura.

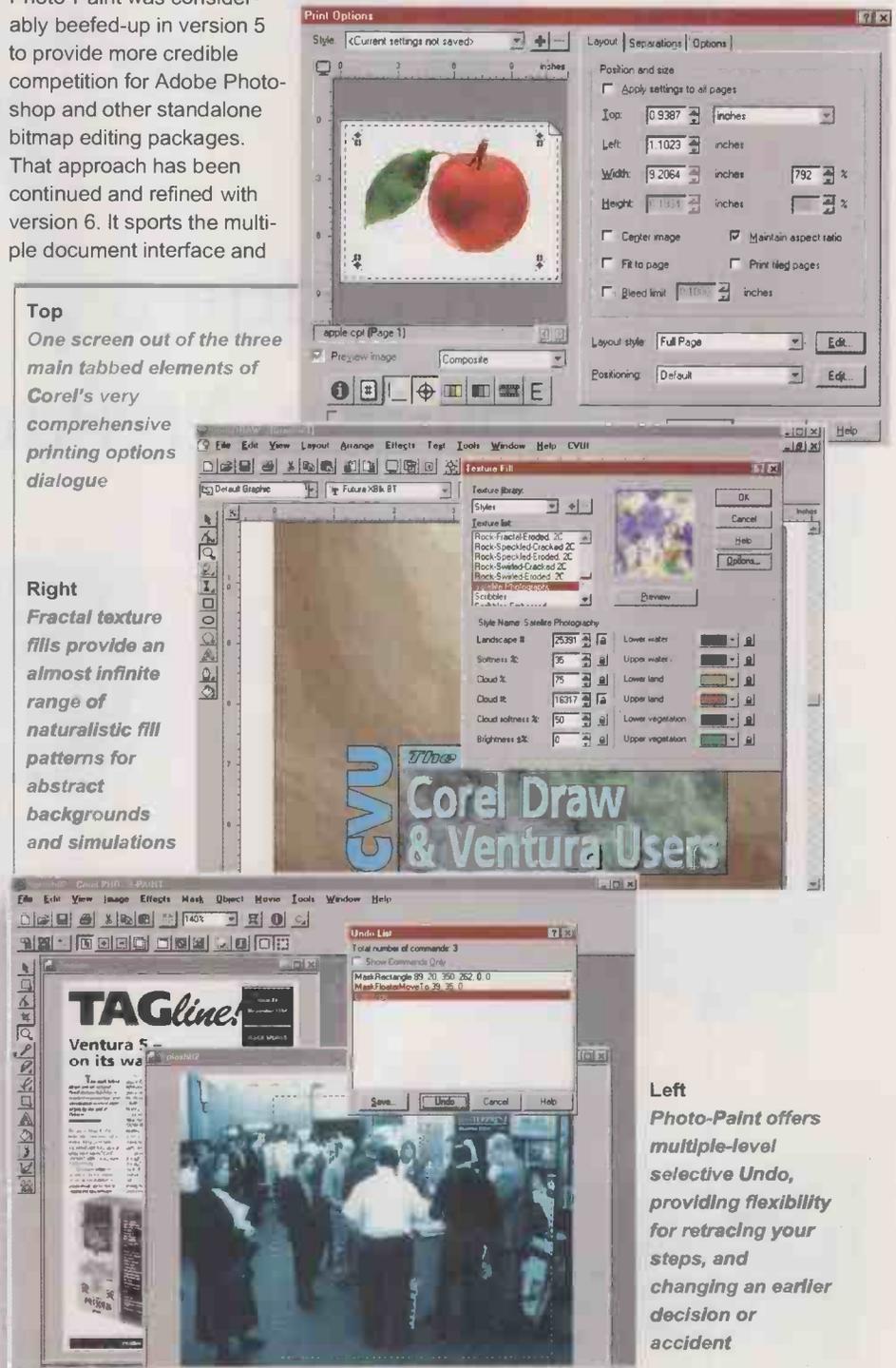
It still offers many of the advantages of a drawing program with the artistic

#### Top

One screen out of the three main tabbed elements of Corel's very comprehensive printing options dialogue

#### Right

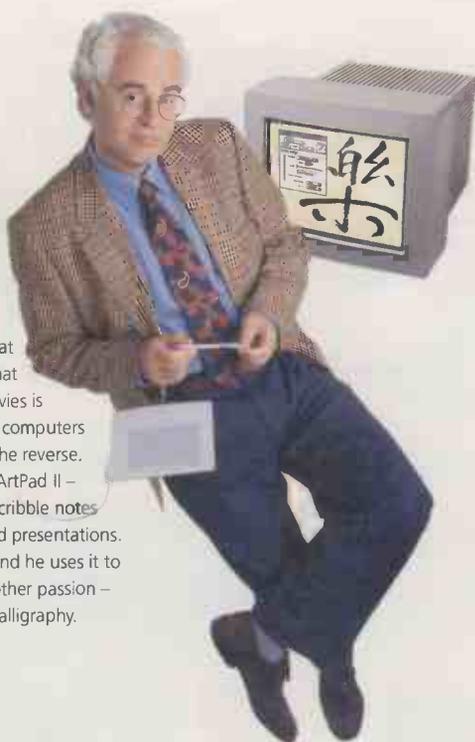
Fractal texture fills provide an almost infinite range of naturalistic fill patterns for abstract backgrounds and simulations



Left Photo-Paint offers multiple-level selective Undo, providing flexibility for retracing your steps, and changing an earlier decision or accident



"Typing? That's what PAs are for." Not that Chairman Bob Davies is averse to the use of computers in business – quite the reverse. He's really into his ArtPad II – using the stylus to scribble notes on documents and presentations. And at the weekend he uses it to indulge in his other passion – Japanese calligraphy.



Making the most of her clients is what PR manager Jane Hollier does best – even if it means helping nature along a little. Using her ArtPad II and Adobe Photoshop, Jane can indulge in a little remodelling in her spare time – even down to changing hairstyles!



# You can judge a company by the ArtPads it keeps.



It seems like all Joanna ever does is type, then revise, then revise the revisions. Now, with her ArtPad II and EraserPen, deleting is as easy as anything – thanks to the eraser tip on the end of this lightweight stylus, making light work of it all.



To a switched on marketing man like Paul Gibson, anything that interrupts his thought process has to go. Through his ArtPad II, his thoughts hit the computer without the constraints of the keyboard. When he's ready, it's straight onto the Net and into the office from wherever in the world Paul happens to be.



**Call the ArtPad II InfoLine: 01703 814939**

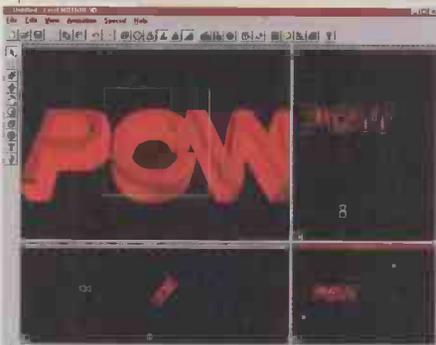
ArtPad II is the universal input tool for every computer. It works with every major application, and it's as easy to use as paper, pencils and an eraser. It's batteryless, the stylus is really light and the tip is pressure sensitive. Make sure your company's not missing out – just give us a call and we'll send you details and tell you where you can try out an ArtPad II for yourself.

With a new ArtPad II, you're in good company.

**WACOM**

Putting technology in its place

## Other parts of the CorelDraw 6 bundle



*Corel Motion 3D provides facilities for producing the full metallic flying letters animation so beloved of TV news programmes the world over*

As well as Draw and Photo-Paint, the CorelDraw 6 bundle provides three other applications and nine utilities:

### CorelDream 3D

An adaptation of the successful Ray Dream 3D modelling and rendering application. It is supplied with a wide range of pre-built models, and others can be built from the tools provided. 3D scenes can be quickly created by merging the 3D-rendered scenes with bitmap images and Photo-CD pictures in Photo-Paint.

### Corel Presents

This incorporates the earlier Chart and Move elements of version 5 into a new, comprehensive, animated presentation package covering similar ground as MS PowerPoint 7, with more bells and whistles (but perhaps less stability and speed). Built-in wizards and a wide range of clipart, photos and animation elements are available.

### Corel Motion 3D

This niche package provides rendering and animation of 3D objects to produce the sort

flexibility of a paint program, and achieves this by maintaining the concepts of objects and layers for all components of a painting, even for processed bitmaps. Objects can be freely converted to masks and back again as required. Unusually for a painting program, it offers rulers and snap to grid facilities. It can open a wide range of file types, including AVI video and FLC animation files. However, if these are opened for editing, they comprise a separate bitmap document for every frame of the movie so this work is a little slow and memory intensive, to say the least.

A lot of work has been carried out on rationalising the mask and object handling in Photo-Paint, and these are now integrated into one toolbar. The

of dazzling flying logos and image manipulations favoured by film company animated logos. Final anti-aliased rendering of a ten-second sequence could take several hours on the average PC, but with Win95 multithreading and helpful progress facilities, this can be run in the background, or overnight at the end of a design session. During design, rapid wireframe renderings are used for visualisation.

### Utilities

Two of the utilities are small resource manager applications:

- Font Master provides on-the-fly installation and removal of TrueType and Type 1 (PostScript) fonts, and has facilities for font preview and creation of custom font groups.
  - Multimedia Manager is a comprehensive browsing utility for identification and selection of the items from the clipart, symbol and photo libraries of CorelDraw 6. Objects can be simply dragged from the Multimedia Manager into the workspace of one of the main applications for use.
- Other minor utilities include:**
- Corel OCR Trace. For bitmap tracing and optical character recognition.
  - CorelDepth. For easy 3D text and logo effects.
  - Corel Capture. For screen area capturing, including irregular masked areas.
  - Corel Script Editor. An automation system that allows macro routines and customisation of other OLE-enabled apps.
  - Corel Presents Runtime. A portable viewer utility for distributing presentations to those without the full Presents software.
  - Other utilities for bar code creation, charting and mapping of data, sticky notes and equation editing that can be applied to other apps via OLE.

Colour Mask roll-up has been simplified too, but still manages to offer fading of a mask with control over the feathering options. The Object Manager roll-up provides largely the same functions as the Layers roll-up in Draw: independently controllable layers on which different painting elements can be placed for ease of manipulation. It's possible, for example, to hide or lock some layers, to prevent further modification. And it allows individual objects to be named, and can form the basis of a simple object library.

A new Texture Brush tool greatly improves the range of natural effects achievable when painting with textures: with control over virtual grain, texture, bleed and wetness. And it comes with a range of natural effect brushes such as

pencils, pen, crayon and chalk.

There are 77 standard image manipulation filters in the system: new ones include terrazzo, tone map, embossed, 3D stereoscopic, canvas and desaturate. Should you be unable to find what you are looking for among those, then you can fall back on the fact that Photo-Paint supports the use of the same range of "plug-in" accessory filters as Adobe Photoshop (Kai's PowerTools for example). User-defined filters are also possible provided you know what you are doing.

Photo-Paint now has full support for duotone images (and monotones, tritones, and quadtones), beloved of many graphic designers seeking additional impact with only one extra ink colour. Text handling allows interactive editing of text even after it has been scaled and placed in the painting — an improvement on previous versions where the text was frozen after initial placement.

### Conclusion

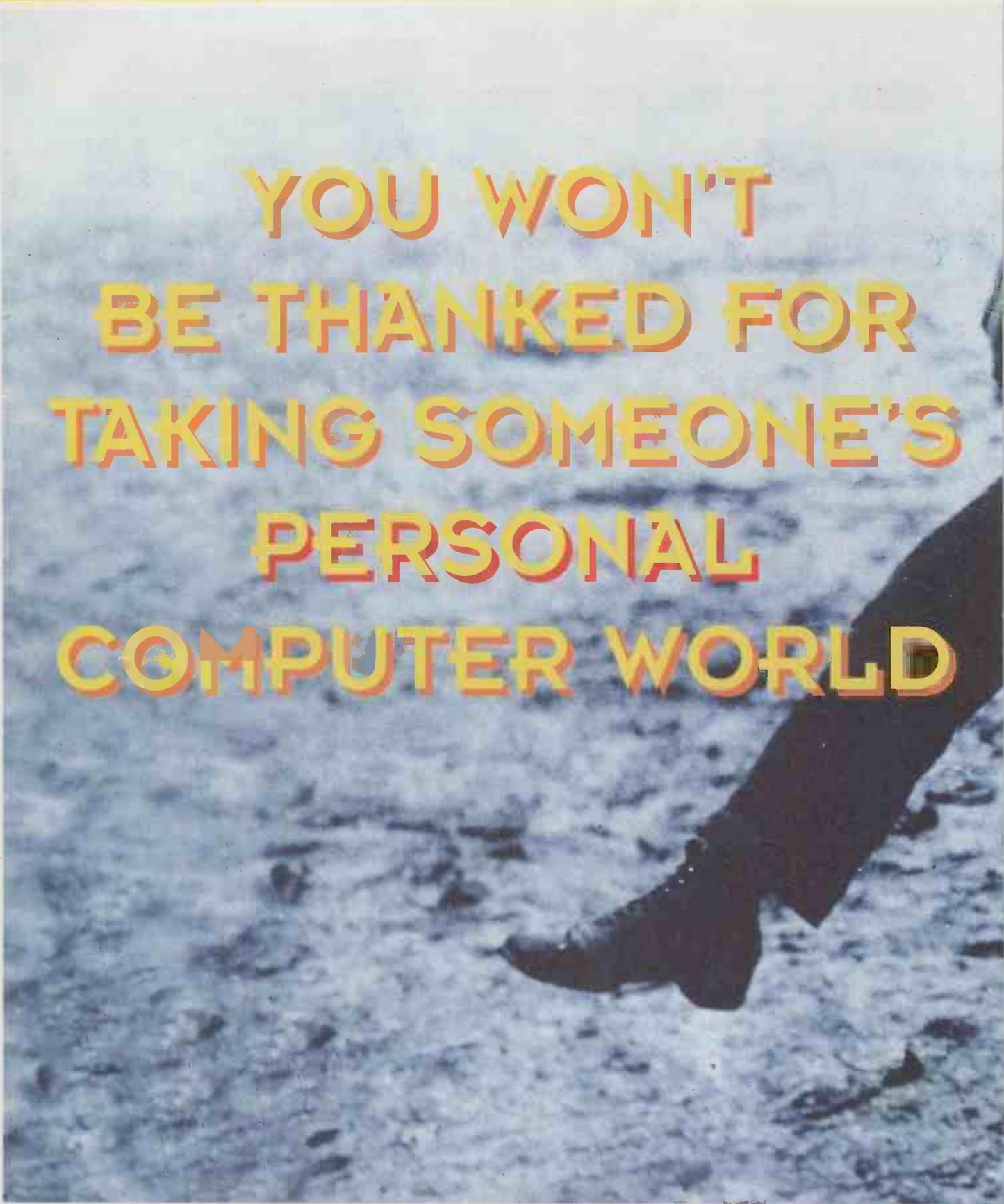
More reliable 32-bit operation, an easier interface, and the multiple document facilities alone have made a step-change in the usability of the CorelDraw suite. Photo-Paint 6 represents a good evolutionary move forward and a consolidation of Photo-Paint 5, which was itself a major step forward. It is now a highly useful and usable package to rival Photoshop. As separate applications or OLE utilities, the range of minor applications doesn't burden the main program with unnecessary functions. Even built-in functions can be removed from the interface if you don't like them. Some of the extras will prove invaluable for some people — there's no reason why 100 percent of a package like this should be of use to all the people all of the time, provided it's good value for the part that is of use to each buyer.

One could spend a lot of money assembling and learning to use alternative "best of breed" packages across the different elements covered by the CorelDraw bundle, but it would be a tall order for most people. As a one-stop solution with integrated menus and support tools, there is no other suite on the market to touch CorelDraw 6 for providing a comprehensive desktop graphics solution at a good price.

### PCW Details

**CorelDraw 6**  
**Price** £495 RRP  
**Contact** Channel MarketMakers  
 01703 814142



A photograph showing a person's leg and foot stepping on a light-colored, textured surface. The text is overlaid on the image in a large, bold, yellow font with a red outline. The text reads: "YOU WON'T BE THANKED FOR TAKING SOMEONE'S PERSONAL COMPUTER WORLD".

**YOU WON'T  
BE THANKED FOR  
TAKING SOMEONE'S  
PERSONAL  
COMPUTER WORLD**

Better pick up your own  
copy right now.



# Personal Computer World

Britain's favourite personal computer magazine

FX Fighter -  
Virtua Fighter on the PC?  
p248

PC CARDS  
The ultimate  
portable  
app

## Docking Notes

WITH  
CD-ROM  
& 3.5"  
DISK



Microsoft Bonus Pack.

Half price tutorial CD.

Free training day.

# A free offer from Elonex that opens doors to Windows 95.

Designed for



Microsoft®  
Windows®95



pentium®  
PROCESSOR

Choose Elonex for your new Microsoft® Windows® 95 system and take advantage of our exclusive offer. This includes a free day's Windows 95 training, a discount voucher for a tutorial CD, and the Microsoft Bonus Pack (Microsoft Plus! trial subscription to Microsoft

Advantage and discounts for Microsoft Home CDs).

Elonex will help you make the most of Windows 95 from the word go - it's faster, easier and more compatible than anything that's come before - and Elonex's training offer lets you see the benefits instantly.

Whichever way you look at it, you can't afford to delay a moment longer. So ring your nearest Elonex sales office right now for more information about personal computer systems with Windows 95 and services from Elonex. Or if you prefer call into any of our showrooms.

**London**  
**0181-452 4444**  
**Bradford**  
**01274-307226**  
**Cumbernauld**  
**01236-452052**



**PC-575R/I £1075** Intel 75Mhz Pentium Processor, 256KB cache, 64-bit graphics accelerator with 1MB DRAM. 8MB RAM (max 64MB), 420MB hard disk, Microsoft Mouse. UK keyboard, 14" Non-Interlaced SVGA colour monitor. 'R' case; up to 2 full height PCI slots (1 threequarter length, 1 half length). Microsoft Windows 95 pre-loaded.

**PC-5100M/I £1270** Intel 100Mhz Pentium Processor, 256KB cache, 64-bit graphics accelerator with 1MB DRAM. 8MB RAM (max 128MB), 420MB hard disk, Microsoft Mouse. UK keyboard, 14" Non-Interlaced SVGA colour monitor. Slimline 'M' case; 2 PCI-Bus slots plus 2 ISA slots (max 3), 3 drive bays. Microsoft Windows 95 pre-loaded.

**PC-5133B/I £1890** Intel 133Mhz Pentium Processor, 256KB cache, 64-bit graphics accelerator with 1MB DRAM. 8MB RAM (max 128MB), 420MB hard disk, Microsoft Mouse. UK keyboard, 14" Non-Interlaced SVGA colour monitor. IDE Quad-speed CD-ROM drive. Built in magneto-optical disk drive. 'B' case; 3 PCI-Bus slots plus 3 ISA slots (max 5), 5 drive bays. Microsoft Windows 95 pre-loaded.

Elonex PCs are pre-loaded with Windows 95 as standard (MS-DOS 6.22 and Windows for Workgroups 3.11 is also available on request). Whichever operating environment is pre-loaded it is supplied complete with program manuals and diskettes. All PCs come with 12 months extendible on-site maintenance (UK mainland only). All Elonex users have access to unlimited technical hotline support. Please call for details. Pre-loaded Microsoft programs may not qualify for the free of charge upgrades advertised by Microsoft. All prices are exclusive of VAT. Prices and configurations are subject to change without prior notice. Microsoft and MS-DOS are registered trademarks and Windows 95, Windows, Microsoft Plus! Microsoft Advantage and Microsoft Home are trademarks of Microsoft Corporation. Intel, Intel Inside logo and Pentium are registered trademarks of Intel Corporation. Elonex Plc. 2 Apsley Way, London NW2 7LF. Tel: 0181-452 4444. Fax: 0181-452 6422.

picture takes up; and the current zoom percentage for the Preview Window.

## MENU OPTIONS

### Open...

Clicking on the Open... button brings up a dialogue which lets you load pictures into PhotoPlus, ready for manipulation. PhotoPlus understands a variety of file formats.

### Save As...

Clicking on the Save As... button brings up a dialogue which lets you save your work to disk.

### Update

The Update button puts a copy of your picture onto the Windows clipboard, as a Windows Metafile, a Windows bitmap and as an OLE object. Most DTP programs will allow you to insert the object using a menu entry typically labelled Edit/Paste Special... If PhotoPlus was invoked from an OLE container, then the Update button behaves slightly differently: it updates the container program as well as the clipboard. The formats take up a lot of memory, so PhotoPlus clears the clipboard when you exit it.

### Help

The Help button calls up the Help file. You can also get help by pressing F1.

### HintLine

The HintLine tells you the purpose of the screen item under the mouse cursor.

### Special Effects

These buttons perform a range of special effects and distortions: Charcoal, Mosaic, Emboss, Posterise, Randomise colours, Negative, Grey scale, Sepia, Highlight/shadow, Solarise, Pixel-lise, Sharpen, Smooth, Remove noise, and Monochrome.

### Brightness and Contrast

These buttons adjust the brightness and contrast of the picture. The top row increases them and the bottom row decreases them. Their effect is similar to that of the brightness and contrast controls on a television.

### Gamma Correction

Click on this button to apply Gamma Correction to the picture. Gamma Correction helps to compensate for differences in brightness between various input and display devices. For example, Photo CD pictures are designed to be viewed on a television, and come out looking too dark on a computer monitor. Gamma Correction makes the dark parts brighter without losing much definition in parts which are already bright enough. This gives a better result than adjusting the brightness and contrast.

### Convert Colour Depth

This button brings up a dialogue which converts the image between various colour depths. The colour depth determines how many bits are used to store each pixel in the picture, and so



the maximum number of colours possible in the image and the total amount of memory it needs. Reducing the colour depth reduces the picture's memory requirements but loses quality.

### Histogram Equalisation/Brightening

These two buttons maximise contrast by expanding the range of colours used. As a result, they make dark pictures look brighter, bright pictures look darker and tend to make obscure detail more apparent. Histogram Equalise treats all colours the same, giving a roughly linear distribution of pixel intensity. Histogram Brighten increases contrast in the dark areas at the expense of contrast in the bright areas.

### Flip Picture

These buttons flip the picture horizontally or vertically. The result is similar to holding the picture up against a mirror. Most images look fine when flipped. Remember, any text in a picture may no longer be readable. Horizontal flipping reverses left and right, and vertical flipping reverses up and down.

### Rotate Picture

The first two of these buttons rotate the picture by 90 degrees clockwise and counter-clockwise. You can use them to convert a landscape picture into portrait. They are especially useful when you want to scan a picture which is too wide for your scanner as you can turn the picture on its side, scan it that way and then rotate it back in PhotoPlus. The third button provides free rotation where you can rotate the picture to any angle. When a picture is rotated to an irregular angle, the resulting picture is larger than the original as the corners of the picture have "pushed" the sides out. The extra areas will be filled in with white pixels.

### Resize Picture

This button brings up a dialogue which lets you scale the picture to an exact size in pixels. If you select Custom, you can enter any size you want into the edit boxes. If the Maintain Aspect Ratio button is checked, the width and height of the picture will remain in proportion so that, for example, a square object within the picture will remain square and not become rectangular.

### Crop Tool

This button selects the Crop Tool which you can use to cut unwanted information from a picture. If you have a picture and you only want a portion of it, use the crop tool to discard the unwanted areas. The new picture is smaller and hence faster to manipulate and save. You crop an image by selecting the Crop Tool then dragging out a rectangle over the Preview Window. The picture will be cropped to the rectangle with everything outside the area thrown away.

### Cut, Copy and Paste

These buttons manage the Windows Clipboard,

which provides a way to move pictures between applications which is sometimes more convenient than saving them to disk. Cut puts the picture onto the clipboard and clears it. Copy copies the picture to the clipboard, without clearing it, while Paste replaces the picture with whatever is on the clipboard. Cut and Copy put the picture onto the Clipboard as a Windows Metafile, a Windows bitmap and as an OLE object. These formats take up a lot of memory, so PhotoPlus clears the clipboard when you exit it.

### Undo

This button reverses the previous operation. Use it when you've made a mistake, or when a transformation didn't work out the way you hoped it would. Undo works by keeping a copy of the picture as it was before the last change. This takes up memory. If you have a low powered PC, or are using large pictures, you can reduce the memory requirements by disabling Undo. Alternatively, if memory is not a problem, you can increase the number of undo levels. To edit the undo settings, double-click on the Undo button and set the undo value as required.

### Reload Picture

This button throws away the copy of the picture you've been working on and reloads the original from disk. It's like a "Super Undo". It undoes everything you did since the picture was last saved or loaded.

### PhotoCD Gallery

This button provides a quick and easy way to load Kodak PhotoCD pictures from a CD-ROM drive. Each PhotoCD file stores a single picture at a variety of resolutions and colour depths.

### Gallery

The Next and Previous buttons step forwards and backwards through the gallery, six pictures at a time. You can double-click on one of the pictures to load it, or you can use the Tab key to switch between them and then press Return. PhotoPlus will then close the dialogue and load the picture.

### Scan in an Image

This button supports the TWAIN image acquisition system which allows you to scan pictures directly from your scanner, provided it comes with a TWAIN driver. When you click on the Scan Image button, PhotoPlus finds and loads the scanner's TWAIN software. This will originally have been supplied with the scanner. The scanner's dialogue will appear, when you finish scanning, so close the scanner's dialogue and the picture will appear in PhotoPlus.

### Zoom

This row of buttons controls the zoom of the Preview Window. The current zoom percentage is displayed in the Status bar.

### Information

This button brings up a dialogue which provides more information about your picture. The colour histogram displays information about colours and how they are distributed within the picture. A picture is made up of pixels, each pixel can have a different colour and the colour of a pixel is determined by mixing red, green and blue components.

street record store direct to you, in CD quality. Please note that the demo is set up to work best with Pentium PCs. If you have a 486DX/266 or a slower PC you should install Cerberus and then, using File Manager or Win 95 Explorer, double click on the program \CERBERUS\CERBPLAY.EXE on your hard disk. Then click on the top right-hand button and click on "Half" in the frequency Box, followed by the "Downmix" button. This will reduce the quality of the music output slightly, but will allow the program to perform well on virtually any PC. You can then use the new Program Manager icon to call up the complete Cerberus player. Note that when it comes to loading in tracks to play, the music can be found in the \CERBERUS directory of the CD-ROM.



### PhotoPlus

Top-notch photo editing from the market leader. For full details, see the program's comprehensive built-in help, and/or the cover disk notes (pages 8 and 131).

### Mac Software

We're sorry, but we had so much material this month we would have needed one and a half CD-ROMs to hold it all. After selecting only the very best programs, there was no room left for Mac software, but we will bring you another superb selection very soon.

### Video for Windows Enhanced Setup

If you select the "New users start here" button, on the next page of PCW Interactive you'll have the opportunity to install the latest version of Video for Windows runtime, so that you can view the digital movies on the CD. If you haven't installed Video for Windows from a PCW Interactive CD before, then you should install this new version as it contains the latest drivers which deliver higher quality, a larger size and a faster playback rate. If you don't install the new version, some videos will display the message "Cannot display this video", or similar warnings.

Some extra buttons on the Video for Windows page, which allow you to fine-

tune your PC's performance without having to leave PCWI or restart Windows.

But please remember that when you exit from PCW Interactive, if you leave the option for full screen video selected, then all video in other applications will also be full screen. If you don't want this, then re-run PCW interactive and select the "Windowed" option and quit again.

### Testing your CD-ROM

If you suspect your CD-ROM may actually be faulty or damaged you can run the file CDTEST.EXE in the SYSTEM directory of the CD-ROM. The program will then examine every byte of data on the disc to see if it can be correctly read. The process takes up to 35 minutes and generates a verification code if the disc passes the test. If the CD-ROM fails this test, try cleaning it with a light solution of washing-up liquid and dry it with a lint-free cloth and run the test again. If it still fails, return your CD-ROM to the magazine for a free replacement.

You are free to copy the CDTEST.EXE program to your hard disk in order to test other CD-ROMs, as long as it is not distributed in any way. If you are running CDTEST from your hard drive you need to specify the CD-ROM drive to test, as follows:  
CDTEST D:

*Note: We offer this tool "As Is" purely as an aid to diagnosing possible faults, some of which may occur because an older version of MSCDEX.EXE is in use and not because of a faulty CD-ROM, and disclaim any responsibility for any erroneous error reports that it may generate.*

### IMPORTANT - READ THIS!

#### • General Protection Faults

If you receive General Protection Faults when running PCWI or playing any digital videos, it is probably because your graphic display driver may not be entirely Microsoft compatible. The answer is therefore to install one of Microsoft's own drivers, as follows (but *not* if you are using Windows 95 as the drivers supplied with it are even newer than the ones on this disc):

- 1) Run "Windows Setup" from File Manager, then select: "Options" followed by "Change Settings".
- 2) Scroll through the list of displayed graphic drivers until you get to the final entry: "Other Display (Requires Disk from OEM)", and select it.
- 3) Insert this month's CD-ROM into the drive and replace the "A:\:" prompt with "D:\SYSTEM\SVGA256" (changing the D: to the correct letter if your CD-ROM is not in drive D:), then press Return.
- 4) Scroll through the new drivers until

you find the ones beginning: "Super VGA...." and select the one for the resolution you prefer. The driver will then be installed and Windows restarted. PCWI and Video for Windows should then have no further problems.

If this works (which it should in 95% of cases) you may wish to contact the supplier of your graphic card to see if they have an updated graphic driver. If Microsoft's drivers don't work you will need to contact your graphic card supplier anyway.

#### • VIDEO FOR WINDOWS INSTALL FAILS

If the Video for Windows installation fails and you receive an error such as "XXXXXXXX.YYY cannot be updated as it is a shared file". The answer is to delete the file "XXXXXXXX.YYY" (or whatever it is called) and try reinstalling Video for Windows.

#### • PCWI IS SLOW TO LOAD OR RUNS SLOWLY

You need to have at least 4Mb of RAM free to use PCWI. If necessary you can obtain this by creating a permanent swapfile of up to 4Mb. You are also advised to enable read caching of your CD-ROM by adding its name to the SMARTDRV line in your AUTOEXEC.BAT file. You should also allow MSCDEX to set up its own buffers by adding a line such as /M:10 to the MSCDEX line, also in your AUTOEXEC.BAT file. Please refer to your manuals for full details.

#### • WINDOWS NT AND OS/2

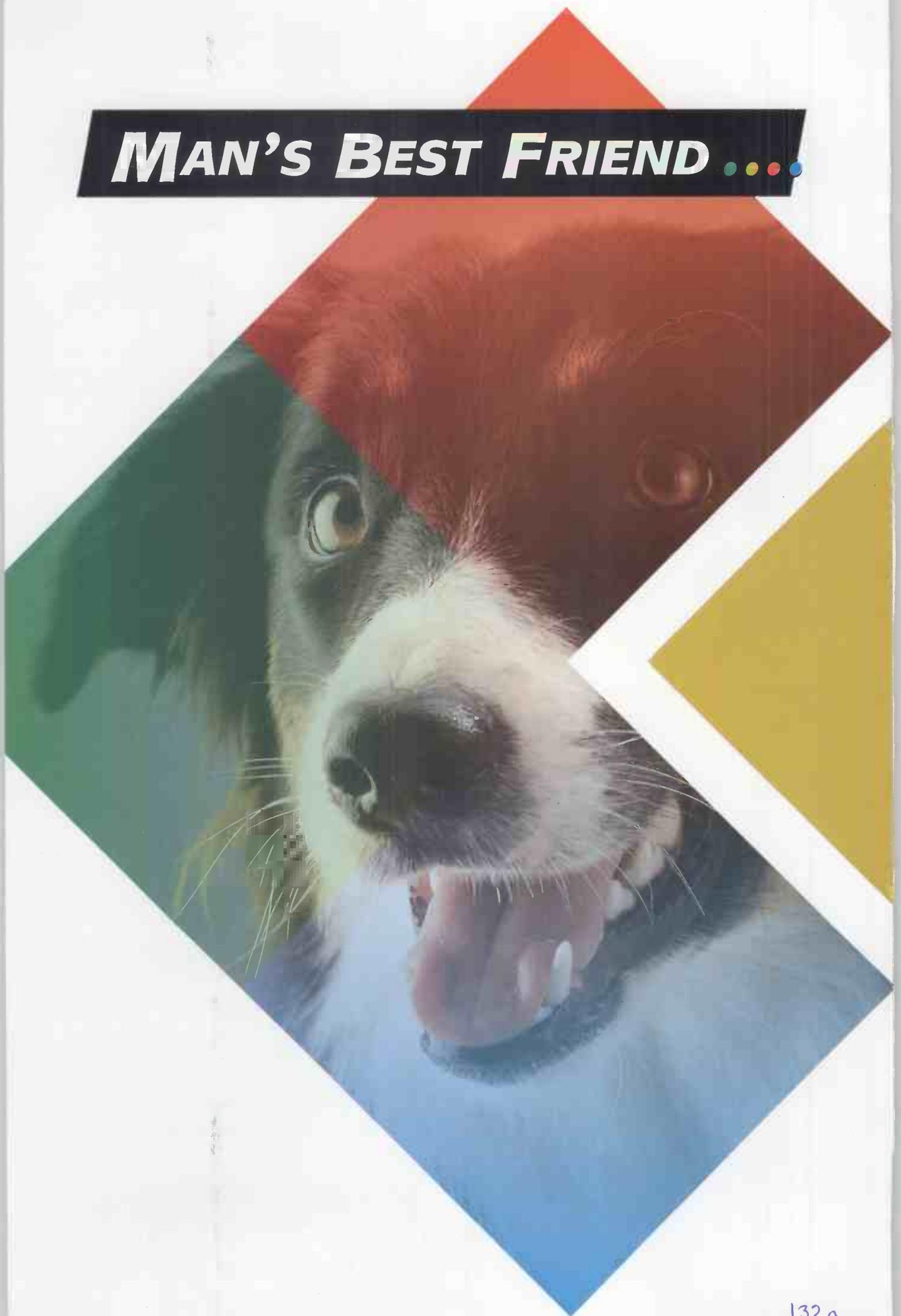
Unfortunately Macromedia Director, the program used to create PCWI, is incompatible with Windows NT. However, you should be able to run PCWI from OS/2 by simply calling up PCWI.EXE from the command line.

### CD-ROM Advice & Contacts

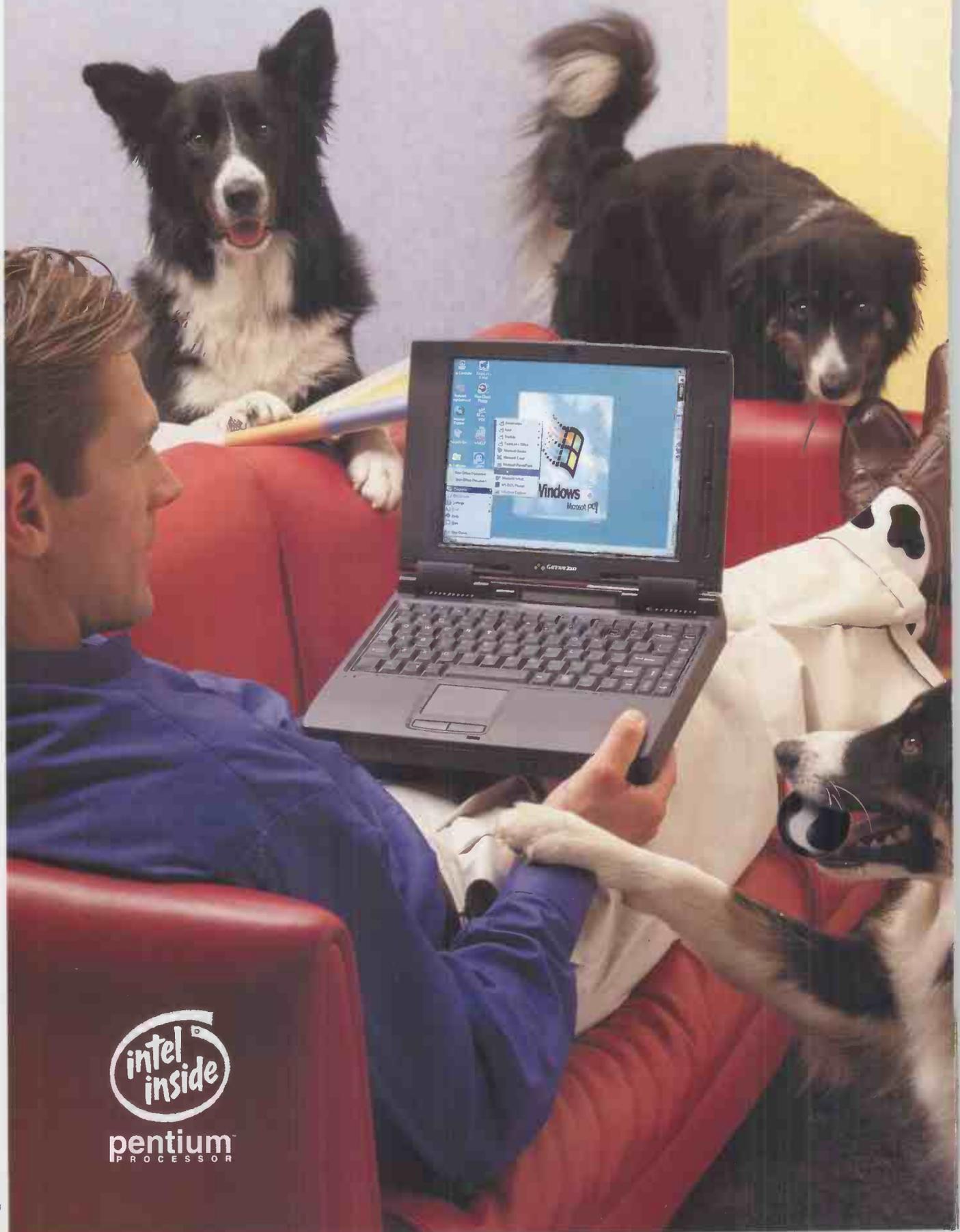
The PCW CD-ROM is virus checked at every stage of production. However, neither VNU nor Ultimea will accept liability for any problems arising from its use. You are advised not to install software on a networked PC before checking the disc.

For technical support on the CD-ROM and the programs on it call the VNU 24-hour Hotline on 01233 665800. This is a computerised touch tone advice system providing hints and tips on a wide range of topics. It also offers you the opportunity to speak to a member of our technical support staff during office hours. Using the computerised system you should be able to access the information you need very quickly. If you prefer you can email [mixon@cix.compulink.co.uk](mailto:mixon@cix.compulink.co.uk), or on CompuServe 70007,5547, or write to us at the magazine.

**MAN'S BEST FRIEND** ...



# ... THE NEW GATEWAY SOLO MULTIMEDIA PORTABLE PC



intel  
inside  
pentium  
PROCESSOR



The 10.2/10.4-inch VGA/SVGA Active Matrix Colour Display is combined with 1MB video card to ensure your images are bright and clear.

Integrated 16-bit sound card and stereo speakers – better than a furry old woofer!

The worlds first portable with a keyboard especially designed for Windows® 95, with short-cut keys to make life even easier.

No more doggy paddling with fiddly roller-balls or pointers – the Solo has an EZ Pad™ pointing device. Just a tickle under the chin and the cursor will obey your every command.

For work, fun or sheer convenience, the modular 3.5-inch floppy drive can be easily exchanged with the double-speed CD-ROM drive.

## MORE COMPUTING, MORE PLACES.



With a new Gateway Solo™ you've a friend to keep you company and help you get the most out of life every day of the week. No more 'dog-days' now. The Gateway Solo is a serious multimedia portable that just can't help thinking its a desktop. Starting at around 6 pounds, it has a feature-packed spec and enough power to be your primary PC. Wherever you are, at home, out travelling, on location, it's like taking your office with you – except you can turn it off any time you want and you don't have to be tied to a desk to use it!

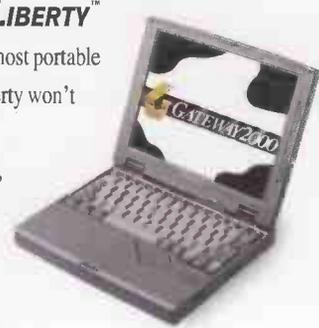
These systems feature Intel® Pentium® processors, 75MHz, 90MHz or 120MHz, up to 1.2GB removeable hard drives and with MS Office 95, Professional Edition, they're the ultimate Windows® 95 portables.

What's more, with a large active matrix colour display, modular CD-ROM drive, built-in stereo speakers and

microphone you can listen to music while you work, watch video clips, even, dare we suggest, play your favourite computer games. You can cruise the Internet, send and receive E-mails, connect to Compuserve and with the optional docking bar, easily connect to external kit like monitor, keyboard and printer. The Gateway Solo, everything you ever wanted in a desktop right at your fingertips in a portable.

### GATEWAY 2000 LIBERTY™

If you're looking for the most portable of portables, Gateway's Liberty won't leave you panting for more. Weighing a mere 4.2 pounds, its chihuahua frame houses an Intel 100MHz DX4 processor, removeable hard drive, up to 16MB RAM and excellent power management.



All Gateway portables are carefully designed and built to the highest quality, with the most loyal service and support. We offer a one-year back-to-base service warranty and lifetime technical phone support. So if you need a portable friend, call Gateway 2000 today!



0 8 0 0 3 6 2 0 0 0

# PEDIGREE PRICES

## GATEWAY SOLO™ V75

- 10.2" VGA (640 x 480) Active Matrix Colour Display
- 75MHz Intel® Pentium® Processor\*
- 8MB RAM (expandable to 40MB)
- 256K L2 Pipelined Burst Cache
- 1MB Video RAM
- Lithium-Ion Battery and AC Pack
- 2 PCMCIA Type II Slots
- EZ Pad™ Pointing Device
- 720MB Removable Hard Drive
- 3.5" Modular Floppy Drive
- Integrated 16-Bit Sound with Stereo Speakers
- Headphones
- 86-Key Keyboard
- Parallel, Serial, Keyboard, Mouse, VGA and PS/2® Ports
- Built-in Mic, Headphone, Line-in Jacks and External Volume Control Dial
- Weight starting at 2.7kg (5.6lbs)
- Microsoft® Windows® 95
- MS Office Professional™ 95

**£2349**

**£2499** (WITH CD-ROM DRIVE)

## GATEWAY SOLO V90

- 10.2" VGA (640 x 480) Active Matrix Colour Display
- 90MHz Intel Pentium Processor\*
- 8MB RAM (expandable to 40MB)
- 256K L2 Pipelined Burst Cache
- 1MB Video RAM
- Lithium-Ion Battery and AC Pack
- 2 PCMCIA Type II Slots
- EZ Pad Pointing Device
- 720MB Removable Hard Drive
- 3.5" Modular Floppy Drive
- Modular CD-ROM Drive
- Integrated 16-Bit Sound with Stereo Speakers
- Headphones
- 86-Key Keyboard
- Parallel, Serial, Keyboard, Mouse, VGA and PS/2 Ports
- Built-in Mic, Headphone, Line-in Jacks and External Volume Control Dial
- Weight starting at 2.7kg (5.6lbs)
- Microsoft Windows 95
- MS Office Professional 95
- Classic Case

**£2699**

## GATEWAY SOLO S90 BEST BUY

- 10.4" SVGA (800 x 600) Active Matrix Colour Display
- 90MHz Intel Pentium Processor\*
- 16MB RAM (expandable to 40MB)
- 256K L2 Pipelined Burst Cache
- 1MB Video RAM
- Lithium-Ion Battery and AC Pack
- 2 PCMCIA Type II Slots
- EZ Pad Pointing Device
- 720MB Removable Hard Drive
- 3.5" Modular Floppy Drive
- Modular CD-ROM Drive
- Desktop IR Receptor
- 28.8K bps PC Card Fax/Modem
- Integrated 16-Bit Sound with Stereo Speakers
- Headphones
- 86-Key Keyboard
- Parallel, Serial, Keyboard, Mouse, VGA and PS/2 Ports
- Built-in Mic, Headphone, Line-in Jacks and External Volume Control Dial
- Weight starting at 2.9kg (6.1lbs)
- Microsoft Windows 95
- MS Office Professional 95
- Deluxe Leather Case

**£3499**

## GATEWAY SOLO S120 DELUXE

- 10.4" SVGA (800 x 600) Active Matrix Colour Display
- 120MHz Intel Pentium Processor\*
- 16MB RAM (expandable to 40MB)
- 256K L2 Pipelined Burst Cache
- 1MB Video RAM
- Lithium-Ion Battery and AC Pack
- 2 PCMCIA Type II Slots
- EZ Pad Pointing Device
- 1.2GB Removable Hard Drive
- 3.5" Modular Floppy Drive
- Modular CD-ROM Drive
- Desktop IR Receptor
- 28.8K bps PC Card Fax/Modem
- Integrated 16-Bit Sound with Stereo Speakers
- Headphones
- 86-Key Keyboard
- Parallel, Serial, Keyboard, Mouse, VGA and PS/2 Ports
- Built-in Mic, Headphone, Line-in Jacks and External Volume Control Dial
- Weight starting at 2.9kg (6.1lbs)
- Microsoft Windows 95
- MS Office Professional 95
- Deluxe Leather Case

**£3999**

## LIBERTY™ DX4-100

- 10.4" Dual-Scan STN Colour Display
- 1.9 kg (4.2 lbs)
- 25.4 x 20.3 x 4.1 cms (10 x 8 x 1.6")
- Intel 100MHz 486DX4 Processor
- 8MB RAM
- Infrared Capability
- 720MB Removable IDE Hard Drive
- NiMH Battery & AC Pack
- Instant On
- 2 PCMCIA Type II Slots
- 78-Key Keyboard & Pointer
- Parallel, Serial, VGA & PS/2 Ports
- Microsoft Windows 95
- MS Office Professional 95

**DX4-100 • £2199**

## LIBERTY DX4-100 GOLD

- 10.4" Dual-Scan STN Colour Display
- 1.9 kg (4.2 lbs)
- 25.4 x 20.3 x 4.1 cms (10 x 8 x 1.6")
- Intel 100MHz 486DX4 Processor
- 16MB RAM
- Infrared Capability
- 720MB Removable IDE Hard Drive
- 2 NiMH Batteries & AC Pack
- Instant On
- PCMCIA 28.8 Fax Modem
- 78-Key Keyboard & Pointer
- Parallel, Serial, VGA & PS/2 Ports
- Microsoft Windows 95
- MS Office Professional 95
- Carrying Case

**DX4-100 GOLD • £2799**

## PERIPHERAL OPTIONS

- Solo Docking Bar **£125**
- Extra Solo Li Ion Battery **£149**
- Desktop IR Receptor **£59**
- 28.8K bps PC Card Fax/Modem **£299**
- 3.5" External Floppy Drive **£79**

*Call for Memory & Hard Drive Options*

## SERVICE & WARRANTY

- Lifetime freephone service and support
- One year limited parts warranty

*All prices and configurations are subject to change without notice or obligation. All prices are quoted in Sterling and exclude carriage and VAT.*



*"You've got a friend in the business."*

**0 8 0 0 3 6 2 0 0 0**

Gateway 2000 Europe • European Headquarters • Clonsbaugh Industrial Estate • Dublin 17 • Ireland

Telephone: 00-353-1-797-2000 • Fax: 00-353-1-848-2022 • FaxBack: 00-353-1-867-0400

Gateway Bulletin Board: 00-353-1-867-0433 • Hours of Business: 8am-9pm Weekdays, 9am-6pm Saturdays

©1995 Gateway 2000 Europe. Liberty, black-and-white spot design, "G" logo, "You've got a friend in the business" slogan, Solo and Gateway 2000 are trademarks or registered trademarks of Gateway 2000, Inc. The Intel Inside Logo, Intel, Pentium and OverDrive are trademarks or registered trademarks of Intel Corporation. All other brands and product names are trademarks or registered trademarks of their respective companies. \*Intel Verified: Upgradeable

# Don't buy a PC or fax ... get *The Catalogue*

If you're thinking of buying a PC or fax,  
**DON'T!** ... until you've seen the **new**  
Amstrad Direct Catalogue.

## ➤ *Amstrad PCs: the UK's No.1*

We started the business, we were the first to bring the PC down in price and it's a fact that there are more Amstrad computers sold in the UK than any other brand.

## ➤ *Amstrad PCs from £299\**

From the new Amstrad PCW right up to the latest Intel Pentium® systems, there's a PC to suit every need – and every budget. We can even tailor-make a PC to your own specifications within 7 working days!

## ➤ *Amstrad faxes from £199\**

From the 4-in-1 Amstrad FX7500AT, combining fax, telephone, answering machine and photocopier, to the Amstrad PPF 1000 plain paper fax, you're sure to find a fax to suit your exact needs.

## ➤ *Direct from the experts*

Talk to the experts *directly*, we'll work out which PC or fax best suits your needs.

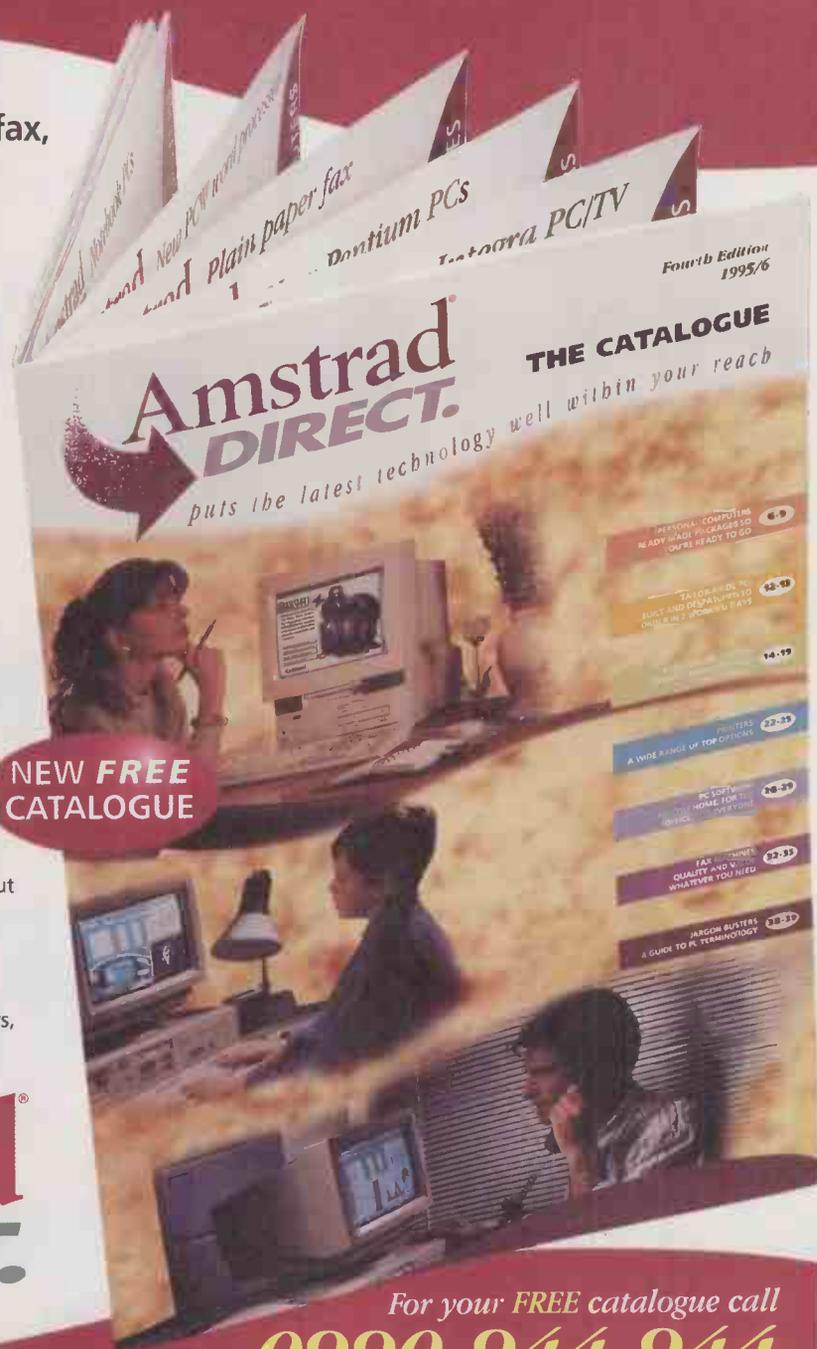
## ➤ *Cut out the middleman*

Buy your Amstrad PCs and faxes direct at *low factory prices*, cut out the middleman and his profit.

## ➤ *Money-back guarantee*

If for any reason you are not absolutely delighted with your Amstrad purchase, you can return it at any time within 30 days, and get a full refund, with *no arguments*.

**Amstrad**  
**DIRECT.**  
*Talk to the experts*



**NEW FREE CATALOGUE**

For your **FREE** catalogue call  
**0990 944 944**

or **FAX** us on **01277 20 90 09** Telephone lines are open 24 hours a day, 7 days a week.

Amstrad Direct, FREEPOST (C4057), Brentwood, Essex CM14 4YW Amstrad Direct is a division of Amstrad Consumer Electronics Ltd. \*All prices exclude VAT & delivery.

## **FREE** Amstrad catalogue request

Please send me my **FREE** copy of the **new Amstrad Direct Catalogue**, featuring the **new range of 100% compatible Intel Pentium® Processor PCs** (with **Windows®95 installed**), the **new PC compatible Integra combined PC and TV**, **new PCW word processor**, as well as Notebooks, printers, faxes and much more **plus** the **Amstrad Promise** that offers me the best combination of quality, price and service I'm likely to find *anywhere*.

Are you interested in buying for business or home? (please tick):–  Business  Home  Both Business & Home

TITLE \_\_\_\_\_ INITIALS \_\_\_\_\_ NAME \_\_\_\_\_ COMPANY/ADDRESS \_\_\_\_\_  
POSTCODE \_\_\_\_\_ TELEPHONE (STD CODE) \_\_\_\_\_ NUMBER \_\_\_\_\_

From time to time we may make our mailing list available to carefully screened companies whose products may be of interest to you. Amstrad Direct is a division of Amstrad Consumer Electronics Ltd. All trademarks acknowledged. If you would prefer not to receive such mailings, please tick this box.

Send **FREEPOST** today (no stamp needed) to: **Amstrad Direct, FREEPOST (CL4057), Brentwood, Essex CM14 4YW. PCW 09**



# Storage & backup

No matter what your backup and storage needs, there's something to suit everyone. On these pages we look at the whole issue of storage media, and Gordon Laing puts eleven devices to the test.

**W**e've said it before and we'll say it again: storage really is becoming very interesting. Not necessarily dinner party conversation, but certainly fascinating for anyone who needs more space to store their information. And that's everyone, since who can honestly say that they have enough storage?

The interesting part is the wealth of technologies that are out there. We've all recognised, perhaps on several occasions, the need for more storage; but what do you go for? A second hard disk? A single, bigger hard disk? Perhaps a removable storage medium, or something designed purely for overnight backup?

The variety is endless. There really is a storage solution for every occasion: either for those who need the greatest performance, or the best value for money. Perhaps huge capacity is an issue rather than speed of transfer.

Maybe you need something as portable and reusable as a floppy disk, but with larger capacity. Sometimes compatibility with another system is paramount.

A feature covering all types of storage and backup devices would occupy an entire issue of *PCW*, and then some. Since we've recently covered CD-R and plan to round-up hard drives in the near future, we narrowed this group test to devices with removable and rewritable media (no removable hard drives however).

We've got 11 devices in all, covering all the tasks described above. None is the perfect storage device, although several appear to come very close. Along with reviews of the devices, we've given detailed explanations of all the different technologies and how they work. We've explained the pros and cons to help you choose which is best for you.

If you have only 2Mb remaining on your hard disk and have made the decision to buy, check out our findings to discover the perfect storage medium for your specific purposes. You may be surprised to see what's out there.

## Storage and backup Contents

- 136** Conner CTD-8000e
- 136** Conner TapeStor 4000T16
- 136** Fujitsu M2512a
- 138** Graphtec Ranger MO
- 138** Hewlett-Packard SureStore 2000e
- 138** Iomega ZIP
- 142** Plasmon PD2000e
- 142** Sony MD DATA Drive MDH-10
- 143** SyQuest EZ135 Drive
- 143** SyQuest SQ 270
- 143** Tandberg Data Panther Mini 1000
- 145** Optical drives
- 147** Magnetic storage
- 150** Tape streamer technology
- 152** Performance Graphs
- 156** Editor's Choice
- 156** Table of Features

PCW Storage Photography by Bruce Mackie

### Conner CTD-8000e



Conner's CTD-8000e, also known as a 4356XP, is a DDS-2 DAT drive. In native mode it can take 4Gb DDS-2 DAT tapes, and can just about double this using hardware compression.

If mass storage is what you're after,

DAT is unparalleled. Tape sizes start at 2Gb and go right up to 8Gb on some drives using compression. If this kind of storage is essential, DAT is the only way to go. DAT media is quite cheap too, although the drives can be pricey.

The external CTD-8000, denoted with an "e" at the end, carries an RRP of £1,395 or £1,245 for the internal. This does not include software or a SCSI card as standard, but all suppliers will be able to sell you suitable accessories. Typical street prices are around £1,050 for the external and £900 for the internal.

In uncompressed native mode on a 4Gb tape, the CTD-8000 will do around 27Mb a minute — that's about 4Gb in three hours.

Conner is a very well known name in the storage business, particularly on the OEM

side. If you want to go for a respectable name with excellent products, then Conner is a good choice. If you need backup capacities over 4Gb, DAT is the only reasonable route and the CTD-8000 won't let you down.

#### PCW Details

##### Conner CTD-8000e

Price External £1,395; Internal £1,245

Contact Conner Peripherals  
01628 777277

**Good Points** Huge capacity and cheap media.

**Bad Points** Relatively expensive drive.

**Conclusion** The only choice if you need this capacity.

### Conner TapeStor 4000



The Conner TapeStor 4000 uses QIC (pronounced *quick*), tape cartridges. QIC carts are sturdier than DAT tapes, but cost around double for the same capacity. The TapeStor 4000 uses native 2Gb QIC-WIDE tapes costing around £15 each, and through software compression is capable of raising this to almost 4Gb.

QIC drives are cheaper than equivalent

capacity DAT drives, and the TapeStor certainly represents good value; street prices have been seen at around £450 for the internal drive. Certainly when Tandberg Data releases its 2/4Gb internal QIC drive for £450, street prices on the Conner will match.

The Conner price includes Arcada Backup Exec software, but no interface. You'll need to provide your own SCSI card, although most dealers will recommend one. Conner interestingly offers an internal E-IDE version of the TapeStor 4000 which we will review in *First Impressions* next month.

Performance-wise, the SCSI TapeStor offers 27Mb per minute, or 2Gb in around an hour and a half in native uncompressed mode.

QIC is the format to go for if you want an

entry-level priced, well-performing backup drive. If you only need 1Gb backup, and you can find the Tandberg Panther cheaper, then go for that. If you can get a good deal on the Conner, it's larger capacity would make it a better buy.

#### PCW Details

##### Conner TapeStor 4000

Price External £650, Internal £479

Contact Conner Peripherals  
01628 777277

**Good Points** Large capacity QIC drive, E-IDE version.

**Bad Points** QIC tapes relatively expensive.

**Conclusion** Excellent, cheap backup drive.

### Fujitsu M2512a



There was a time when magneto-optical was the storage technology to have. The 3.5in rewritable optical discs typically offered capacities

of 230Mb and were a godsend to those wanting transportable storage or backup. Today, of course, there are lots of competing media technologies all trying to be the standard, and MO has a tough job ahead.

Fujitsu is the leading company in MO technology; indeed most MO drives use

Fujitsu transports. The M2512a is its own badged 3.5in MO drive, using 230Mb cartridges, offering 217Mb post format. The external SCSI drive reviewed here costs £499 and comes with a Shuttle technology SCSI card, Claris Works, a SCSI cable and one cartridge. Internal SCSI and IDE versions are available for £390, and an external parallel model for £545. Fujitsu quotes around £17 for each additional cartridge.

Fujitsu's MO system has to reset the state of pre-written media before it can be written over again. This multipass system is consequently slow, especially compared to the SyQuests and ZIPs. The Panasonic PD system reviewed here under the Plasmon name can write directly over unwanted data in a single pass and is faster, too, than the MO.

MO's good point is the reasonably cheap

and sturdy media, less affected by nasty magnetic fields than some other media. Fujitsu's bundle is good, but consider the SyQuest 270 and Plasmon PD before parting with money.

#### PCW Details

##### Fujitsu M2512a

Price External SCSI £499, Internal SCSI

or IDE £390, External parallel £545

Contact Fujitsu 0181 573 4444

**Good Points** Fair capacity, resistant media.

**Bad Points** Expensive drive, slow performance.

**Conclusion** Solid, and a good bundle, but a little dated.

# Thinking Windows?



# Think memory. Think Kingston.



Windows<sup>®</sup> NT. Windows 95. OS/2. All the hype about these powerful, new operating systems overlooks one tiny fact—most PCs and servers simply can't run them effectively unless you add more memory. But Kingston can help you meet the demands of today's memory-hungry software, no matter what kind of systems you have.

You see, Kingston makes memory modules for more than 2,300 kinds of PCs, workstations, and printers. Not just all of the newest models from the leading brands, we make memory for all of the older

systems too. Plus, we're the only ones who actually test 100% of our memory. And all of it comes with a lifetime guarantee.

How can you find the right memory configuration for your particular systems? That's easy. We make an electronic guide that helps find the exact memory you need in seconds. It's called the KEPLER configuration guide and it comes on a convenient, new Windows format or a 600 page manual. For the most up-to date information on our memory products, call 01252 303500 for your nearest dealer.



**Kingston**  
TECHNOLOGY CORPORATION  
UK EXCLUSIVE DISTRIBUTOR  
**DATRONTech**

Call Datrontech at 01252 303500 • Fax 01252 303444 42-44 Birchett Road, Aldershot, Hants. GU11 1LU

**FREE**

Yes, I would like to receive

**NEW.** Kepler-Kingston's Windows CD. Helps you choose the perfect upgrade for your system.



Kingston Upgrade manual containing over 600 pages describing the upgrade paths for over 4000 computers.



Windows 95 Solutions guide. Informative brochure explaining Windows 95 product enhancements.



Company: \_\_\_\_\_ Name: \_\_\_\_\_ Title: \_\_\_\_\_  
 Address: \_\_\_\_\_ Tel: \_\_\_\_\_ Fax: \_\_\_\_\_  
 No. of PCs installed: \_\_\_\_\_ Name of preferred dealer: \_\_\_\_\_



**G**raphtec has taken a Fujitsu 3.5in magneto-optical mechanism, fitted it into its own case, and rebadged it as Ranger. From the outside, Graphtec has opted for a slightly taller and thinner case than Fujitsu and supplies three different external configurations: plain SCSI with PC drivers for £555,

### Graphtec Ranger MO

plain SCSI with Macintosh drivers, and one which boasts SCSI and parallel ports, which we review here.

Graphtec throws in one MO cartridge with the Ranger (ours was from Maxell), but quotes a high £32 for additional carts. Fujitsu quoted around £17 for the same thing so it's certainly worth shopping around for media. As with the Fujitsu, the Ranger MO takes 3.5in 230Mb carts, which offer 217Mb after formatting.

Graphtec claimed the Ranger uses the same insides as the Fujitsu we reviewed, but our tests showed the Ranger to be quicker. Both MO drives are still slow though; better geared to backup than running apps. MO has the advantage of being fairly impervious to potentially damaging magnetic fields, and so long as you

shop around, the media is fairly good value. Ranger's combined parallel and SCSI version offers flexibility that the Fujitsu doesn't, but Fujitsu's own drive is cheaper. Graphtec's Ranger MO has the edge on performance, but neither are ideal for running applications or operating systems.

#### PCW Details

##### Graphtec Ranger MO

**Price** External SCSI £555, External parallel/SCSI £595

**Contact** Graphtec 01270 611234

**Good Points** Model with parallel and SCSI ports.

**Bad Points** Fujitsu's MO is cheaper.

**Conclusion** Good, and quicker than Fujitsu's.



**H**ewlett-Packard does a rather neat line in backup drives using a variety of technologies. We tested the 2000e model from the SureStore range of DAT drives; all are SCSI-2 devices.

All SureStore drives are available as internal or external configurations, the for-

### Hewlett-Packard SureStore Tape 2000e

mer being 3.5in wide but too tall to fit in a standard 3.5in bay, instead requiring a 5.25in bay and the supplied panel converter.

The external 2000 drive costs £799, and the internal £699. Both come with a suitable SCSI cable, diagnostics for DOS and NetWare Loadable Module (NLM), a 90mm DDS DAT tape, cleaning tape, and Colorado Backup for Windows software.

The 2000 series do not use data compression of any kind, offering a maximum storage of 2Gb on 2Gb native DAT tapes. Backing up the entire 2Gb will take around three hours, about 11Mb per minute. You will need a SCSI card, and HP carries suitable Adaptec 1510A ISA SCSI cards.

The 5000 series use the same 2Gb native tapes but can double this with compression.

The 6000 series can take 4Gb native tapes, again able to double this with compression to 8Gb.

Hewlett-Packard is a well-respected name in many fields, including tape backup, and the SureStore range will help it retain its good reputation. The 2000 series is an excellent entry-level DAT drive.

#### PCW Details

##### HP SureStore Tape 2000e

**Price** External £799, Internal £699

**Contact** Hewlett-Packard 01344 369222

**Good Points** Good value DAT drive.

**Bad Points** Maximum of 2Gb storage.

**Conclusion** Ideal entry-level DAT.



**I**omega describes its colourful ZIP drive as the new floppy drive, although it won't read conventional floppies. Instead, it uses 100Mb cartridges containing a flexible platter. When formatted, the ZIP carts offer 94Mb and cost around £15 each.

The ZIP drive mechanism is fitted inside an attractive-looking slim blue case, with a clear window through which the cartridge

### Iomega ZIP

may be seen. There's no internal or IDE option, but both SCSI and parallel external versions are available for the same price of £149.

Each drive comes with ZIP Tools software which helps you organise and track data. While the cartridges are of course

removable and pocketable, Iomega is partly selling the ZIP drive as an entirely portable device — just pick the whole thing up and go. You could of course buy two, but the ease of carting a single unit around is certainly a cost saving. At only 450g it is half the weight and a bit slimmer than the external SyQuest EZ135, the ZIP's main competitor; you will need to carry the heavy power supply though.

It isn't quite as quick as the EZ135, and the media is a bit smaller — when formatted it's 94Mb vs 126Mb — but both units are very cheap and incredibly useful. If carrying the whole unit is a primary concern, the ZIP wins. If you need the extra capacity and slight performance, the EZ135 has the edge.

#### PCW Details

##### Iomega ZIP

**Price** External SCSI drive £149, External parallel drive £149

**Contact** Iomega 0800 898563

**Good Points** Cheap and portable.

**Bad Points** Slower and smaller media than EZ135.

**Conclusion** None the less excellent.



# Applications are voracious little creatures. Satisfy them with the EZ-135.

**MORE MEGABYTES! MORE SPEED! MORE SECURITY! THE EZ-135 IS HERE!**

Forget about deleting storage-hungry applications or juggling drive space, with the new EZ-135 Drive from SyQuest, you'll have all the storage you could ever need. Each removable cartridge holds 135 megabytes of information – that's about 100 times more than the average floppy. So transporting large files is a snap. And unlike other removable cartridge systems, the SyQuest EZ-135 Drive offers true hard drive performance – the same level of performance that

made SyQuest the world leader and choice of professionals. But perhaps best of all, the EZ-135 Drive costs less per megabyte than any other comparable system, making it the best value around. So treat yourself to a system you can grow into, rather than out of. Get the EZ-135 Drive today! For more information, visit your local dealer. Or call us at

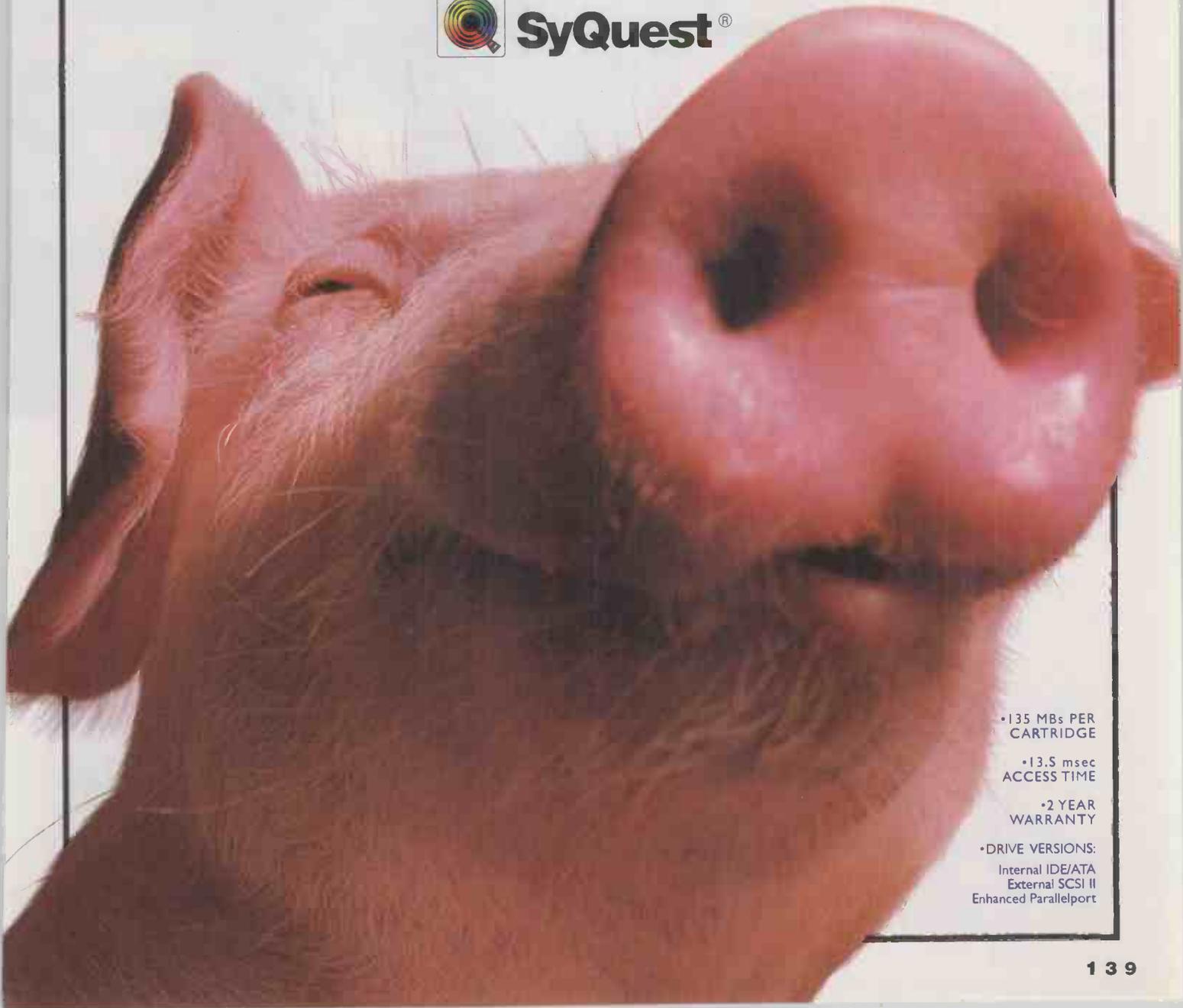
 **0 9 9 0 - 1 1 - 5 5 - 6 5**



**EZ Drive** A removable hard disk in a 3.5" cartridge.



**SyQuest**<sup>®</sup>



- 135 MBs PER CARTRIDGE
- 13.5 msec ACCESS TIME
- 2 YEAR WARRANTY
- DRIVE VERSIONS:
  - Internal IDE/ATA
  - External SCSI II
  - Enhanced Parallelport

# Performance, Quality, Upgradeability, Choice & Incredible Value! ...

## MJN DX4-100 Business System at £769

**MJN** High Performance Business Systems incorporate the latest technology and advanced features that are demanded by today's business users. These systems include a minimum of 8Mb RAM, the latest PCI based motherboards with fast enhanced IDE disks, superb 64-bit PCI graphics and are available in various configurations with differing RAM and hard disk capacity.

Systems shown here are optimised for Windows® 95 and also include the entire suite of Lotus high end applications as standard.

Our Best Buy 486DX4-100 B model is available for a remarkable £769 +VAT!

### MJN 486DX4-100 B

- 486DX4-100 processor
- 8Mb RAM (Max 64Mb)
- 540Mb enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA screen
- 102 keyboard and mouse
- Expandable desk top case with 7 drive bays

### Software

- Microsoft Windows 95
- Lotus 1-2-3 for Windows
- Lotus Ami Pro for Windows
- Lotus Approach for Windows
- Lotus Organizer for Windows
- Lotus SmartPics for Windows
- Lotus Notes Express for Windows licence

	8Mb	16Mb
540Mb	£769	£969
850Mb	£799	£999
1.08Gb	£849	£1049
486DX2-66 models .....	minus £30	
75MHz Pentium® models.....	plus £70	
90MHz Pentium® models.....	plus £150	
100MHz Pentium® models .....	plus £230	

### Options

Midi tower case .....	No extra charge
Full tower case .....	£Call
14.4 modem .....	plus £80
28.8 modem .....	plus £160
PC TV Card with Teletext.....	plus £160
Quad speed CD drive.....	plus £100
Six speed CD drive.....	plus £150
800Mb tape back-up .....	plus £150
Video RAM upgrade to 2Mb.....	plus £40
14" NI screen upgrade .....	plus £40
15" NI screen upgrade .....	plus £110
17" NI screen upgrade .....	plus £340
Microsoft Office 95 .....	plus £149
Microsoft Office Pro 95.....	plus £199

MJNBS2A



Every MJN Business System comes with a complete range of software from Lotus including Lotus Notes Express

### A Range Designed By You

We asked our customers for the most important features they wanted in their PC. We listened to their suggestions which included more choice, higher performance, quality components, easy upgradeability - and all these at a competitive price with top service and support. The end result is the new MJN range of personal computers.

### Wider Choice Of Expandable Case Styles

The new range features a choice of ergonomically designed cases which include a new 7 bay desktop, 8 bay midi tower and 9 bay full tower with heavy duty CE approved power supplies. Unique designs enable small footprints whilst giving you more expansion potential than any other set of case styles.



### Highest Performance Components

The motherboards, graphics adapters and hard disks used in these systems are amongst the highest performance components available. Our performance systems feature the latest Intel Triton chipset with Burst Mode cache and EDO RAM, fast 64-bit PCI graphics cards with VRAM, enhanced IDE (Fast ATA)

*“The best performer of the review group”*  
PC User

hard drives with over 256K cache and six speed IDE CD-ROM disks. All these options are available on all our other systems.

### Optimised For Windows 95

All our Windows 95 systems feature a minimum of 8Mb or 16Mb RAM and all the components are optimised for smooth and fast running of Windows 95. A system optimised for Windows 95 will outperform systems which just come bundled with Windows 95.

### Tailor Made Configurations

We appreciate that our customers' requirements vary and we can alter the configuration of these systems to fit in with your particular needs. Simply select the case style, processor, hard disk, RAM and other options which suit your requirement and budget.



### Future-Proof Upgradeability

All systems are upgradeable to the next generation Pentium technology processors. System RAM can be easily upgraded via 72-pin SIMMS, as can the memory on the graphics cards and motherboard cache. The enhanced hard disk controllers can handle up to 4 hard disks and our new cases can take a minimum of 7 storage devices even on desktop models!



### Quality Is The Key To Our Success

MJN manufacturing is certified by BSI to ISO 9002 (BS5750) quality standard and all our new PC systems are designed to comply with CE safety and emission standards. Our service, support and quality systems are also certified to ISO 9002.



### Wider Range Of Software Options

As well as the superb Lotus software suite which comes as standard with many systems, we also offer you a superb range of bundled multimedia titles with our multimedia systems. Microsoft Office 95 is also available as an option at a very competitive price.

### Backed By Superb Service And Support

Our knowledgeable sales staff can offer advice on your requirements and are backed by teams of technical support staff who will quickly resolve any problems. We offer extended warranties up to 5 years and on-site support for networks and file servers.

### The Best Value in the UK

Our manufacturing strength, direct relationships with the world's leading component manufacturers and direct supply to our customers without any dealer outlets allows us to offer these top quality systems at unbeatable prices. Compare our specifications, quality and performance with any other manufacturer and we are confident that you will be impressed by our value.

### Buy with Confidence from MJN

MJN is one of UK's leading PC manufacturers with group turnover over £100 million in the UK alone. MJN systems have been a favourite amongst corporate buyers, government departments and educational users over many years and have received Best Buys and recommendations from all of the UK's leading PC publications. Call us today for the best value in the UK.



*“It is well designed and well built... whatever you want, MJN can deliver.”*  
Personal Computer World

# ...The New MJN Range Offers All These & Much More

Telephone

# MJN

on

# 01 282 777 555



MJN 486DX4-100P  
September 95



MJN P75P/CD  
August 95



MJN P90/CD  
May 95



MJN P90/CD  
May 95



MJN P60P/CD  
February 95



BEST BUDGET BUY  
MJN 486DX2-66  
January 95

## Plasmon PD2000e



**P**lasmon's PD2000e is the only external configuration of the superb Panasonic PD system (reviewed in *First Impressions*, PCW, October 1995). Plasmon sells the internal version for £575, same as Panasonic, while the external box raises the price to £659. Both come with one 650Mb PD cartridge, resembling a CD-ROM caddy and offering a substantial 633Mb when for-

matted; additional carts cost £39 each. There are no IDE or parallel versions.

Panasonic's PD system boasts the company's own patented Phase Change technology; very similar to that used by phase change WORM (Write Once Read Many) such as CD-R. The difference with Panasonic's system is that the active layer is made of a material with reversible properties, so it's rewritable. Even cleverer is that it can rewrite in a single pass, making it faster than MO technologies, but still slower than the SyQuests and ZIPs. It's still fast enough to run applications but unfortunately cannot be booted from, so no chance of different OSs on a set of PD carts.

What makes the PD system really special is that it doubles up as a quad speed CD-ROM drive. You don't need a caddy

either, since the cartridge tray has a circular dip to take bare CDs; you can't load a cartridge and CD simultaneously though. The PD system is extremely flexible and the ideal choice if you can stretch to the cost of the drive; remember you do get a CD-ROM drive too.

### PCW Details

#### Plasmon PD2000e

**Price** External SCSI £659,

Internal SCSI £575

**Contact** Plasmon 01763 262963

**Good Points** High capacity, cheap media and doubles as quad speed CD-ROM drive.

**Bad Points** Not quickest or cheapest.

**Conclusion** Extremely flexible if you can afford the drive.

## Sony MD DATA Drive MDH-10



**A**bout three years ago Sony launched its MiniDisc (MD) format, capable of storing 74 minutes of digital audio on a 64mm diameter MO disc. The company managed to incorporate the same audio capacity as a CD, onto the MD using a compression ratio of around 5:1. Uncompressed, the MD media could store 140Mb information and the world wondered when Sony would get round to creating a computer data version.

After what seems like an eternity the MD DATA has arrived, and like all Sony products it looks and feels great. The MDH-10 is a tiny Walkman-sized device and the lightest in this round-up. It does need its supplied power adaptor to work off the mains, but unlike anything else

reviewed here it can also run off batteries. A very light but powerful 1200mAh lithium ion rechargeable is included, as is a clip-on battery case for three AAs. There is a PCMCIA interface option for £149.

The MD DATA can play but not record audio MDs. It has a line-out socket and comes with a pair of headphones with a large bulge in the cord for transport controls, and even an LCD display. As promised in Sony literature, the MD system is fairly impervious to quick bumps and shocks, with its buffering system. Keep shaking it about for more than, say, six seconds though, and it will skip.

It connects to your computer with a SCSI-2 port on the rear, but MD media must be formatted using the supplied software. A somewhat tortuous DOS command formats

the media not in FAT, but MDFS (Mini-Disc File System) format. This allows the media to be used between PC and Macintosh platforms. You cannot use the standard DOS format, unlike every other device on test here.

We had difficulties operating the MDH-10 in Windows 95, but none in Windows 3.1 or DOS. Software for Macintosh is also supplied, and is a lot easier to use.

The MD DATA blanks cost £15 each and can store 135Mb after formatting. Performance is very slow even for a magneto optical drive.

The MDH-10 is an ideal device on the move: battery operated, PCMCIA option, and doubling up as an audio player. It is very slow for storage, and the drive is expensive compared to the ZIPs, EZs and in fact everything else here, but the MD DATA does offer a unique service and is the only truly portable device in this feature.

### PCW Details

#### Sony MD DATA Drive

**Price** External drive £499

**Contact** Sony Peripherals  
01932 816000

**Good Points** Truly portable plus audio MD playback.

**Bad Points** Very slow, and the drive is expensive.

**Conclusion** Perfect for the gadget freak on the move.

### SyQuest EZ135 Drive



**S**yQuest introduced its 3.5in drives with two models: one with single-sided media 105Mb capacity (now discontinued), and the other, a double-sided 270Mb, reviewed in these pages. The EZ135 Drive is not much more than a remodelled, repackaged and remarketed cross between the two.

SyQuest's media is simply the rigid platter of a Winchester hard disk fitted in a removable plastic cartridge; it is effectively a hard drive with the performance to match. The mechanism is fitted into a neat grey box with two full-size SCSI ports and an ID selector at the rear. Power comes from an external adaptor. An internal IDE version is available now and an external parallel port version due by Christmas. All are bundled with one cartridge.

Since the EZ135 needs only one head to read the single-sided media, it is considerably cheaper than the 270Mb drive. The media is almost one quarter of the price too. In fact, considering the similar performance, the 270Mb comes across as quite expensive. The formatted 135 carts offer 126Mb for

around £13 each, and unless you absolutely need more, the 270 version is not worth considering.

The EZ135's main competitor is Iomega's ZIP drive. They're similar prices, but the EZ135 is quicker and has 32Mb greater formatted capacity. The ZIP is still pretty quick, but lighter, and consequently more portable as an entire unit.

#### PCW Details

##### SyQuest EZ135 Drive

Price External SCSI £179,

Internal IDE £149

Contact SyQuest 0800 526559

**Good Points** Cheap and fast.

**Bad Points** The ZIP's a bit lighter.

**Conclusion** Excellent all-rounder.

### SyQuest SQ 270



**A**ll SyQuest drives use the same kind of media: the rigid platter of a hard disk, fitted inside a plastic cartridge. When inserted into a suitable SyQuest drive, the combination effectively becomes a hard drive, with similar performance.

The SQ 270 is SyQuest's largest capacity drive, using 3.5in 270Mb cartridges, offering 254Mb when formatted. All config-

urations come with one cartridge; additional ones cost £42. We reviewed the SQ 270 external SCSI custom model ("custom" means just the drive and cartridge). Internal SCSI, IDE and external parallel versions are available, along with value packs which include SCSI drive, cartridge and Adaptec 1515 SCSI card.

The SQ 270 SCSI drive is very quick and the 270Mb cartridges offer a decent capacity. However, the drive requires two heads, raising the price well above that of, say, the SyQuest EZ135. If 135Mb is enough, the EZ135 is the better choice. If you need the greater capacity and excellent performance, the SQ 270 is ideal but expensive.

At a similar media capacity and drive

price, there are the 230Mb MO drives — MO media is much cheaper than the SQ 270s, but far slower. MO media is less susceptible to damage than pure magnetic storage, but SyQuests are very reliable. MO 230Mb vs SyQuest 270Mb is media cost vs performance.

#### PCW Details

##### SyQuest SQ 270

Price External SCSI £450, Internal SCSI £300, Internal IDE £360

Contact SyQuest 0800 526559

**Good Points** Fast, and good capacity.

**Bad Points** Expensive media.

**Conclusion** Ideal if EZ135 is too small or MO too slow.

### Tandberg Data Panther Mini 1000



**T**andberg Data is well known for its backup devices, particularly its tape drives using the QIC minicartridges (pronounced *quick*). QIC minicartridges are physically slightly larger than DAT tapes, but much sturdier. DAT tapes start at 2Gb capacity, while QIC carts can be as small as a few hundred megabytes. Performance

is fairly similar between DAT and QIC, but the QIC carts are around double the price.

On the plus side, QIC drives are much cheaper than DAT drives. Tandberg Data's Panther Mini 1000 drive costs £549 in an external box, or £449 as an internal; typically half that of a DAT drive.

These prices include Sytos backup software for Windows and DOS.

Another £48 gets you an Adaptec 1510 SCSI card; parallel Panthers

are available.

The Panther Mini 1000 takes 1Gb native QIC-WIDE cartridges, and can squeeze up to 2Gb through software compression. In native mode the Panther backs up 1Gb in around one hour; about 18Mb per minute.

By the time you read this, Tandberg Data will have a new Panther Mini, costing only £5

more, and capable of taking the 2Gb native carts, approximately doubling to 4Gb through compression (like the Conner TapeStor 4000). Unusually, Tandberg intends to keep selling the 1Gb version at the old price to keep all users happy. We would recommend all new users to go directly to the 2Gb model.

#### PCW Details

##### Tandberg Data Panther Mini 1000

Price External £497, Internal £397

Contact Tandberg Data 01582 769071

**Good Points** Cheap drive, good package.

**Bad Points** New 2/4Gb model is a better buy.

**Conclusion** Go for the 2/4Gb version.

# YOUR INSURANCE PROBABLY COVERS THIS...



## ... BUT WHAT ABOUT THIS?

### **Although you may have good insurance, you are probably not fully covered!**

If you lose your computer equipment whether through fire, theft or accident, your insurance will probably replace the equipment relatively quickly. However, they can't replace the data stored on your machines – data such as balance sheets, accounts and customer lists.

### **Backed up not Bankrupt**

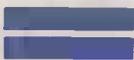
A backup system from Tandberg Data allows you to quickly copy all your data from your computer onto a tape which can be stored for safe keeping. If the worst should happen, you then simply copy all your data back from the tape onto your new equipment.

### **Specifications to match your needs**

Tandberg Data have a back up system for any capacity, most like the Panther Mini are capable of backing up 1GB in less than an hour too! Prices start from around £500.

**If you want more information on how to protect your business, call now and we'll send you a free guide called "Why backup your data!"**

**Phone now!**

**TANDBERG DATA**  **01582 769 071**

U.K. - France - Germany - Japan - Norway - Singapore - Sweden - U.S.A.



### **43% of businesses are gone in 6 months!**

Research by Data Quest has shown that 43% of businesses that lose data due to fire or theft become bankrupt in 6 months. All this can be prevented if you have a reliable backup system.

## Optical drives

Optical drives include magneto-optical (MO), WORM (Write Once/Read Many), and rewritable optical. All these read data with lasers which are far more precise than the drive heads on a disk drive. They hold more data than traditional disk drives, too, allowing more data to be packed in per square inch; hence the name Compact Disc or CD-ROM (Compact Disc Read Only Memory).

### WORM

Write Once/Read Many storage has been around for about eight years, and as the name suggests this type of optical drive can be written to and read from. When data is written to a WORM drive, physical marks are made on the media surface by a low-powered laser and since these marks are permanent, they cannot be erased, hence write once.

As far as the user is concerned, a WORM drive behaves in just the same way as any other storage media. When a file is saved to the drive and recalled for editing, the most recent version appears. Unknown to the user, however, every version of every file is permanently stored; even files that the user believes to be deleted. Financial institutions, government organisations and legal firms are particularly keen on the use of this type of media for storage as it provides a kind of transparent archiving facility which ensures sufficient security for the storage of sensitive data.

### Rewritable optical disks

Rewritable, or erasable, optical disk drives provide the same high capacities as those provided by WORM or CD-ROM drives, but the data on them can be erased. Most people perceive a drive which is erasable to be a superior product, but this is not necessarily the case. The erase feature can be an asset or a liability, depending on the way you use it.

Research into how people use their storage media shows that most users who store hundreds of megabytes of data very seldom erase. The most effective application for erasable optical drives is for CAD/CAM files, or desktop publishing systems where large data files are continually altered.

Optical drive technology was often seen as the eventual replacement for the traditional magnetic hard drive, but this is not the way the market has worked out, and optical drives do not look likely to take over in the near future. Fixed magnetic drives have continued to improve in performance and capacity and offer superior performance to the optical drive. The average access time for a 5.25in erasable optical drive is around 40 to 60 milliseconds. The new 3.5in optical drives are much faster, producing scores of 30-40

milliseconds, but they're still about three times slower than the average magnetic hard drive.

So, why buy an optical drive? The main advantage with optical drives is their robustness compared to the normal magnetic type. Optical drives offer a storage medium which is easily transportable and rugged. Optical disks are immune from head crashes and the kind of data loss which is caused by adverse environmental factors. In fact, the relative advantages of the two types of system make them complementary rather than competitive. Optical drives offer security, while magnetic hard drives offer real-time performance.

### Magneto-Optical Drives

The performance problem with optical drives has been addressed recently with a new generation of rewritable optical drives using magneto-optical technology and phase-change erasable technology. Magneto-optical drives are the most widely available optical storage product with drives being produced in two form factors: 3.5in and 5.25in.

MO technology, as you might guess from the name, uses a combination of laser and magnetic science. An electro-magnet and a laser beam are used together to change the state of the optical media. The active layer of the disk is magnetic, with each element having its own magnetic polarity. In order for an element to change from a binary "0" to "1", its polarity must be changed, and this is achieved using a combination of electro-magnetic and laser technology. Because of the way in which magneto-optical technology works, two or sometimes three rotations must be made each time data is written to the disk: once to erase old data, then to write new data, and thirdly to verify the data. This puts a considerable overhead on performance. Reading from the disk is much simpler and can be executed in a single rotation which takes half the time of writing.

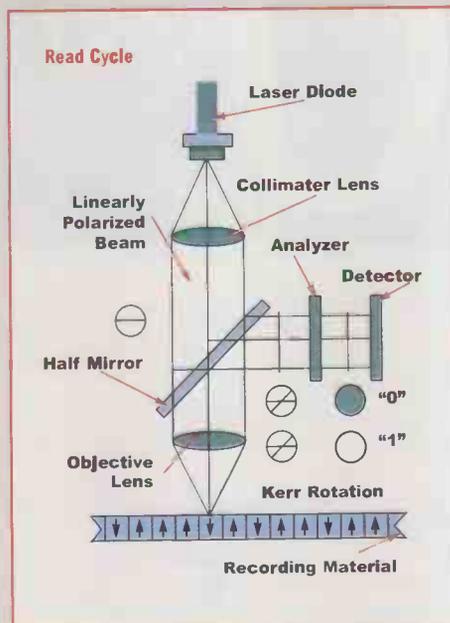
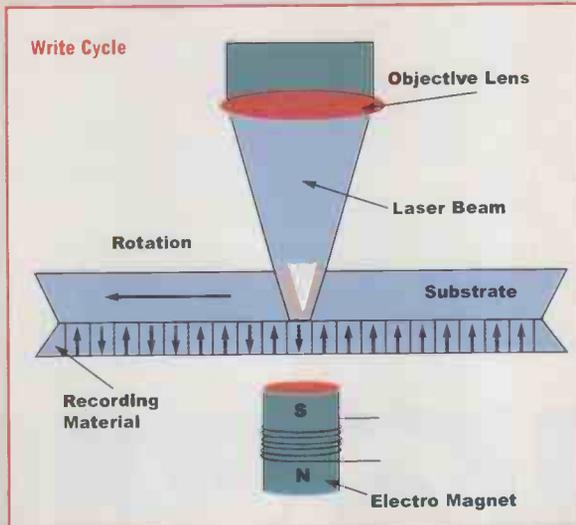
### Phase-Change technology

Phase-change technology does not suffer from the same performance overheads as

magneto-optical technology. It is the only erasable optical solution which has direct overwrite capability. Using a purely optical technology relying only on the use of a laser, phase-change is able to write new data with just a single pass of the read/write head.

A laser light is used to convert spots on the disk's active layer from a dull amorphous material into a highly reflective crystalline state. The laser beam is then able to distinguish between the reflective and non-reflective light and can thus identify a binary "0" and "1". While phase-change media does not have the recycling properties of MO, tests show it can be written to at least a million times.

Eleanor Turton-Hill



Family Value®

### 486 100mhz Multimedia System



£49 per month

**Easy Payments**  
 24 months interest free credit, pay £350.33 deposit and 24 monthly payments of £49. APR 0%  
**OR**  
 Buy now pay Spring 96. Deposit £170.33 pay the balance of £1356, 6 months later. APR 0%  
 Cash Price £1299 + VAT

- 486DX4-100 CPU
- 8mb RAM
- 850mb fast EIDE hard drive with PCI 32-bit mode 3 enhanced IDE controller
- Dual speed, multi session ATAPI CD-ROM
- 16 bit sound card and speakers
- 3.5" 1.44mb floppy drive
- 64 bit local bus graphics card with 1mb DRAM
- 14" energy saving, MPR-II monitor, NI, max res 1024 x 768
- 2 serial, 1 parallel port
- Desktop case with 200w PSU†
- 102 key UK keyboard
- 2 button serial mouse
- 1 year's parts and labour warranty, with service at home or in your office

#### Bundled Software

Microsoft®  
 Windows 95 (CD)

Microsoft® Value Pack  
 Microsoft Works v3.0,  
 Microsoft Publisher v2.0  
 Microsoft Golf v1.0  
 Microsoft Money v3.0

Microsoft®  
 Encarta 95 (CD)  
 Interactive Multimedia Encyclopedia

Family Value  
 5 CD Selection (CD)

Family Value®

### Pentium® P75 Multimedia System



£69 per month

**Easy Payments**  
 24 months interest free credit, pay £340.33 deposit and 24 monthly payments of £69 APR 0%  
**OR**  
 Buy now pay Spring 96. Deposit £200.33 pay the balance of £1796, 6 months later. APR 0%  
 Cash Price £1699 + VAT

- Intel Pentium® 75 processor
- PCI local bus with 256k level 2 cache
- 8mb RAM
- 850mb fast EIDE hard drive with PCI 32-bit mode 3 enhanced IDE controller
- Quad speed, multi session ATAPI CD-ROM
- 16 bit sound card and speakers
- 3.5" 1.44mb floppy drive
- 64 bit PCI graphics card with 1mb DRAM
- 15" energy saving, MPR-II monitor, NI, max res 1280 x 1024
- 2 serial, 1 parallel port
- Desktop case with 200w PSU†
- 102 key UK keyboard
- 2 button serial mouse
- 1 year's parts and labour warranty, with service at home or in your office

#### Bundled Software

Microsoft®  
 Windows 95 (CD)

Novell  
 PerfectOffice® (CD)  
 WordPerfect 6.1, Quattro Pro 6.0, Presentations 3.0, Envoy 1.0a, InfoCentral 1.1, GroupWise 4.1.

Microsoft®  
 Encarta 95 (CD)  
 Interactive Multimedia Encyclopedia

Family Value  
 5 CD Selection (CD)

Quality multimedia computers for the home and small office.

Great software packages pre-installed and ready to run.

0% APR\*

Delivery direct to your door with service in your own home.

2 easy ways to pay, interest free credit or buy now pay later.

Family Value®

### Pentium® P90 Multimedia Super System



£79 per month

**Easy Payments**  
 24 months interest free credit, pay £570.33 deposit and 24 monthly payments of £79 APR 0%  
**OR**  
 Buy now pay Spring 96. Deposit £250.33 pay the balance of £2216, 6 months later. APR 0%  
 Cash Price £2099 +VAT

- Intel Pentium® 90 processor
- PCI local bus with 256k level 2 cache
- 16mb RAM
- 1.08gb fast EIDE hard drive with PCI 32-bit mode 3 enhanced IDE controller
- Six speed, multi session ATAPI CD-ROM
- 16 bit sound card and speakers
- 3.5" 1.44mb floppy drive
- 64 bit PCI graphics card with 2mb VRAM
- 15" energy saving, MPR-II monitor, NI, max res 1280 x 1024
- 2 serial, 1 parallel port
- Desktop case with 200w PSU†
- 102 key UK keyboard
- 2 button serial mouse
- 1 year's parts and labour warranty, with service at home or in your office

#### Bundled Software

Microsoft®  
 Windows 95 (CD)

Novell  
 PerfectOffice® Professional (CD)  
 WordPerfect 6.1, Quattro Pro 6.0, Presentations 3.0, Envoy 1.0a, InfoCentral 1.1, GroupWise 4.1, Paradox 5.0, AppWare 1.0.

Microsoft®  
 Encarta 95 (CD)  
 Interactive Multimedia Encyclopedia

Family Value  
 5 CD Selection (CD)

Family Software



Family Value®

### How to order

All Family Value® PC's are available direct. Payment can be made on our 2 easy interest free credit schemes, or by cash for the stated price on each system.

All credit sales are subject to status, written details available on request. A deposit will be required at the time of order, for this we accept Mastercard, Visa, Switch or American Express. By answering a few simple questions your credit application can be given an instant acceptance. The relevant documents are then posted to you, on return of these correctly signed your selected PC will be shipped direct to your door. All finance charges shown include VAT and delivery.

Your 1 years at home service starts 14 days after you receive your system. This can be upgraded to 2 years for an extra £8.50 per month.

Family Value sales lines are open from 8.45am until 6.30pm Monday to Friday and 10am to 4pm on Saturday. Call the Family Value freephone order line 0500 550255 to place your order.



0500 550255

Family Value®

Family Value® by Adama Technology Ltd, City Point, Chester Rd, Old Trafford, Manchester M32 0RW, UK. Fax: 0161 877 8684

## Magnetic storage

The hard disk inside your PC is made of aluminium alloy covered with a magnetic coating. This makes the disk itself a pretty rigid plate, hence the name "hard" disk. Hard disks are completely sealed inside the disk drive and are not removable like many other media. They also spin very fast and have high recording densities, which means they must be kept free from dust and any other kind of environmental contamination if they are to be maintained properly.

Thankfully, for the user, most hard disks look pretty much the same and people rarely know much about their internal workings. Hard disks have changed radically over the years, especially in terms of capacity. The smallest hard disks of long ago held a tiny 5Mb while these days 8Gb is possible for a desktop PC. The average PC bought today has between 500Mb and 1Gb in hard disk storage.

Data is recorded onto the magnetic surface of the hard disk in exactly the same way as it is on floppies or digital tapes. If you've ever defragmented your hard disk, then you probably have some mental image of how the surface of the disk looks. Essentially, the surface of your hard disk is treated as an array of dot positions each of which can be identified and set to a binary "1" or "0". The position of each array element is not identifiable in an "absolute" sense, so a scheme of guidance marks helps the recorder find positions on the disk. The need for these guidance markings explains why disks have to be formatted before they can be used.

When it comes to accessing data already stored, the disk spins round very fast so that any part of its circumference can be identified quickly. Floppy disks spin at 300rpm which means it takes about one fifth of a second for any given part to be identified. Hard disks, of course, spin much faster; typically about 5,400rpm or one ninetyth of a second per rotation, but these speeds are being superseded with new, faster products all the time.

### Hard disk speed

The speed of a hard disk can be measured in lots of different ways, and it's important to know exactly what figures are being quoted when you're shopping for a new one. The performance of your hard disk is very important to the overall speed of the system. A slow hard disk will hinder a fast processor like nothing else in your system can.

As an initial gauge, look for the drive's "average access time". This is the time taken by the drive to locate the right track on which a piece of data is stored, and the specific place on the track where that data is sitting.

This is usually quoted in milliseconds. As well as average access time look out for "transfer rates". The transfer rate is the speed at which the drive can deliver the data from the disk platters to the CPU, and is generally measured in megabytes per second.

In order to get an accurate view of a hard drive's performance, the average access time and the transfer rate should be looked at together. Drive makers and dealers have a reputation for bending the truth on such issues and are often found to quote the fast access time of a drive, without any mention of the transfer rate: you'll also see this in advertisements. Unfortunately, a high access time coupled with a slow transfer rate produces a slow drive.

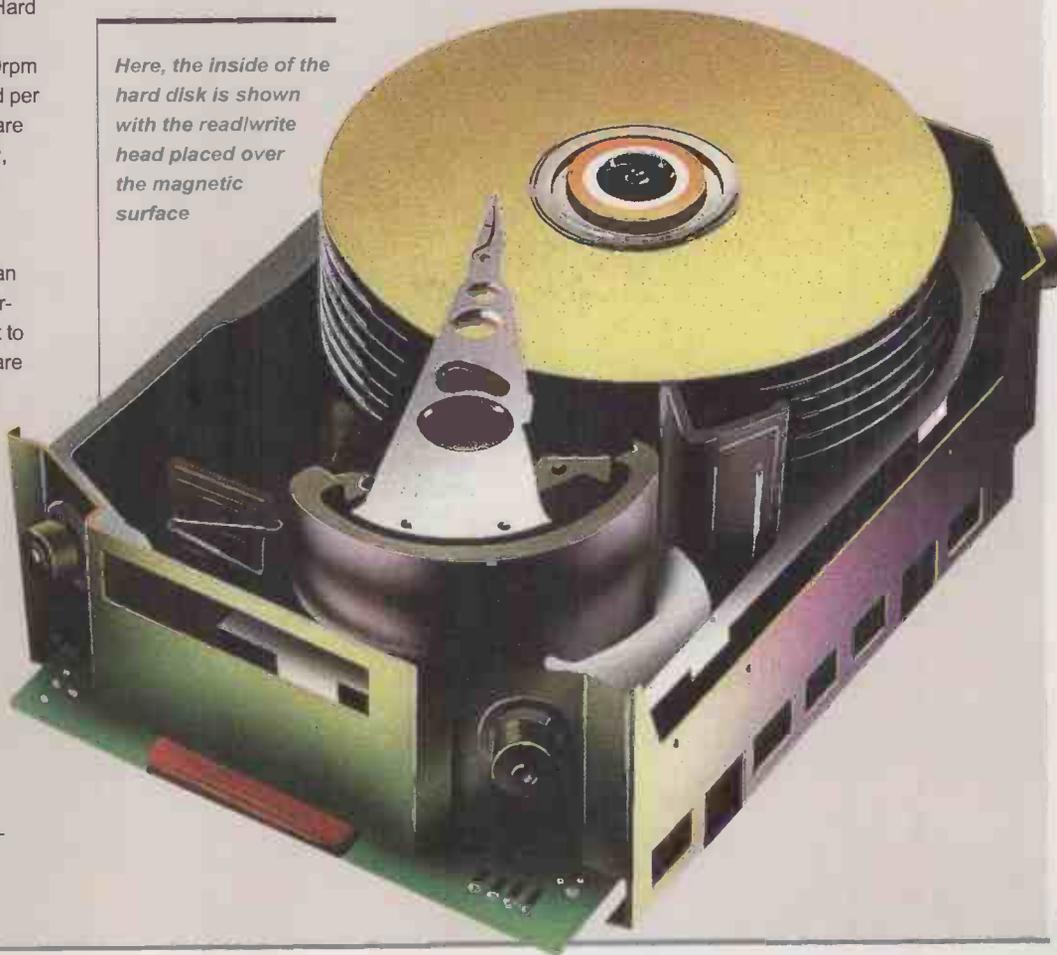
Because access time is measured in milliseconds and transfer rate is measured in megabytes per second, the overall drive performance can be difficult to get your head around: basically, you're looking for the lowest possible access time and the highest possible transfer rate.

Another measure of hard disk performance which you should be aware of is "seek time", which is conveniently confused (by some people) with the access time. Seek time is also measured in milliseconds and defines the amount of time it takes a hard drive's read/write head to find the physical location of a piece of data on the disk. The seek time says absolutely nothing about the speed of a hard drive. The importance of the access time and transfer rate is that they tell you how long a hard drive takes to locate and retrieve data.

PCW plans to benchmark a variety of budget and high-performance hard disks in the near future.

**Eleanor Turton-Hill**

*Here, the inside of the hard disk is shown with the read/write head placed over the magnetic surface*



# MJN P75 Multimedia System at £999



*“Best Buy, we can thoroughly recommended the MJN”*

PC Plus

**MJN** Multimedia Systems feature the highest quality, high-performance components and come packed with features at prices that provide you with incredible value. All systems feature ultra-fast 64-bit PCI graphics, large enhanced IDE hard disks, crisp sharp 14" and 15" screens and fast CD-ROM drives with full-feature multimedia.

Also included are superb CD multimedia titles including Microsoft Encarta, Infopedia full feature encyclopaedia, WinTutor Windows 95 tutorial, Bodyworks and the multimedia version of World Atlas together with the best business software suite from Lotus. Compare the specification of our systems with any other and we are confident you will agree that when it comes to multimedia, MJN is your best choice.

#### MJN 486DX4-100 MM

- 486DX4-100 processor
- 8Mb RAM (Max 64Mb)
- 540Mb enhanced IDE hard disk
- Double speed, quad speed or six speed CD-ROM drive
- 16-bit stereo sound card
- Twin stereo speaker system
- Quickshot joystick
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA colour screen
- 102 keyboard and mouse
- Expandable MJN midi tower case with 8 drive bays

#### Software

- Microsoft Windows 95
- Lotus 1-2-3 for Windows
- Lotus Ami Pro for Windows
- Lotus Approach for Windows
- Lotus Organizer for Windows
- Lotus SmartPics for Windows
- Microsoft Encarta 95 CD
- Infopedia - the ultimate encyclopaedia CD
- World Atlas MPC CD
- Wintutor 95 multimedia CD
- Bodyworks multimedia CD
- Plus other multimedia titles

#### MJN P75 MM

- Intel 75MHz Pentium® processor
- 8Mb RAM (Max 128Mb)
- 850Mb enhanced IDE hard disk
- Double speed, quad speed or six speed CD-ROM drive
- 16-bit stereo sound card
- Twin stereo speaker system
- Quickshot joystick
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA colour screen
- 102 keyboard and mouse
- Expandable MJN midi tower case with 8 drive bays

#### Software

- Microsoft Windows 95
- Lotus 1-2-3 for Windows
- Lotus Ami Pro for Windows
- Lotus Approach for Windows
- Lotus Organizer for Windows
- Lotus SmartPics for Windows
- Microsoft Encarta 95 CD
- Infopedia - the ultimate encyclopaedia CD
- World Atlas MPC CD
- Wintutor 95 multimedia CD
- Bodyworks multimedia CD
- Plus other multimedia titles

#### MJN Multimedia Options

14.4 modem .....	plus £80
28.8 modem .....	plus £160
PC TV Card with Teletext .....	plus £160
Quad speed instead of double .....	plus £50
Six speed instead of double .....	plus £100
Desktop case .....	No extra charge
Full tower case .....	£Call
800Mb tape back-up .....	plus £150
Video RAM upgrade to 2Mb .....	plus £40
14" NI screen upgrade .....	plus £40
15" NI screen upgrade .....	plus £110
17" NI screen upgrade .....	plus £320
Microsoft Office 95 .....	plus £149
Microsoft Office Pro 95 .....	plus £199

#### Personal Finance

All systems are available on Personal Finance from as little as £49\* per month.

Tel. 01 282 777 555. Fax 01 282 77 08 44. All prices exclude delivery (£19) and VAT (17.5%). Software applications are provided on CD or pre-loaded with on-line documentation. Pack shots shown for purposes of illustration only. Finance available subject to status, APR \*19.8% Written quotations are available on request. £60E.

MJNCD2A

£899

£999

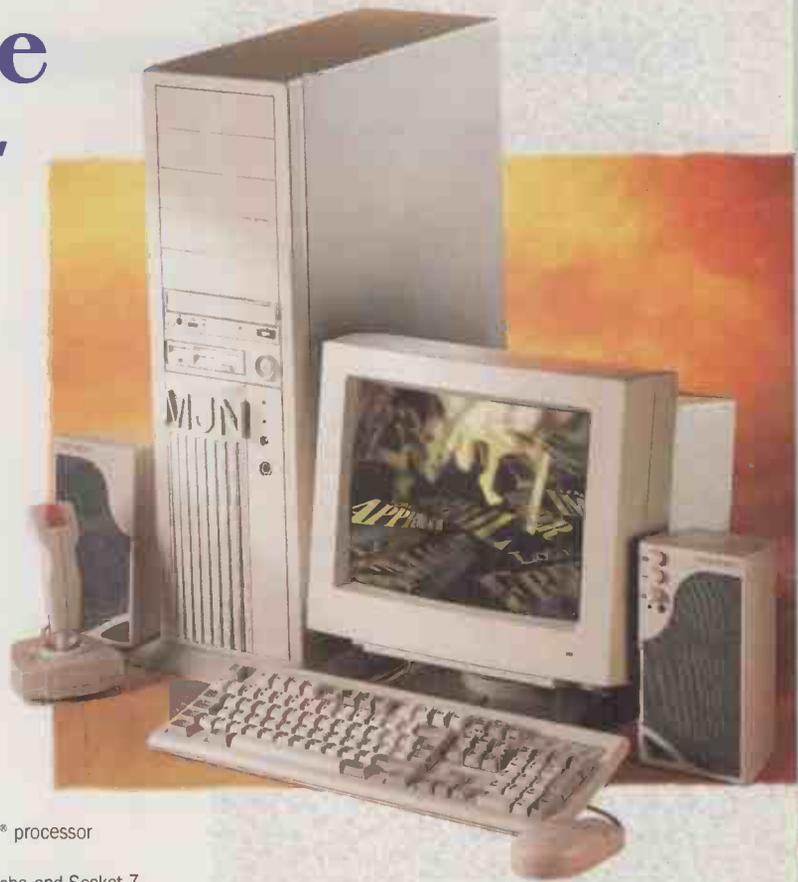
	8Mb	16Mb
540Mb	£899	£1099
850Mb	£929	£1129
1.08Gb	£979	£1179
486DX2-66 models .....	minus £30	

	8Mb	16Mb
850Mb	£999	£1199
1.08Gb	£1049	£1249
1.6Gb	£1149	£1349
Intel 90MHz Pentium® .....	plus £80	
100MHz Pentium® .....	plus £160	



All the MJN multimedia systems come with the best CD multimedia titles and Lotus business software

# MJN Performance Systems for the power user



**MJN** Performance Multimedia Systems have a high specification featuring the fastest components available. Our P133 multimedia model features the latest Intel Triton chipset with 256K BURST mode cache, 32Mb EDO RAM, Fast 1.6Gb enhanced IDE hard disk, 28.8 modem, advanced PC TV with Teletext and six speed CD multimedia with Orchid Wave Table sound.

Also included is the fastest Diamond Stealth 64-bit PCI graphics with 4Mb VRAM video RAM, 3.2Gb tape back-up, sharp 17" screen and a range of Lotus business software together with CD multimedia titles.

## MJN P100 MMP

- Intel 100MHz Pentium® processor
- Intel Triton Chipset
- 256K cache and socket 7
- 16Mb RAM (Max 128Mb)
- 1.6Gb enhanced IDE hard disk
- Quad speed or six speed CD-ROM drive
- 14.4 (or 28.8) BABT approved modem
- 16-bit stereo sound card
- Twin stereo speakers
- Quickshot joystick
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 2Mb video RAM
- 15" SVGA NI MPRII screen
- Midi tower case with 8 drive bays
- 102 keyboard and mouse

## Software

- Microsoft Windows 95
- Lotus software suite including Lotus 1-2-3, Ami Pro, Approach, Organizer, SmartPics and Notes Express for Windows
- Microsoft Encarta® '95 CD
- Infopedia - the ultimate encyclopaedia CD
- World Atlas MPC CD
- Wintutor 95 multimedia CD
- Bodyworks multimedia CD
- Plus other multimedia titles

## MJN P133 MMP

- Intel 133MHz Pentium® processor
- Intel Triton Chipset
- 256K BURST MODE cache and Socket 7
- 32Mb EDO RAM (Max 128Mb)
- 1.6Gb enhanced IDE hard drive
- Six speed CD-ROM Drive
- 28.8 BABT approved modem
- Advanced PC TV with Teletext
- 3.2Gb tape back-up
- Orchid wave table stereo sound card
- High power stereo speaker system
- Quickshot joystick
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 4Mb VRAM video RAM and MPEG playback
- 17" SVGA NI MPRII screen
- Full tower case with 9 drive bays and heavy duty power supply
- 102 keyboard and mouse

## Software

- Microsoft Windows 95
- Lotus software suite including Lotus 1-2-3, Ami Pro, Approach, Organizer, SmartPics and Notes Express for Windows
- Microsoft Encarta® '95 CD
- Infopedia - the ultimate encyclopaedia CD, World Atlas MPC CD, Wintutor 95 multimedia CD, Bodyworks multimedia CD
- Plus other multimedia titles

*"The best performing machine of the lot... blisteringly fast hard disk performance with one of the highest ratings ever recorded in Shopper"*

**Computer Shopper**

## MJN P100 MMP

	16Mb	32Mb
850Mb	£1689	£2089
1.08Gb	£1739	£2139
1.6Gb	£1839	£2239
120MHz Pentium	..plus £160	
133MHz Pentium	..plus £240	

## MJN P133 MMP

	16Mb	32Mb
1.08Gb IDE	£2959	£3439
1.6Gb IDE	£3059	£3539
2Gb SCSI	£3679	£4159
150MHz Pentium	..plus £270	
166MHz Pentium	..plus £Call	

## MJN P100 MMP Options

14.4 to 28.8 modem upgrade	.....plus £80
PC TV card with Teletext	.....plus £160
x6 speed CD instead of quad	.....plus £50
3.2Gb tape back-up	.....plus £220
17" NI screen upgrade	.....plus £210
Upgrade to 2Mb VRAM video and MPEG	.....plus £1100
Upgrade to 4Mb VRAM video and MPEG	.....plus £220
Full tower case	.....plus £50
Microsoft Office 95	.....plus £149
Microsoft Office Pro 95	.....plus £199

£1839

£3539

Telephone

**MJN** on

01 282 777 555

MJNTOWZA

All the MJN multimedia systems come with the best CD multimedia titles and Lotus business software



## Tape streamer technology

### Helical Scan and Linear Recording

There are two types of technology used for tape streamers: helical scan recording and linear (or longitudinal) recording. The linear type offers better performance than the helical scan type, but typically lower capacities. Helical standards include 4mm DAT and 8mm tape, while linear includes QIC (pronounced *quick*).

QIC-WIDE tapes offering higher capacities are becoming increasingly common but cost around double that of equivalent DAT tapes. DAT drives are usually more expensive than QIC drives of similar capacities.

When data is recorded to linear tape, the read/write heads are stationary and the tape itself moves past the heads at 100-125ins per second. The data is recorded onto the tape in straight lines. Extra read/write heads can be added to improve performance. The 800Kb/sec achieved by two heads could be doubled to 1600Kb/sec by four heads. In some environments where high performance and capacity are required, as many as 36 read/write heads can be stacked up at one time.

Helical scan recording is the same type of recording as that used in video-tape recorders and is inherently slower than the linear type. For this reason, it is generally only used in environments where high capacity is the primary requirement. The read/write heads on a helical scan device are attached to a rotating drum, and data is recorded onto a tape moving in the opposite direction in a striped pattern. The tape moves at less than one inch per second but because it is recording more than one line at a time, it has an effective speed of 150ins per second.

Just like the linear variety, the performance would be greatly improved if additional read/write heads were added, but this is problematic with helical scan devices as the majority of heads require two parts (one to write and another to check for data integrity). The fact that the heads may only be added in pairs makes it difficult to fit the wiring inside a single drum and this limits the potential performance of helical scan devices. They are also rather prone to wear and tear because of the wide wrap angle of the tape.

#### Eleanor Turton-Hill

### Travan

The Travan specification is an attempt by the tape industry, particularly the 3M conglomerate, to offer still greater capacities and a degree of backwards compatibility. It stems naturally from the evolution of the QIC cartridges, on which capacities were increased by

### Tape revolution

	Original	Longer tape	Wider tape	Travan
QIC 80	120Mb	170Mb	210Mb	400Mb
QIC 3010	340Mb	n/a	420Mb	800Mb
QIC 3020	670Mb	n/a	840Mb	1600Mb

*Getting it taped: how data cartridges have evolved*

lengthening and widening the tape (see table above).

The three travan sizes, known as TR1, TR2 and TR3, are wider and longer than the original QIC tapes and cannot be read on QIC drives; but old QIC tapes can be used on equivalent

Travan drives. TR1, TR2 and TR3 cartridges will cost about £24, £28 and £30 respectively, so that the cost per megabyte falls as you go up the scale.

TR3 drives will read TR2 tapes so some manufacturers look like skipping TR2 drives. TR4 drives using 4Gb tapes are expected to appear before

Christmas, and TR5 drives, storing 10-12Gb, will come in 1997. All of these capacities can, of course, be doubled with data compression.

Both Hewlett-Packard and Iomega have launched TR1 drives. Cheapest is Iomega's Ditto Easy 800, which has an estimated street price of about £125 and looks almost identical to the Zip. Iomega is also offering a TR3 drive, the

Ditto 3200, which we will be reviewing next month.

3M is encouraging the development of software that makes tape drives easier to use, particularly to make them appear to the user as just another disk drive.

Travan's major advantage is perhaps that a single tape can be used to back up an entire hard disk. It can also carry huge video and graphics files. If tape remains much cheaper per megabyte than rival media, PC users may adopt the kind of storage management seen on large systems, where data is shuffled between slow data banks and fast local media.

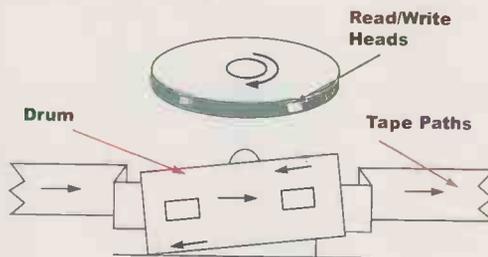
#### Clive Akass

3M 01344 858000

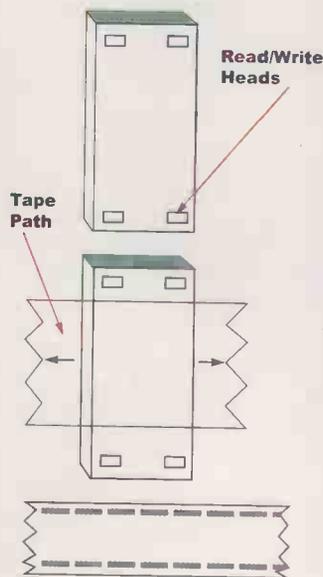
Iomega 0800 898563

Hewlett-Packard 01344 369222

### Helical Scan Recording



### Linear Recording



# How could we make our notebooks more like the top quality brands?



## Simply by increasing the prices.

**Apart from** the price, there's very little difference between Mitac notebooks and their big brand equivalents.

With features and options you'd normally associate with much more expensive notebooks, Mitac has unequalled price/performance.

Features such as modular upgradeability and blistering CPU performance, plus DX2-66 and DX4 options to suit every need and budget. Total connectivity, including the

latest PCMCIA technology. And build quality that is never less than world-class.

Mitac notebooks are fully supported by the massive resources of an international organisation and a new European manufacturing and service centre in Telford.

Small wonder, then, that several of the world's premier brands have chosen Mitac to manufacture their computers.

And no surprise that leading computer

industry titles regularly name Mitac products as 'Editors Choice'.

So when you want to purchase a top quality notebook, choose the one that doesn't charge you for its name - Mitac.

For more information, please call Mitac Europe Marketing on 01952 207351.

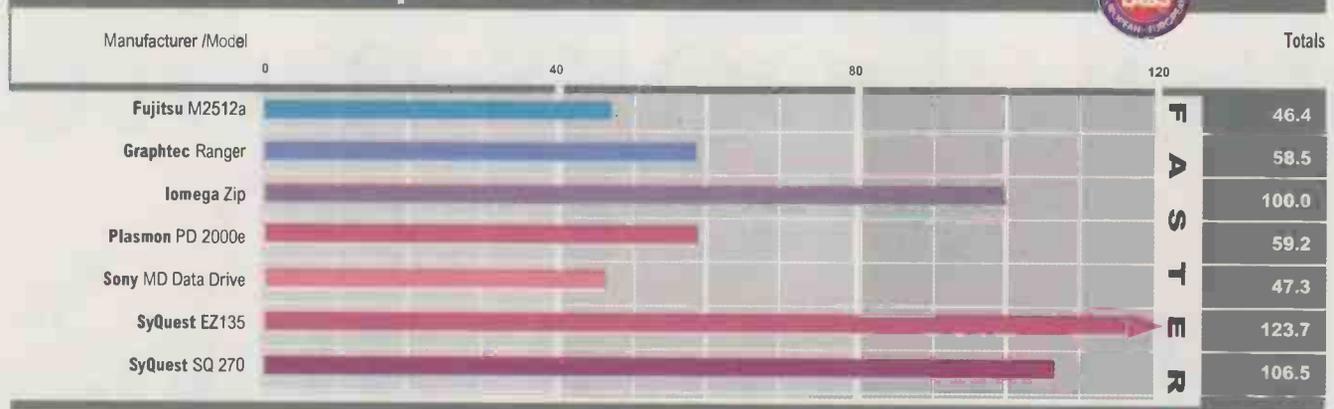
**MITAC** 

The Quiet Giant.

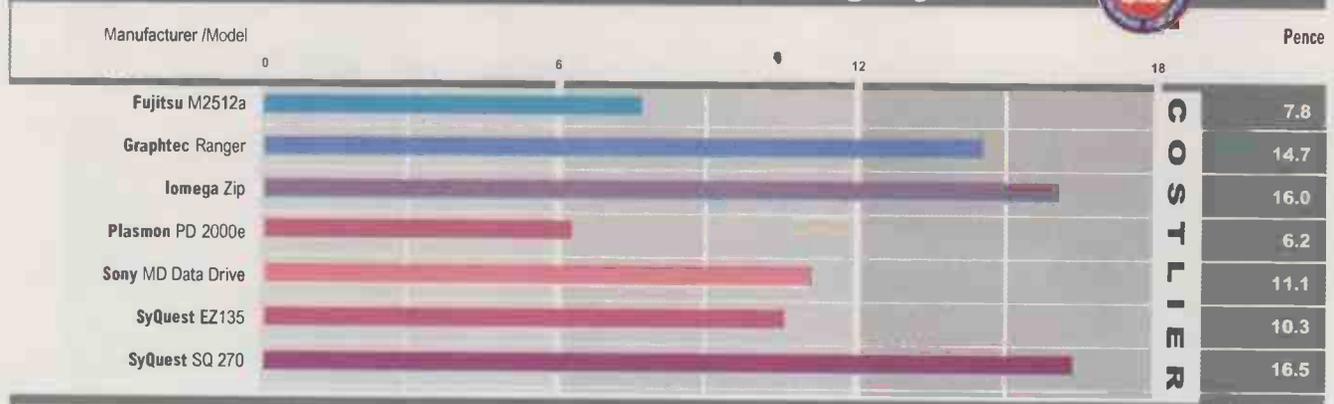
**ISO-9001**

# Performance results

## Overall performance



## Price (pence) per formatted megabyte



## How we did the tests

This round-up is roughly divided into two halves: the four tape drives and the seven other devices. All 11 were connected individually to a high-performance Adaptec 2940 PCI SCSI card, fitted to a Pentium 90 PC with 16Mb RAM; at the time of testing, the only other SCSI device was the PC's own hard disk. The PC was running Windows 95 with Adaptec's EZ-SCSI 4 for Windows 95.

To put tape drive performance into perspective, you are always going to be looking at rates of typically 11 to 30Mb per minute.

The point is that when backing up entire, or large proportions of a drive to tape, you'll be waiting long enough to make a hot drink or even pop out for a short wander round.

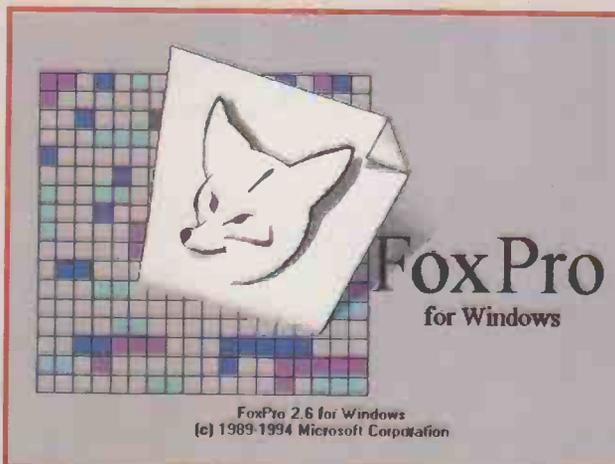
That's why so many backup software packages offer remote timers which back up, say,

overnight. For this reason we have presented the typical backup rates of the tape drives in the table and the reviews, but not in the performance graphs on this page.

The remaining seven drives were tested with the database section of the standard VNU European Labs PC test suite. This repeatedly searches large databases, resulting in access times and transfer rates, both sequential and random, which are weighted and combined into a single score.

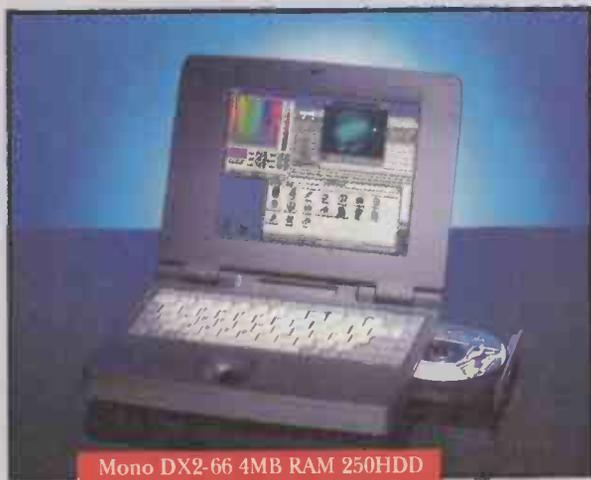
These final results for the seven drives are presented in graph form on this page; bigger is better.

Out of interest we have also calculated the cost per megabyte of the media. This does not take performance or the cost of the drive into consideration, but is here only to satisfy curiosity.



*The FoxPro database portion of the VNU benchmarks, used here to test storage performance*

# A fully featured business notebook with interchangeable CD-ROM. Of course, you want it *just* for work.



Mono DX2-66 4MB RAM 250HDD

**£999**

Dual scan DX2-66 4MB RAM 250HDD £1399  
TFT DX2-66 8MB RAM 250HDD £1799

Optional CD-ROM drive displayed

## The 4024 Multi-media Notebook

Our 4024 notebook is as versatile as it's upgradeable. So while it's ideal for all-singing, all-dancing multi-media presentations, it will also take the rest of your business tasks - from the most straightforward to the most demanding - in its stride. And because it offers a wide variety of options, you can decide just how fully featured it should be to meet your on-the-move multi-media needs.

486 DX2-66 upgradeable to DX4-100 • 3.5" Floppy drive, easily interchangeable with optional 5.25" double-speed CD-ROM drive or second battery pack • 4MB RAM standard, 32MB RAM maximum • 9.5" mono screen (optional 9.5" or 10.4" TFT or DualScan colour) • Easily removable 250MB IDE HDD • 32-bit VESA Local Bus for VGA • PCMCIA slots (2 x Type II or 1 x Type III) for fax/modem cards • Built-in microphone and speakers • Optional 16-bit audio card • Dual level power management • Weight: 5.4lbs • Dimensions W280mm x D220mm x H40mm

All machines come with free DOS and Windows, power adaptor, technical support, 12 months' return-to-base warranty and free carry case. On-site warranty £49. Delivery £15.

With features and options you'd normally associate with much more expensive notebooks, Mitac has unequalled price/performance.

Mitac products are also supported by

a network of sales, service and customer care staff, based at the European manufacturing and service centre in Telford.



The Intel logo is a registered trademark of Intel Corporation.



All prices exclude VAT and delivery and are subject to change without notice. E & OE.

Call Actinet Computers Limited now on 01902 871001.

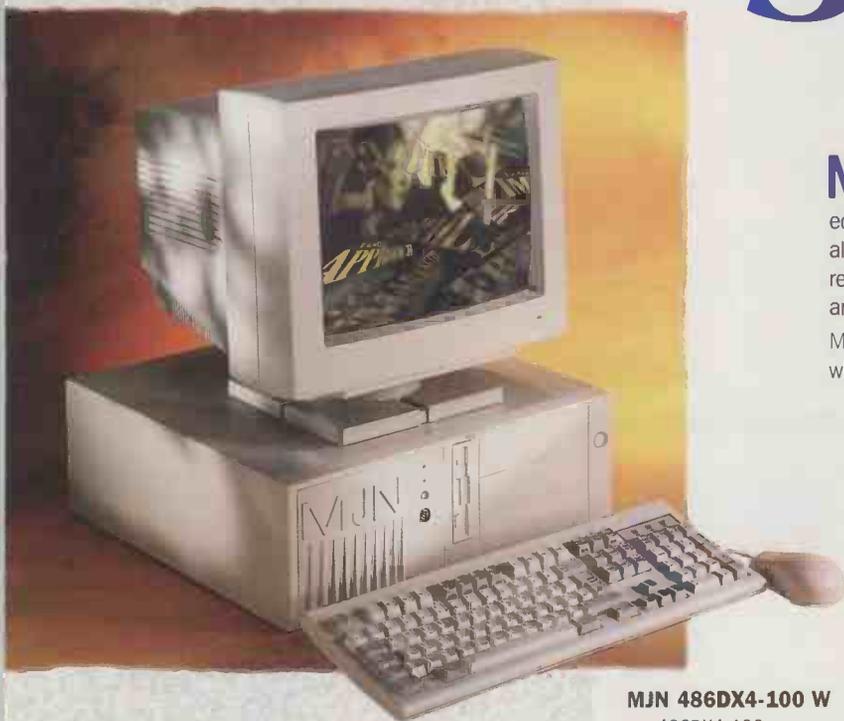
Order line open 9am-5.30pm Mon-Fri, 9am-1.00pm Saturdays.

**MITAC**   
The Quiet Giant.



# MJN Workstations

## from £599



*“The MJN is a meaty machine.  
It's specification is formidable”*  
Practical PC

### MJN Workstation Options

Midi tower case .....	No extra charge
Full tower case .....	£Call
Ethernet combi network card .....	plus £40
MS DOS 6.22 & Windows for Workgroups 3.11 .....	plus £60
Microsoft Windows 95 .....	plus £60
14.4 modem .....	plus £80
28.8 modem .....	plus £160
Quad speed CD drive .....	plus £100
Six speed CD drive .....	plus £150
800Mb tape back-up .....	plus £150
Video RAM upgrade to 2Mb .....	plus £40
14" NI screen upgrade .....	plus £40
15" NI screen upgrade .....	plus £110
17" NI screen upgrade .....	plus £320
Microsoft Office 95 .....	plus £149
Microsoft Office Pro 95 .....	plus £199

### Server Options

Please call for details of server specifications and options.

### Personal Finance

All systems are available on Personal Finance from as little as £49\* per month.

Tel: 01 282 777 555. Fax 01 282 77 08 44. All prices exclude delivery (£19) and VAT (17.5%). Software applications are provided on CD or pre-loaded with on-line documentation. Pack shots shown for purposes of illustration only. Finance available subject to status. APR \*19.8% Written quotations are available on request. E&OE.  
MJNWRK2A



MJN can design a network system  
for your particular requirements

**MJN** 486 and Pentium® Workstations are the ideal systems for business, corporate and educational users and are suited to both network and stand alone applications. These systems can be tailored to your requirements with appropriate software, operating system and network configurations.

MJN File servers are available with a range of configurations which can be tailored to your individual requirements.

### MJN 486DX4-100 W

- 486DX4-100 processor
- 4Mb RAM (Max 64Mb)
- 540Mb enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA colour screen
- 102 keyboard and mouse
- Desktop case with 7 drive bays
- Select required operating system and options

£599

	4Mb	8Mb
540Mb	£599	£699
850Mb	£629	£729
1.08Gb	£679	£779

486DX2-66 models.....minus £30

### MJN P75 W

- Intel 75MHz Pentium® processor
- 8Mb RAM (Max 128Mb)
- 850Mb enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA colour screen
- 102 keyboard and mouse
- Select required operating system and options

£799

	8Mb	16Mb
540Mb	£769	£969
850Mb	£799	£999
1.08Gb	£849	£1049

90MHz Pentium® models .....plus £80  
100MHz Pentium® models ...plus £160

### MJN P133 W

- Intel 133MHz Pentium® processor
- Intel Triton chipset with 256K cache
- 8Mb RAM (Max 128Mb)
- 1.08Mb enhanced IDE hard disk with 256K cache
- 3.5" 1.44Mb floppy drive
- Parallel and 2 serial ports
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA colour screen
- 102 keyboard and mouse
- Select required operating system and options

£1299

	8Mb	16Mb
850Mb	£1169	£1449
1.08Mb	£1299	£1499
1.6Gb	£1399	£1599

150MHz Pentium® models ..plus £270

TABLE OF FEATURES STORAGE &amp; BACKUP

Manufacturer	Fujitsu	Graphtec	Iomega	Plasmon	Sony	SyQuest	SyQuest
Model	M2512a	Ranger	ZIP drive	PD2000e	Minidisc data	EZ135 Drive	SQ 270
Technology	Magneto optical	Magneto optical	Flexible platter	Phase change	Magneto optical	Rigid platter	Rigid platter
IDE option	yes	no	no	no	no	yes	yes
Parallel option	yes	yes	yes	no	no	yes	yes
Unformatted capacity	230Mb	230Mb	100Mb	650Mb	140Mb	135Mb	270Mb
Formatted capacity	217Mb	217Mb	94Mb	633Mb	135Mb	126Mb	254Mb
Cost of media	£17	£32	£15	£39	£15	£13	£42
Dimensions whd	89 x 140 x 206mm	77 x 152 x 253mm	136 x 184 x 38mm	210 x 62 x 270mm	86 x 30 x 131mm	122 x 53 x 215mm	181 x 54 x 205
Weight	1.75kg	2.7kg	0.45kg	2.52kg	0.34kg	1.05kg	1.73kg
RRP external	£499	£555	£149	£659	£499	£179	£450
RRP internal	£390	n/a	n/a	£575	n/a	£149 (IDE)	£300
Telephone	0181 5734444	01270 611234	0800 898563	01763 262963	0181 860 0500	0800 526559	0800 526559

## Editor's Choice

Personal  
Computer  
World  
**EDITOR'S  
CHOICE**

**T**here's a storage device for every situation. Whether you're after performance, capacity, portability, compatibility or maximum megabytes per pound, there's a medium for you.

Unfortunately, none do it all. This round-up confirmed what we knew: before being able to choose the right device, you must understand your desired application and expectations. What storage characteristics are most important to you? As almost every device we tested uses different media, it's hard to compare them and come up with any winners overall. Instead, here are our recommendations within each media category.

One of today's most heated battles is for the low-cost, 100Mb-or-so capacity yet relatively high-performance, storage market. The two contenders are Iomega with its ZIP

drive, and the SyQuest EZ135. Both use media costing around £15 each, offering 96Mb and 126Mb respectively after formatting.

The drives themselves are similarly priced too: the external SCSI ZIP and internal IDE SyQuest cost £149, while the external SCSI SyQuest comes in at £179. Performance is good on both, although the EZ135 is faster.

Iomega suggests that its ZIP drive is so light, you can carry the entire unit around, saving you the cost of buying two. But the required mains power supply is fairly heavy, consequently invalidating any portability advantage the ZIP has over the EZ135.

Both systems are ideal for cheap and fast backup and storage, and come highly recommended. However, the EZ135 has the edge thanks to the better performance and

slightly larger capacity at the same price.

• *SyQuest EZ135: Choice for general low-cost use*

If you want double the capacity of the EZ135 and ZIP drives, three fit the bill: the two 230Mb magneto-optical drives from Fujitsu and Graphtec, and the 270Mb SyQuest SQ270. All three drives are similarly priced between £450 and £550, but the media cost is very different. The MO cartridges are available for less than £20, while the SyQuest 270's come in at a somewhat hefty £42 each.

MO is very slow and only recommended for backup, particularly so since the media is relatively cheap per megabyte and quite resilient to ambient fields. The SyQuest SQ 270 was big and quick enough to run applications or boot operating systems from. If this high performance and extra capacity is desired, the SQ 270 is the drive to go for.

Plasmon PD2000E

SyQuest EZ135 Drive



Conner TapeStor 4000

TABLE OF FEATURES STORAGE &amp; BACKUP

Manufacturer	Conner	Conner	Hewlett-Packard	Tandberg Data
Model	CTD 8000e	TapeStor 4000	SureStore Tape 2000e	Panther Mini 1000
Technology	DDS-2 DAT	QIC-WIDE Minicartridge	DDS DAT	QIC-WIDE Minicartridge
Native backup rate	27Mb/min	27Mb/min	11Mb/min	18Mb/min
Native capacity	4Gb	2Gb	2Gb	1Gb
Capacity with compression	8Gb	4Gb	n/a	2Gb
Compression	hardware	software	none	software
Software included	none	Arcada Backup Exec	Colorado Backup	Sytos Plus
Dimensions whd	154 x 67 x 235mm	154 x 51 x 235mm	116 x 95 x 220mm	171 x 54 x 235mm
Weight	1.87kg	1.38kg	2.2kg	3.2kg
RRP external	£1395	£650	£799	£497
RRP internal	£1245	£479	£699	£397
Telephone	01628 777277	01628 777277	01344 369222	01582 769071

• *SyQuest SQ 270: Choice for high performance*

Also at the £500 mark is the long-awaited Sony MiniDisc DATA drive. Its tiny discs cost £15 each and offer 135Mb after formatting. Performance of this magneto-optical system is very slow, but flexibility, portability and sheer gadgetness are its strong points. The media is relatively cheap too, although the drive is quite expensive.

The Sony MD DATA can play audio MiniDiscs (though not record them) and even comes with a pair of headphones. It has an optional PCMCIA adaptor and is the only truly portable device here, capable of living off its lithium ion rechargeable battery or a set of three AAs. Even with the lithium ion battery, the whole unit weighs a mere 340g, making it the perfect choice for the notebook user on the move who wants to listen to music, and back up information.

• *Sony MD DATA: Choice for portability*

If you can stretch to £659, the Plasmon PD2000e becomes a possibility. Plasmon is the only company to offer an external ver-

sion of Panasonic's PD System (reviewed in October 1995). It is probably one of the most flexible drives we have ever come across, being both 650Mb rewritable cartridge and quad speed CD-ROM system in a single unit.

At £39 per cartridge, the PD system has the lowest cost per megabyte of just over six pence. Performance isn't up to the SyQuests or ZIPs, but beats the conventional magneto-opticals. As a quad speed CD-ROM drive, it delivers 600Kb/sec and conveniently kills two storage birds with one device. Thanks to its large, cheap media with reasonable performance and the double life of the drive, Panasonic has a winner with its PD system, whether internal or external, from Plasmon.

• *Plasmon PD2000E: Choice for flexibility*

Those who want to back up over 1Gb of information can only look to tape. The two main format contenders use different recording technologies. The QIC tapes are a linear system, only recently offering high capacities. DAT is a helical system, capable of storing up to 8Gb with compression.

QIC-WIDE tapes capable of storing 2Gb uncompressed cost about £15 each; double that of an equivalent DAT. However, QIC drives tend to be cheaper. The two QIC drives we looked at, from Tandberg Data and Conner, both represent bargains. We'd choose the Conner TapeStor 4000 as it's only £100 more and can take the 2Gb QIC-WIDE tapes, whereas the Tandberg (at the time of writing) could only use 1Gb tapes. Tandberg intends soon to put out a 2Gb version at around the same price.

• *Conner TapeStor 4000: Choice for cheap take backup*

If 2Gb isn't enough, DAT is the only route left. All the established manufacturers have comparable drives and it's difficult to choose between them. Both the Conner and H-P DAT drives performed well, but the only conclusion is that DAT is the ultimate cheap media format: typically one quarter of a pence per megabyte.

• *Any 8Gb DDS-2 DAT drive: Choice for ultimate capacity*

Gordon Laing



Sony MD Data



SyQuest SQ 270



Bringing back

## All it takes is the all-in-one, user-replaceable Canon Cartridge.

It's no wonder that office equipment users around the world have turned to the Canon Cartridge, choosing cartridge-equipped laser beam printers, plain paper faxes, personal copiers and image filing systems. Because the Canon Cartridge contains not only fresh toner, but also a new drum, replacing the old cartridge with a new one restores the image you put on paper to the fresh, crisp quality you want. The all-in-one cartridge is simple to replace. It's totally self-contained, so your hands will stay clean as well. Plus, Canon has created a system that accepts used Canon Cartridges returned from around the world. Now, when you replace your Canon Cartridge, you not only get a fresh, clean image, if you will lend a hand, you will also get a cleaner world.



# that great, fresh image has simply never been simpler.

For your home or office, choose any of the wide range of products that use Canon cartridges.



Laser Beam Printer  
LBP-460



Personal Copier  
FC230

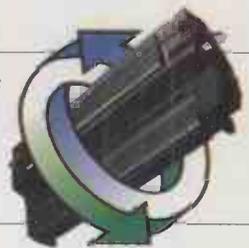


Electronic Filing System  
Canofile 510



Fax-L600

In the UK, France and Germany, please take used cartridges to the nearest post office. Canon pays the postage, so there's no additional cost. Easy mailing instructions can be found in the cartridge box.



# Canon

# Going against the flow

Panasonic has been using OS/2 for years. It is confident of the future for OS/2 and is currently installing Warp. John Miall, IT research and development manager, tells George Cole how and why this high-tech company is bucking the trend towards Windows NT.

In the PC world it's easy to believe that you can have any operating system you like as long as it's DOS and Windows. But not everyone has opted for Bill Gates' special brew. Panasonic UK, part of the giant Japanese electronics group Matsushita, has been using IBM's OS/2 operating system for more than three years, and is busily installing the latest version, OS/2 Warp, in some 500 workstations.

Panasonic is well known for its business and consumer electronics items such as TVs, VCRs, microwave ovens, telephones, faxes and answering machines. Less well known is the fact that the company has been making PCs and peripherals for years. Earlier this year Panasonic launched the CF-41, a 486/Pentium notebook PC with full multimedia features including sound card,

speakers, CD-ROM drive and optional MPEG moving video.

So why has this high-tech company decided to swim against the tide of Windows systems flooding on to desktops? There are already around 80 million PCs with Windows 3.x. Research group Dataquest forecasts that around 30 million copies of Windows 95 will be sold this year. According to IBM, 10 million copies



PCW Photography by John Miall

Panasonic FX600 PCs powered by an 8086 processor and running DOS programs such as WordStar. But it was becoming clear that the company would need to be networked in order to improve efficiency. Around 1992, Panasonic introduced its Panalink token ring network.

Then came the question of which operating system to use. Panasonic had worked closely with IBM for some time, and had even produced some products for "Big Blue" to badge as its own (such as monitors). Panasonic was also running an IBM ES-9121 mainframe: "We probably had access to more information than most people about what IBM was doing," says Miall, "and so we saw Beta copies of OS/2 and found that it had the ability to give every environment we were looking for and every connectivity method we wanted to use. It was clear we needed an advanced operating system, and as we knew one was coming along, why not go straight in?"

### Growing pains

According to Miall, the decision was very easy because there was no other competition. Panasonic looked at Unix, but it lacked a graphical front-end and many of the applications that Panasonic needed, like spreadsheets and word processors. The DOS/Windows route was deemed to be fine for standalone PCs, but not for the networking facilities which Panasonic was planning.

OS/2 version 1.3 was installed in 1992 but it wasn't all plain sailing, says Miall: "I remember the outcry that was caused when it was discovered that we would need machines with 4Mb of RAM before you could load the operating system. And 1.3 was really for use on file servers: it had excellent multitasking facilities, but not the virtual DOS session [which lets users run DOS programs] which was as capable as the one you now have with Warp. You had a single DOS session which was very limiting on memory. You could run the very bare, basic, DOS

of OS/2 have been shipped — three million copies of Warp have been shipped since its launch in November 1994. It's not an insignificant number, but it does mean that OS/2 is overshadowed by Windows.

### Right product, right time

According to John Miall, Panasonic's IT Research and Development manager, OS/2 was the right product at the right

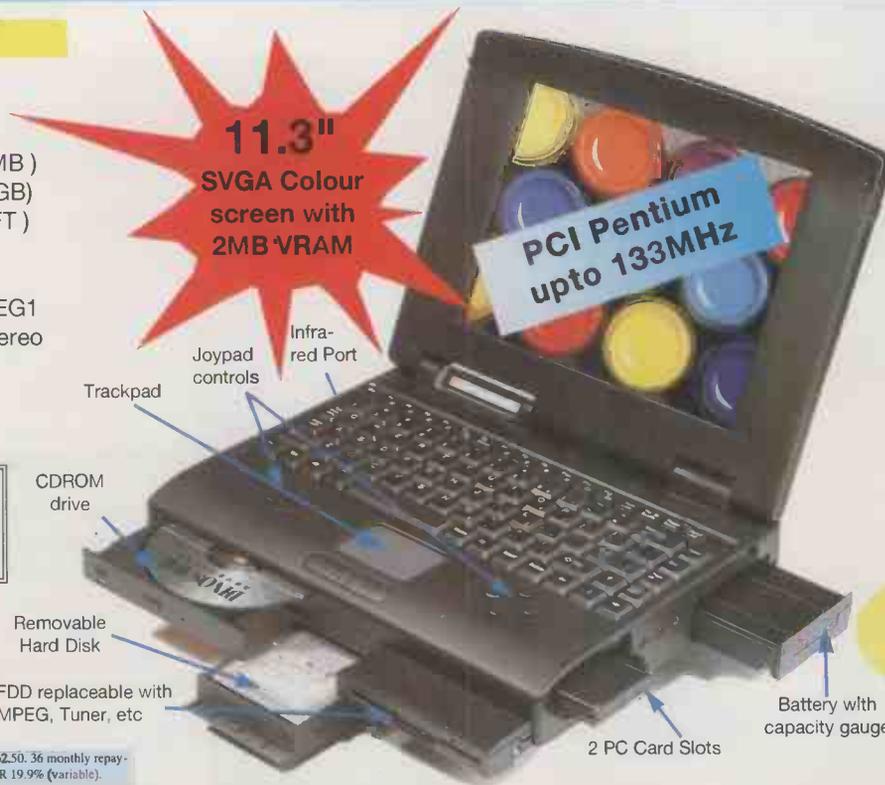
time: "PCs didn't get a firm grip in the company until 1989/90 but there was no network in place. This is because we work on the principle that you must have a sound business case before any project is put into place. So we started with a clean slate position as to which way the company should go and the operating environment we should use," he says.

At this stage, employees were using

# ACi presents CD ROM Power notebook

## ACi AMETHYST

- PCI Bus system
- Intel Pentium P75/90/100/120/133
- 8MB RAM (exp to 32MB)
- 540MB HDD (exp to 1.3GB)
- 11.3" DSTN (or 10.4" TFT) colour LCD display
- 256K write-back Cache
- Optional Video + MPEG1
- FM synthesiser 16-bit stereo system
- Infra-red comms port
- Optional tuner



Additional Battery pack giving up to 5 hours of use!

Compact, easy to carry docking station

8Mb RAM & 540MB HDD as Standard

From **£1995** + VAT

From **£69** Monthly

Cash price inc VAT + carriage £2361.75. Deposit £462.50. 36 monthly repayments of £69.00. Total amount payable £2946.50. APR 19.9% (variable).

PC Cards and other optional extras available for all ACi notebooks

## AWARD WINNING BUDGET PENTIUM

## AWARD WINNING 486 NOTEBOOK

### ACi 7600 Pentium

### ACi PerFormer



- Intel Pentium P75/90
- DSTN or TFT
- RAM: 8 to 40MB

- CPU: 486Dx2-66 to 486Dx4-100
- Mono, DSTN, TFT
- RAM: 4, to 20MB

- HDD: 340 MB to 1.3 GB
- 32 Bit Local Bus
- 2 PC Card II (1 X III) slots
- Docking Station option
- Built-in Sound Card

8MB RAM & 340MB HDD as Standard

4MB RAM & 340MB HDD as Standard



From **£1649** + VAT

From **£59** Monthly

LEASE FROM **£8.99 PER WEEK**

From **£29** Monthly

From **£999** + VAT

APR 19.9%

Cash price inc VAT + carriage £1955.20. Deposit £331.20. 36 monthly repayments of £59.00. Total amount payable £2455.20. APR 19.9% (variable).

Written quotation available upon request. Offer subject to status. Repayment by Direct Debit.

Cash price inc VAT + carriage £1191.45. Deposit £393.22. 36 monthly repayments of £29.00. Total amount payable £1437.22. APR 19.9% (variable).

APR 19.9%

**CALL NOW FOR COMPLETE QUOTATION**



pcuser

Southern Office:

ACi House, 82 Chaplin Road,  
London NW2 5PR  
Tel: 0181 830 1958  
Fax: 0181 830 1959

ALLIED COMPUTER INDUSTRIES



VISA and ACCESS WELCOME



Northern Office

HSL House, Atlantic Street,  
Altrincham, Cheshire WA14 5DH  
Tel: 0161 929 9444  
Fax: 0161 929 1661

All trademarks acknowledged. All prices exclude VAT (except where indicated) and carriage (£15) and are correct at the time of publishing. E&OE. Specification subject to change without notice. Goods are offered for sale subject to availability and ACi Ltd terms and conditions, copies of which are available on request.

London Office

Manchester Office

0181 830 1958

PHONE NOW

0161 929 9444



Microsoft Office and Lotus SmartSuite, although Corel Draw and AutoCad are used, too, in some departments. Panasonic additionally runs some custom-written applications. The network has 11 IBM PS/2 servers. Panasonic uses a clever method to install OS/2 on its workstations. It runs a central file server, allowing you to pull the operating system and network connection from it and place them onto an empty machine. Miall says OS/2 has been very easy to install.

Everyone using Warp has the same machine configuration and Panasonic uses a restricted workplace shell which stops users from

programs and only after it had switched the processor into DOS mode — so your OS/2 applications tended to come to a stop while you ran DOS. On a scale of technical achievement, I'd give OS/2 version 1.3 a score of minus one."

But Miall says Panasonic started off with version 1.3 because it knew what IBM was planning and had seen previews of later versions. Around 1991, OS/2 version 2.0 arrived: "This was a pleasant surprise. It was running DOS applications well and was a whole new ball game. It allowed you to use programs and applications which you couldn't before."

### Network stability

Panasonic used successive versions of OS/2 and started to install OS/2 Warp in late 1994. Miall says one of the best things about Warp is the network stability it offers: "If an employee says he wants to use some unknown application on a networked workstation, you normally think, 'crikey, this could wreck the whole network.' With OS/2 Warp you're pretty confident that you can put the application in its own standalone virtual machine (which isolates it from other programs) and the thing flies. And if it does fall over, so what? The network server is still standing. A big point in favour of OS/2 Warp is that you get a crash-protected system, and from a corporate point of view this is very important."

But despite Miall's enthusiasm for

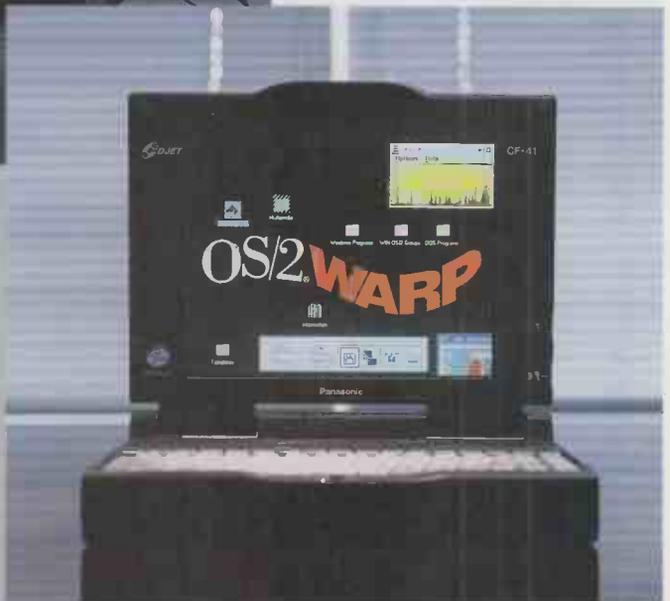
OS/2 Warp, Panasonic has been cautious about its introduction:

"Many of our workstations are still using version 2.11 and we're

only just beginning to put Warp in place. We thoroughly test everything before we install it onto our live network. We've probably got a phobia about anything sneaking onto the network and causing damage." So Warp is being introduced on a department-by-department basis, with the R&D section using it first, followed by the customer information systems department.

The standard configuration of Panasonic's current workstations is a Panasonic CFV-21P notebook with a 486 or Pentium processor, 12Mb of RAM (although high-power users, such as those in the R&D department, may have 20Mb on their machines) and 350Mb hard disk. "I would not recommend anyone trying to run Warp on a four-meg machine, despite what IBM claims," says Miall.

The major applications used are



messing up their desktop. Users are restricted to their own applications and Panasonic's internal email system (Panapios). But users cannot access OS/2 prompts to alter things: "OS/2 is pretty well protected but you can delete a couple of key files and suddenly the whole thing's screwed up — it's just a measure to save us the pain of putting them right again," says Miall. Panasonic's R&D section is currently testing Warp's internet connectivity and multimedia features.

### Pros and cons

Miall sees many good things in OS/2: "It's quite capable of running any DOS or Windows application which has been written correctly and it doesn't use shortcuts to direct access parts of the operating system. Even some of these can be handled but you need to know how to fine tune



Windows 95 with OS/2 but the products are like chalk and cheese. I would be very surprised if many corporates take Windows 95"

OS/2. I can't stress enough the importance of having somebody who knows and understands Warp on site. If you haven't got that, you're going to suffer headaches from users — you've got to have someone there who knows what they're doing. But having said that, OS/2 gives you worry-free computing."

"Bad points," he adds, "are the lack of native OS/2 applications — you're not going to get as many as with Windows (for obvious reasons), although the majority of commercial applications are available on OS/2. But many applications appear on DOS and Windows before they arrive on OS/2. And if you're hoping to use network services with OS/2, you're going to need a machine with at least 8Mb of memory."

Panasonic is looking to the future, and seriously considering using the PowerPC version of OS/2, when it finally comes out: "I think the Intel platform will reach its peak at the Pentium 7-series and so other chip technology will have to be used. PowerPC could be used for our

high-end workstations," says Miall.

And what about Windows 95? Does Miall wish he had waited for that? "Windows 95 is heading in the right direction, and it's very different to how it was first announced. The reason for this is that Warp was there: it forced Microsoft to stretch further and further with their product, because OS/2 Warp was coming out with these features built-in. When I went to a Windows 95 presentation I sat there thinking: 'Is this new? I've done all of these things for over two years'."

Miall continues: "Windows 95 is a giant step forward for running DOS and Windows, but it wouldn't be my personal choice, having used OS/2, mainly because OS/2 has been out there for a few years and had the bugs ironed out. Everyone compares Windows 95 with OS/2 but the products are like chalk and cheese. I would be very surprised if many corporates take Windows 95."

But Miall adds that Microsoft may have a stronger card to play: "When the Windows NT workstation comes out with a

graphic front-end, it will be the first serious contender to OS/2 Warp in the corporate market. NT is coming of age now and is a well-respected product that is starting to become stable — Windows NT is a future which I hope won't go away."

So would he consider moving over to NT? "If we found loads of Win-32 apps still appearing for that product, and it was stable, we might consider adding NT to our network. But whether we'd be in our right minds to change over to it, when we have a perfectly good product that's been going well for the last two years, is unlikely. At the end of the day, if Windows NT was superior in its functionality we would consider switching but it would be silly if IBM didn't keep up with it. I'm confident about the future of OS/2, even if at times IBM haven't always sounded as if they were. OS/2 has certainly helped keep us ahead."

**PCW Contacts**

IBM Software Enquiries  
01329 242728





# PC SCIENCE

**24 Hour Delivery!**  
Subject to availability

## PC SCIENCE PACK 1

### PERSONAL MULTI-MEDIA

- 8 Mb RAM ■ 3.5" Floppy ■ 540 Mb Hard Disk
- 64-Bit 1Mb PCI Graphics Accelerator Card
- 14" Multisync NI SVGA Colour Monitor
- 16 Bit Sound Blaster Pro (Comp.) Soundcard
- Panasonic CD-ROM Drive (Atapi E-IDE)
- 15 Watts Hi-Fi Active Speakers ■ Mouse
- Mini-Tower Case (Desktop/Full Tower option)
- 102 Keys enhanced ergonomic Keyboard
- MS-DOS 6.22, Windows 3.11 (Win 95 option)
- MS-Encarta 95, etc... ■ 5 year warranty\*

486 DX2-66 .....	£799
486 DX4-100 .....	£869
PENTIUM 75 .....	£999
PENTIUM 90 .....	£1099
PENTIUM 100 .....	£1199

## PC SCIENCE PACK 2

### MULTI-MEDIA TELEVIDEO

- Pentium 75,90,100,120,133Mhz
- Intel Triton Motherboard, 256k cache
- 16Mb Superfast RAM ■ 3.5" Floppy
- 17" SVGA NI Multisync Colour Monitor
- Video Master MPEG/CD-i/Video CD Player
- PC Television Home Video Card
- 1.275 Gigabyte Mode 4 E-IDE Hard Disk
- Six Speed CD ROM ■ 240 Watt Speakers
- Wave 32 Soundcard with Cubase & Midisoft
- PC-Science 14400 Internet Fax/Modem
- Mini-Tower, Keyboard, Mouse, Mic, Joystick
- MS-DOS/WIN 3.11 preloaded, WIN 95 option
- MS-Encarta 95, Golf, Works, Money, Dangerous Creatures, Scenes (CDs) etc.
- MEGAPACK 3, 12 CD ROMS: incl. TFX, Megarace, Lemming's Chronicles, Dragon's Lair. (worth £410)\*\*
- 4 FREE CD Movies ■ 5 year warranty\*

PENTIUM 75 .....	£ 2199
PENTIUM 90 .....	£ 2299
PENTIUM 100 .....	£ 2399
PENTIUM 120 .....	£ 2499
PENTIUM 133 .....	£ 2599

## PC SCIENCE PACK 4

### MULTIMEDIA - PRO

- Pentium 75,90,100,120,133
- Intel Triton Motherboard
- 16Mb Superfast RAM, 256k cache
- 15" SVGA 0.28dp NI MPR2 Multisync Colour Monitor
- 64-Bit 2Mb PCI Graphics Card
- 1.275 Gigabyte Mode 4 E-IDE HDD
- Six Speed CD ROM
- 3.5" Floppy Drive
- Expert Wave 32 Soundcard with Cubase & Midisoft
- 240 Watt Super Hi-Fi Speakers
- PC-Science 14400 Internet Fax/Modem
- Mini-Tower case (other options)
- Keyboard, Mouse
- Microphone, Joystick
- MS-DOS & WIN FWG 3.11 (WINDOWS 95 option)
- MS-Encarta 95, Golf, Works, Money, Dangerous Creatures, Scenes (CDs)
- MEGAPACK 3, 12 CD ROMS: incl. TFX Tactical Fighter, Megarace, Lemming's Chronicles, Dragon's Lair, Vortex, Cyclones. (worth £410)\*\*
- Bodyworks
- 5 year warranty\*

PENTIUM 75 ..	£ 1699	PENTIUM 120 ..	£ 1999
PENTIUM 90 ...	£ 1799	PENTIUM 133 ..	£ 2099
PENTIUM 100 ..	£ 1899	*CALL FOR UP TO DATE PRICES*	

# 'your Multimedia partner'

from **£799**  
(exc. VAT)



'interesting system would grace any home...gave an impression of quality and care...' 'A good machine that you should consider seriously.'  
PC review PC Home Oct 1995

## PC SCIENCE MULTIMEDIA WORKSTATION PACK 3

- 8Mb Superfast RAM
- Intel Triton Mother Board, 256k cache
- Supports EDO RAM, Pipeline cache
- 14" SVGA Multisync Colour Monitor
- 64-Bit 1Mb PCI Turbo-Pro Accelerator
- 1.275 Gigabyte Mode 4 E-IDE Hard Disk
- Quad Speed CD ROM, Six Speed +£49
- 16 Bit SoundBlaster PRO (Comp) Soundcard
- 240 Watt Hi-Fi Bass Booster Speakers
- PC-Science Internet Fax/Modem
- Mini-Tower case ■ 3.5" Floppy Drive
- 102 Keys enhanced ergonomic Keyboard
- Quickshot Joystick ■ Quality Mouse
- MS-DOS, WIN 3.11 preloaded (WIN 95 option)
- MS-Encarta 95 etc... ■ Bodyworks
- MEGAPACK 3, 12 CD ROMS: incl. TFX, Megarace, Lemming's Chronicles, Dragon's Lair. (worth £410)\*\*
- 5 year warranty\* ■ Fast Delivery

486 DX2-66 .....	£ 979	PENTIUM 75 .....	£1199
486 DX2-80 .....	£ 999	PENTIUM 90 .....	£1299
486 DX4-100 .....	£1049	PENTIUM 100 .....	£1399



**0% FINANCE Available!**  
on selected models  
subject to status

\* 5 year warranty - first year parts/labour, then RTB labour only. \*\* Retail value when sold separately

E & OE. Prices and specifications subject to change without prior notification - all prices exclude VAT at 17.5%

## INFORMATION HOTLINE CALL: 01423-323386 NOW

Northern Sales **0131-220 4410** London Sales **0171-433 1589**

HOW TO ORDER: By phone using Access, Visa, Switch, cheque and by fax to 01423 323370 or by mail to: Personal Computer Science Ltd, Head Office, Trafalgar House, Barr Lane Industrial Estate, Rocliffe, York YO5 9LS  
Open 6 days.....Monday to Friday 8.30am to 6pm, Saturday 10am to 4pm



# cloud nine

A year ago, a laser printer designed for shared network use was a rare commodity. Now you can't move for them. Nick Lawrence asks what qualities a network machine needs, and chooses nine of the best.

PCW Photography by Bruce Mackie

**L**ast month we tested 11 laser printers falling into two price ranges: under £321 and under £751 on the street. Here is the third and final category of our laser printer round-up: network machines.

Over the following pages we look at nine laser printers, ideal for shared workgroup use over a network. Rather than set a price, we opted for a specific configuration to which all models should conform.

All had to have a resolution of 600dpi or higher: the Lexmark Optra was the only one to boast 1200dpi. All had to be fitted with a thin Ethernet BNC network connection, have 8Mb memory, and Adobe PostScript Level 2.

When choosing a network printer, all of these features have to be taken into consideration. Some models may boast all or better as standard, while others may offer a bare machine out of the box, requiring significant upgrades to fit the desired bill.

We chose the above configuration to represent a useful network machine, and asked all manufacturers to match it so as to

provide a common ground for testing.

Unfortunately, **not** all the machines could be fitted with exactly 8Mb; some came with 2Mb as standard, with upgrades in multiples of 4Mb. Consequently, we received machines with anything from 6Mb to 12Mb; the HP LaserJet 4MV, for example, which comes with 12Mb as standard. Nevertheless, our tests did not especially favour machines with more than 6Mb (especially so, as we were using our network of a single workstation).

The reviews specify how much memory was fitted to the models supplied and tested: unless stated otherwise, it was 8Mb. The prices quoted in the table and reviews are for the configurations supplied and tested: notice that in all cases apart from the HP LaserJet, every printer had its memory upgraded from standard.

Along with our reviews, we've provided information on what setting up a network printer involves and what you should look out for. Descriptions of how laser printers work, both physically and electronically, can be found in last month's round-up.

## Contents Network Laser Printers

170	Brother HL1260
170	Dataproducs T16
170	Epson EPL9000 PS
174	Hewlett-Packard LaserJet 4MV
174	Kyocera FS-1600
174	Lexmark Optra Lxi
175	Mannesmann Tally T9008
175	QMS 1060e
175	Xerox 4510
167	Setting Up A Network Printer
169	How We Did The Tests
176	Editor's Choice
178	Performance Graphs
180	Table of Features

## Setting up a network printer

gone to the parallel port on your PC and redirects it onto the LAN to be collected by the print server.

One print server can look after several printers. In the past, a dedicated PC would have been used with multiple printers connected to it in a conventional manner, by a serial or parallel links. Now, most of the network cards available for printers can set themselves up as print servers so that they can log into the network like a conventional user (with a password if necessary) and behave like a print server. Thus, a dedicated PC is no longer necessary.

To achieve this, you must set up the network card in the printer. Most manufacturers provide some management software to search for their printers on the network, allowing you to set them up by telling them how to log in, what password to use, and for which queue they have to print jobs. This software should be supplied with the network card.

The print queue is set up by the

and raster images being fed to the printer, it can print at full engine speed even when doing complex graphics.

If, however, the information is being fed to the printer using a higher-level PDL (Page Description Language), some of the speed advantage will be lost because the printer has to convert the PDL into a raster image. PostScript, in particular, can be notoriously slow with graphic images. The basic rule is that if your printer is I/O bound (i.e. waiting all the time for data to be transmitted), a network link can substantially improve performance.

### How do you connect your printer to the LAN?

Connecting a printer to a LAN involves setting up three main structures: a print server, a print queue and a redirector. The way in which you set these up depends entirely on which network operating system you are using.

- The print server is that part of the system which receives the print job from a networked PC and directs it to the appropriate printer queue.
- The printer queue holds all the jobs for a particular printer until they can be serviced.
- The redirector runs on the workstation, takes output that would have

### Network printers

Networking your printer can provide performance benefits over a simple serial or parallel printer, in addition to those gained by sharing a printer between many PCs. The actual performance gain will depend on the type of work you are doing and the content of your print jobs. This is not only the difference between text and graphics, but also whether information is being sent in PDL, PostScript or as a raster image.

If most of your printouts are text files and use fonts that are held in the printer (either in the form of soft fonts or cartridges) then, surprisingly, the performance gains over a simple parallel connection will be small. The information sent to the printer is basically a string of ASCII characters and some font instructions to the printer. A full page of A4 text is about 3,000 characters, and this can easily be transmitted in the bandwidth available from a parallel link.

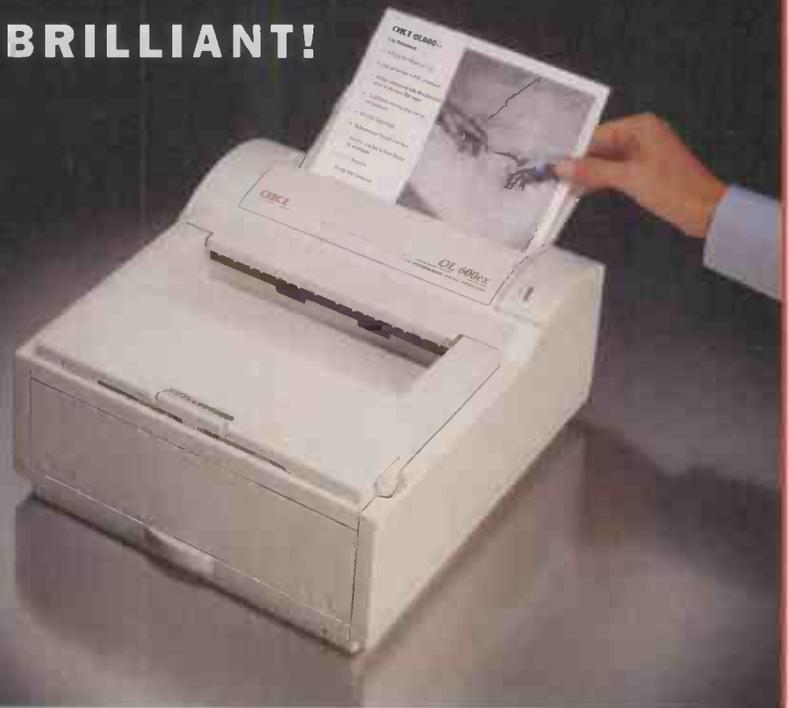
You'll reap the benefits of a network printer connection when you print graphics or use documents with lots of fonts to be downloaded to the printer. A complete A4 page of graphics at 300dpi takes up just under 1Mb. At 600dpi that same document will take up about 3.75Mb. With a 10Mb/sec connection,



**THE NEW OKI OL600ex LASER  
QUALITY PRINTER.**

**FAST, RELIABLE AND ONLY £340.**

**BRILLIANT!**



The new **Oki OL600ex** six page per minute printer leaves other page printers in the dark.

For example, when working with Microsoft Windows™ and the Oki MicroRes 600 feature, it produces enhanced pin sharp print to 600 x 600 d.p.i.

It takes up barely more room than a sheet of A4 paper, making it ideal for desktop use.

And because of its LED technology

- THE OKI OL600ex  
TECHNICAL SPECIFICATION:**
- PRINT SPEED: 6PPM WITH RISC PROCESSOR
  - PRINT RESOLUTION: 300 X 300 DPI, 600 X 600 DPI WITH MICRORES 600 FEATURE IN GDI MODE
  - MEMORY: 1.0 MBYTE STD. 18.0 MBYTE MAX
  - PAPER HANDLING: 100 PAGES STANDARD, OPTIONAL 250 PAGE 2ND PAPER TRAY, OPTIONAL 80 SHEET MULTIFEEDER FOR ENVELOPES
  - EMULATION: PCL 4.5
  - INTERFACE: BI-DIRECTIONAL HI-SPEED PARALLEL INTERFACE

it has fewer moving parts so less breakdowns and less service costs.

In fact, it has proved to be so reliable we're including a five year warranty on the LED print head, as well as a one year on-site warranty on the printer.

With an exceptionally low price of around £340 (excluding VAT) the **Oki OL600ex** easily outshines other comparable page printers.

See the light with Oki!

**OKI**

People to People Technology

**LET'S TALK PRINTERS:  
0345 414 400**

Monday - Friday 8.30 - 5.30. Answering service outside office hours.

Name \_\_\_\_\_ Tel No \_\_\_\_\_ No of PCs in your co \_\_\_\_\_ Return coupon to: Oki Systems  
Business/Home address \_\_\_\_\_ Postcode \_\_\_\_\_ (UK) Ltd. FREEPOST (RG2496),  
Newbury, Berkshire RG14 5ZX

PCW/600/00/12/5

management software for your network. Under Novell Netware this is an unnecessarily complex process, because queues and printers needn't be assigned on a one-to-one basis. This means you can have several printer queues all pointing to the same physical printer, or you can have one printer queue that points to several printers: whichever printer is free at the time, will be used. As the most common situation is a one-to-one assignment, most other network OS's queues are assigned on this basis.

Most manufacturers produce network cards for their printers, but as they are proprietary you should check that your printer manufacturer offers the options you need. The closest thing to a standard interface is that provided on Hewlett-Packard printers. Because HP printers are the *de facto* standard of the low- and middle-end printing world, there are many third party alternatives to HP's own Jet-Direct cards (e.g. those supplied by Pacific Data products).

Connecting your printer to the LAN will be a matter of ordering the correct add-on for your printer. The things you need to check are cabling type, protocol and manageability.

The cabling type defines the network connection to the printer, and needs to be the same as the other devices on your LAN. The two main cable types are UTP

(Unshielded Twisted Pair) and Thin Ethernet. The former uses RJ45 connections which look very similar to standard telephone connections and are used for all sorts of networks (including Novell IPX/SPX, Unix TCP/IP and IBM Token Ring). Thin Ethernet uses a BNC-type connection and looks like coaxial cable. This is used mostly for standard Ethernet networks, using either Novell's IPX/SPX or Unix's TCP/IP.

Other cable types include Shielded Twisted Pair (STP) which is used by IBM for token ring networks, and Thick Ethernet that uses a 15-pin D-type connector that looks similar to a joystick port.

Although this may sound complicated, it is merely a matter of finding out what cabling your network is currently using: it's likely to be either UTP or Thin Ethernet. And whichever network protocol you are using, this is likely to be IPX/SPX, TCP/IP, Token Ring or AppleTalk. You need to specify your network operating system when you order the network card: Novell, Unix, Windows NT, LAN Manager or Apple's own (but it is possible to network Macs using other than Apple's own networking software).

If your printer doesn't have an add-in card (or perhaps one that isn't suitable for your network environment), all is not lost. There are a number of third-party devices available that connect to the network as a

print server: black boxes that have a network connection and one or more serial and parallel connections. The printer is plugged in to the parallel port in a conventional manner and the box logs into the network as a print server.

### The Future: 100Mb/sec Ethernet, Switching and ATM

The future of networking is moving towards new topologies that will allow you more bandwidth on your network. As these move into place, it is important that network printers don't get left behind. If you move to a 100Mb/sec Ethernet network, you don't want to have to install 100/10 Ethernet bridges just so that you can connect to your printer. There are currently very few manufacturers that offer 100Mb/sec options.

Although a 100Mb/sec card for a printer may not seem an important option as technology moves forward, you do want your printer to be able to connect to the LAN in the same way as any other device. The fact that the printer is not capable of handling 100Mb/sec of data is irrelevant: many of the workstations with 100Mb/sec cards will not be able to handle 100Mb/sec of data, either. You just don't want to have to use a different networking infrastructure for your printer than for your workstations.

Simon Head

## How we did the tests

We asked for all the printers to be fitted with PostScript Level 2 and 8Mb memory. Many could not be fitted with exactly 8Mb and instead were delivered with anything from 6Mb to 12Mb. Under normal circumstances this would affect performance and make comparison difficult. However, our hardware configuration consisted of a single workstation and our tests included small enough documents not to make any discernible difference above 6Mb. The printers also had to have at least 600dpi true print resolution (without, or before, enhancement techniques). Finally (and crucially), they had to have Ethernet connectivity through 10Base2 (Thin Ethernet).

Previously, we have connected our testing PC to the printers through a parallel port, but these printers are first and foremost network machines. Consequently all were hooked up to a network running Novell NetWare 3.12 over Thin Ethernet 10Base2 cable. Since the only nodes were the testing PC (a 486 DX33), the NetWare server and the printer, possible network disruptions were kept to a minimum.

This additionally gave us an opportunity to test the quality of the installation software that came with the printers. Remote configurability is all the rage, and hopefully the implementations of SNMP (Simple Network Management Protocol) here will help to make it the tool which allows network administrators to configure many aspects of their users' computers, without leaving their desks. With any luck, tortuous front panel menus and the dreaded pconsole will soon fall from favour. We used Windows 3.1 as the workstation OS for these utilities (although many have utilities for other operating systems as well).

### Speed test analysis

Overall scores for text and graphics printing speed are combined using standard weightings, giving an overall performance result. Windows 3.1 is used as a unifying platform which supports printer drivers: a VNU European Labs benchtest tool is used to provide accurate timing.

The speed tests were carried out using PostScript at 600dpi — this was the maximum resolution of all the printers except

the Lexmark Optra which can achieve 1200dpi. Text and graphics performance are measured separately, as most printers should be able to rapidly print out many pages of text, whereas graphics pages generally require more processing by the printer's internal controllers.

The Text Speed score is derived from a geometric mean of the results of four different tests, two of which involve runs of ten identical pages. The other two text tests are based on a variety of fonts — thus exercising the controller's font-caching capabilities.

Graphics Speed performance figures are based on timings for printing three different graphics metafiles, one of which is actually a bitmapped font. The other two are simulated half-tone graphics generated by a graphics package.



### Brother HL1260



The HL1260 is one of the smaller printers here, compacted into a cube which can take 500 sheets as standard. It is Brother's only workgroup laser.

Setting up the Brother network utility on

a PC is something of a frustrating experience, as the Windows version needs to be installed from a batch file which won't run from within Windows.

The 1260 has some features that set it apart from the other printers: a PCMCIA card slot for a flash SRAM card or a hard disk (though the approved vendor list is small), an unobtrusive full duplexing unit which attaches to the back of the printer, and a simple macro language built into the PCL driver which allows the user to send a file to the printer with each print job. This combination of features could be useful in the financial services sector, when a standard set of terms and conditions could be stored on a PCMCIA card, called from the printer driver and printed onto the back of a sheet of paper.

Despite all these flashy features and

10Mb RAM as tested, the speed tests showed rather poor performance for the Brother, as it came in the middle of the pack in some tests and was the slowest on our difficult bitmap test.

#### PCW Details

##### Brother HL1260

**Price** RRP £2,036 with 10Mb; Street £1,630

**Contact** Brother 0161 330 6531

**Good Points** Lots of features for corporate bodies; holds 500 sheets as standard; cheap.

**Bad Points** Not the fastest.

**Conclusion** A printer for those with specific requirements.

### Dataproducts T16



Being something of a huge beast, the T16 can hold loads of paper in the three trays in the model supplied, and is designed for higher-end networks than

most of the other printers.

For a start there is no SNMP utility; which sets this Dataproducts printer apart. At first, this would seem to be an oversight, but Dataproducts claims that this is countered by the front panel setup which allows the printer to behave like 12 virtual printers, each with a different combination of network environment and emulation protocol, and each with a different printer name to feed the file server. This would apply where a Unix and Mac network would use TCP/IP, while a group of PCs would be using NetWare.

Unfortunately Dataproducts does not make it easy to plug the necessary names into the NOS. To configure it to work with NetWare, you have to fire up pconsole and feed it an arcane printer name which you

have previously obtained by printing out a status sheet. The print server name is "T20" followed by the last six digits of the Ethernet address.

Once everything is up and running, you still need to fiddle with the front panel to change defaults such as the paper size. It needs an SNMP-type utility.

#### PCW Details

##### Dataproducts T16

**Price** RRP £3,495 with 12Mb standard; Street £2,800

**Contact** Dataproducts 01734 884777

**Good Points** Can be used with several networks simultaneously.

**Bad Points** No remote configuration utility.

**Conclusion** For big networks only.

### Epson EPL9000 PS



The 8ppm Epson 9000 PS is the top model in its range of five lasers. New models will be released by the middle of November, but Epson hasn't divulged what

form they will take, other than to say that they are better specified and lower priced, with smaller footprints than the current range.

A smaller footprint would be welcome on the lumbering EPL 9000 PS, but like the HP LaserJet 4MV its size can be forgiven on account of its A3 capability. The paper tray can take only 250 sheets, compared with the HP's 350 capacity.

The network setup was excellent, requiring the sysadmin only to click on an automatically detected queue and print server to attach the two.

Epson positions this printer as an "affordable A3 model", and the lightweight price reflects the 6Mb RAM supplied for testing with accompanying lacklustre performance under our speed tests (although good font cacheing did help its score in our

font downloading test). Nevertheless, the ability to output A3 should by not be discounted.

This printer would probably serve best in a low-usage network needing simple remote configuration and A3 pages.

#### PCW Details

##### Epson EPL9000 PS

**Price** RRP £2,608 with 6Mb standard; Street price not available

**Contact** Epson 0800 289622

**Good Points** A3 capability. Good network setup.

**Bad Points** Not the fastest printer, although more RAM would help.

**Conclusion** Good for low-usage A3 printing.

# Atlantic Systems



## Atlantic Multi-Media Plus2

- Intel 75Mhz Pentium Processor
- Intel Triton Chipset
- 8Mb RAM, 256k cache
- 1Mb PCI graphics accelerator
- 14" SVGA 0.28 PureColor™ LR Monitor
- Plug & Play BIOS
- 540Mb PCI E-IDE Hard Drive
- Quad Speed CD-ROM Drive
- PCI motherboard - 3 PCI slots
- 16 bit Soundcard + stereo speakers
- Microsoft Multi-Media Bundle
- Lifetime Technical support



# £999

Ex delivery & V.A.T @ 17.5%

<b>P90 Version</b>	<b>£1069</b>
<b>P100 Version</b>	<b>£1139</b>
<b>P120 Version</b>	<b>£1269</b>
<b>P133 Version</b>	<b>£1399</b>



# IT'S ALL P WITH ATLA

## Atlantic Systems



Atlantic are one of the biggest computer systems manufacturers in the country and the people who

have put Atlantic where we are today are our customers, who have benefited from buying direct from the manufacturer, guaranteeing the best value around. In the last five years Atlantic systems have grown as has our customer base, and as part of our ongoing commitment to quality we are fully on target to achieve British Standard BS5750/ISO 9000 before the end of 1995. We give you the choice to select the system that meets your exact needs, now and in the future.

## Atlantic & ICL 5 Year Warranty



At Atlantic we believe that quality is paramount- our technology works for you. We guarantee it. Comprehensive on-site warranty from ICL support is standard for the first year on every new Atlantic system, and we cover you for a further four years for any labour needed on your system, giving you peace of mind for the future. Only top quality components are used throughout our range, ensuring both compatibility and reliability throughout, and reassurance if you want to add-on or upgrade your system in the years to come.

## After Sales Technical Support



A lifetime technical support is offered too, so you can be sure of getting answers to your questions direct from the experts, who

are on hand to advise on the best configurations for your needs, and help out with the increasing demands that the future will bring.

## Delivery

Our standard systems are available for immediate despatch, with other configurations available within five working days from your order. When you need the power of today's technology, we don't believe you should have to wait for it.

## Finance



We now offer finance deals on all Atlantic Systems, allowing you to buy your ideal system today and spread the payments over a period convenient to you.

Atlantic Systems - Technology you can rely on !



## MULTI-MEDIA

### Option One

- Dual speed CD-ROM
- 16 bit soundcard
- Desktop stereo speakers
- Microsoft family pack.



# £139

Ex delivery & V.A.T @ 17.5%

### Option Two

- Quad speed CD-ROM
- 16 bit soundcard
- Desktop stereo speakers
- Lotus Smartsuite 4
- Corel 4 + Quicken 3



# £225

Ex delivery & V.A.T @ 17.5%

### Option Three

- Six speed CD-ROM
- 16 bit soundcard
- 28.8K Fax/Modem
- Desktop stereo speakers
- Lotus Multi-Media Office

Fax/Modem is non BAPT, for BAPT approved version add £49

# £369

Ex delivery & V.A.T @ 17.5%

All Multi Media systems are fully configured.



All prices exclude V.A.T. All trademarks & registered Trade Marks are acknowledged. Intel, Intel Inside, Intel 486, Pentium and Overdrive are trademarks or registered trademarks of Intel Corporation. Atlantic Systems reserve the right to change system configuration and cases without prior notice. Atlantic Systems terms & conditions apply & are available on request. Sameday despatch subject to availability. Despatch charged @ £15 per system All prices are subject to change without notice or obligation. E&OE. Finance available subject to status, no deposit required, APR 19.9% Variable over 12 / 24 / 36 months. Software packages are for illustration purposes only, actual packaging may differ from that shown. Warranty with ICL / Atlantic first year on-site parts & Labour followed by four years return to base labour.

# LAIN SAILING NTIC SYSTEMS



## Atlantic DX2-66 Value

- DX2-66 486 processor
- 540Mb hard drive PCI E-IDE
- 4Mb RAM, 256k cache
- PCI motherboard - 3 PCI slots
- Pentium upgradeable
- 1Mb PCI graphics accelerator
- Desktop or Mini Tower Case
- 14" SVGA 0.28 PureColor™ LR Monitor
- 3.5" HD Diskette Drive
- CPU Fan
- 102 Key UK Enhanced Keyboard
- 3 Button MS Compatible Mouse
- 5 Yr Warranty - 1st Year On-Site
- Lifetime Technical Support

**£559**

Ex delivery & V.A.T @ 17.5%



"you get a lot of power  
for your money."  
Review: Nov 95

**DX4-100 / 8Mb RAM £699**

## Atlantic Premiere

- Intel 75MHz Pentium processor
- 540Mb hard drive PCI E-IDE
- 8Mb RAM, 256k cache
- PCI motherboard - 3 PCI slots
- Triton Chipset, Plug & Play Bios
- 1Mb PCI graphics accelerator
- Desktop or Mini Tower Case
- 14" SVGA 0.28 PureColor™ LR Monitor
- 3.5" HD Diskette Drive • CPU Fan
- 102 Key UK Enhanced Keyboard
- 3 Button MS Compatible Mouse
- 5 Yr Warranty - 1st Year On-Site
- Lifetime Technical Support

**£799**

Ex delivery & V.A.T @ 17.5%



**Pentium 90 MHz £869**

**Pentium 100 MHz £939**

**Pentium 120 MHz £1069**

**Pentium 133 MHz £1199**

## Atlantic Pro95

- Intel 90MHz Pentium processor
- 1Gb hard drive PCI E-IDE
- 16Mb RAM, 256k cache
- **Six speed CD-ROM**
- Triton Chipset, Plug & Play Bios
- PCI motherboard - 3 PCI slots
- 2Mb 64 bit PCI graphics accelerator
- 16 bit soundcard & stereo speakers
- Lotus Smartsuite 4 • CorelDraw 4 • Quicken 3
- 3.5" HD Diskette Drive • CPU Fan
- 15" SVGA 0.28 PureColor™ LR Monitor
- 3.5" HD Diskette Drive • CPU Fan
- 102 Key UK Enhanced Keyboard
- 3 Button MS Compatible Mouse
- 5 Yr Warranty - 1st Year On-Site
- Lifetime Technical Support
- Microsoft Windows 95 CD

Alternative specification for the same price:  
850Mb HDD + 14.4 K Fax/Modem

**£1599**

Ex delivery & V.A.T @ 17.5%



**Pentium 100 MHz £1669**

**Pentium 120 MHz £1799**

**Pentium 133 MHz £1929**

## Popular Add ons & Upgrades

### Storage & Memory Upgrades

Memory upgrades per 4Mb .....	<b>ADD</b>	£100.00
256k Pipeline Burst Cache (Pentium Systems only) .....		£99.00
Upgrade from 540Mb to 850Mb HDD .....		£49.00
Upgrade from 540Mb to 1 Gigabyte HDD .....		£89.00
Iomega Tapestreamer 420Mb internal.....		£129.00
Quad Speed CD-ROM drive.....		£110.00

### Graphics & Display Upgrades

15" SVGA Colour .28 NI (1024x768)LR .....	<b>ADD</b>	£89.00
17" SVGA Colour .28 NI (1024x768)LR .....		£299.00
20" SVGA Colour .28 NI (1024x768)LR .....		CALL
2Mb 64Bit SVGA Graphics Card DRAM/VRAM.....		£79.00/£155
4Mb 64Bit SVGA Graphics Card VRAM .....		£299.00

### Printers

OKI 300c Colour Bubblejet Printer (300dpi).....	<b>ADD</b>	£249.00
OKI 400ex Laser Quality LED Printer (300dpi) .....		£299.00
OKI 410 Laser Quality LED Printer (600dpi text quality) .....		£410.00
OKI 810ex Laser Quality LED printer (600dpi graphics & text) .....		£699.00
Parallel Printer Cable 1.5 Metre.....		£3.00

### Add-On Cards

Soundcard, 16Bit SB compatible.....	<b>ADD</b>	£49.00
Soundcard, 16Bit Soundblaster Original .....		£59.00
Soundcard, AWE-32 Soundblaster Original Value .....		£139.00
Soundcard, AWE-32 Soundblaster Original ADSP .....		£179.00

Fax/Modem 14.4 Baud Full Duplex V.32Bis (For BABT add £20) .....	£49.00
Fax/Modem 28.8 Baud Full Duplex V.34 (For BABT add £49).....	£109.00
PC Television Tuner - Record & Replay TV on your PC ! .....	£249.00
<b>Other Items &amp; Software</b>	<b>ADD</b>
Extended 3 Year On-Site Warranty .....	£139.00
Dual Infra-Red Cordless Joysticks.....	£39.00
Active Powered Speakers 10W/20W/80W.....	£19/£25/£40
Full Tower Case Upgrade (250Watt) .....	£49.00
MS DOS 6.22 & Windows WFWG 3.11 .....	£69.00
Microsoft Works V3 .....	£39.00
Microsoft Windows 95 .....	£99.00



Find Office 1 at:  
Eastgate Centre, Eastville,  
Bristol. B55 6XX  
Junction 2 M32 - Behind Tesco  
Tel: (0117) 976 7055



Find Office 1 at:  
Cameron Retail Park, Metro Centre  
Gateshead. NE11 9YS  
Next to TOYS'R'US  
Tel: (0191) 461 1148



Find Office 1 at:  
Regent Retail Park, 42 Ordsall Lane  
Salford, Manchester M5 3TP  
Next to Sainsburys  
Tel: (0161) 839 8808

Atlantic systems are available at branches of Office One: Bristol, Manchester & Gateshead. New Preston Branch: Unit 1, Queens Retail Park, Queens St, Preston PR1 4HZ Tel: 01772 887667

**SALES HOTLINE 01792 700 002**

After Sales Technical Support 01792 700220 / Sales Faxline 01792 792888

Corporate, Local Authority and Educational orders welcome. Telesales : 9.00am-6.00pm weekdays. 10.00am-4.00pm Saturdays. Trade enquiries & Administration 01792 792999,

Atlantic Systems, Atlantic Close, Llansamlet, Swansea, SA7 9FJ



Atlantic™

## Hewlett-Packard LaserJet 4MV



**H**ewlett-Packard has several technologies under its belt (including processor technology that has sparked the PA-RISC 7000 and a rumoured partnership

with Intel on the P7) but it is perhaps best known for the printers with which it has dominated the market for so long.

The LaserJet 4 series is now stable and mature, with the 4MV placed in the middle of the three workgroup lasers. Unlike the other printers here (apart from the Epson) the 4MV is A3 capable, which accounts for its prodigious size and weight.

All HP printers come with JetDirect, a printing utility which communicates with the printer far better than Print Manager and returns more usable messages for the end-user. The systems administrator is catered for with JetAdmin, the HP remote configuration utility, which is also included as standard with Windows 95. JetAdmin was certainly one of the better examples of its breed. It was quick to find the printer across

the network and performed all the necessary tasks with the minimum of user intervention.

The printer's standard 12Mb RAM made a difference when it came to the speed tests (many of the others had between 6Mb and 10Mb). The fast print engine must also have helped, as the 4MV came top in all our speed tests.

### PCW Details

#### HP LaserJet 4MV

**Price** RRP £2,749 with 12Mb standard; Street £2,129.

**Contact** Hewlett-Packard 01344 369222

**Good Points** Very fast, A3.

**Bad Points** Large.

**Conclusion** An excellent printer from an excellent manufacturer.

## Kyocera FS-1600



**T**his is the most compact printer of the group, with a tiny footprint that could fit onto almost any desk, and the only printer here to use LEDs instead of a laser.

The FS-1600 keeps consumable costs low by separating the toner from the mechanical parts of the printer, so only the toner needs to be replaced (not the drum and other mechanics). Kyocera claims 10,000 pages from one toner cartridge; more than any other printer. The EcoLink remote configuration utility is one of the easier ones: it installs quickly and lets you get on with configuring the printer for your network.

The 8Mb RAM was used to good effect in our speed tests, achieving particularly good scores in the downloaded fonts test. It was faster coping with simpler, text-based work rather than more complex graphics. More memory, or space for downloading fonts, is available via the PCMCIA slot, which could also be used for "cable-free" printing

whereby you take a card out of a notebook and plug it directly into the printer.

The printer's combination of good speed, small housing and an easy setup utility, sets it apart from the rest. Cheap consumables, which could make this printer one of the most economical during its lifetime, makes it exceptional.

### PCW Details

#### Kyocera FS-1600

**Price** RRP £2,318 with 8Mb; Street £1,739.

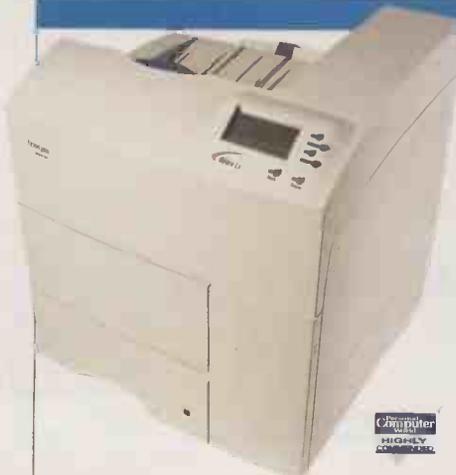
**Contact** Kyocera 01734 311500

**Good Points** Cheap to run and easy to use.

**Bad Points** Not many.

**Conclusion** An excellent printer.

## Lexmark Optra Lxi



**T**he Optra Lxi is top of the range: 16ppm, 4Mb as standard (ours came with 12Mb) and a 500-sheet paper tray. The Lxi has easily the best front-panel

setup of any printer here. 10baseT is fitted as standard, but 10base2 Thin Ethernet costs an extra £340. All models in the Optra range are capable of true 1200 x 1200dpi although this would usually be restricted to imaging or technical drawing rather than everyday use, so we tested it at 600dpi.

The remote configuration utility (MarkVision) is one of the best for a workgroup, as it uses fewer network packets than the SNMP printers here. It achieves this by using the Network Printing Alliance Protocol (NPAP), which has an alert-based system (the printer only makes contact with the controller when it needs to send an alert) rather than the polling-based system employed by SNMP. In fact, this is an option in the Unix version of MarkVision, soon to be implemented in the NetWare version to

enable the sysadmin to keep control of SNMP printers as well as NPAP-based ones. MarkVision provides job statistics too, including which user printed which job and the tray from which the paper originated.

The configurability of this printer, combined with 1200dpi and Lexmark's reputation, is recommendation enough. The good speed-test results are a bonus.

### PCW Details

#### Lexmark Optra Lxi

**Price** RRP £3,634 with 12Mb (£3,294 10BaseT); Street price not available.

**Contact** Lexmark 01628 481500

**Good Points** 1200dpi, MarkVision.

**Bad Points** Not cheap.

**Conclusion** Brilliantly designed for corporate bodies.



### Mannesmann Tally T9008

just a re-badged Olivetti. This 8ppm machine is aimed at the small workgroup, with a 350-sheet paper tray and 2Mb RAM as standard (an upgrade to 10Mb, PostScript and an Ethernet were installed in our model) and Mannesmann Tally cited the example of a solicitor's small office, or similar environment with multiple light users.

We would recommend the presence of a Certified Novell Engineer (CNE) while installing this machine as it was virtually impossible to install it on NetWare via the supplied software. In the end, we left it to be arcane and wrestled pconsole into submission ourselves.

Perhaps the real problem was that the T9017, which has a 16ppm engine and is more robustly designed, would have been more suitable for this test than the souped-up

T9008 Mannesmann Tally sent us. Perhaps this would have been easier to set up as well — certainly this was the aspect which most let down an otherwise reasonable printer.

**T**his top-of-the-range Mannesmann Tally T9008 printer appears identical to the Olivetti PG508, and has a Japanese-made printer engine in common. But it differs in its electronics — it's more than

#### PCW Details

##### MT T9008

**Price** RRP £2,256 with 10Mb; Street £1,750.

**Contact** Mannesmann Tally  
01734 788711

**Good Points** Cheap.

**Bad Points** Network configuration.

**Conclusion** Wait until the software is more sophisticated.



### QMS 1060e

these printers, and it began well by installing with no fuss. Once it has analysed the network and autodetected the printer, you can perform functions like changing the printer name. Doing anything beyond this involves communicating with the printer by typing commands to an interface, structured to mirror the front panel of the printer, and with the user-friendliness of edlin. The saving grace is that this utility locks out the printer's buttons so that it doesn't receive conflicting information locally, and remotely.

We were able to get the CrownAdmin utility to find the printer across the network and change the printer and print server names, but not talk to NetWare. We were forced to fire up pconsole and enter the names manually to get NetWare to recognise

the device.

The 1060e's speed under PCL 5 emulation wasn't bad, though it was much faster when producing simpler, text-orientated pages than the more complicated bitmap and graph tests.

**Q**MS' 1060e comes with 8Mb RAM and a huge array of disks and setup utilities for almost every network environment found in everyday use.

CrownAdmin is the big selling point of

#### PCW Details

##### QMS 1060e

**Price** Street price £2,195 with 8Mb standard; RRP not applicable.

**Contact** QMS 01784 442255

**Good Points** Lots of disks and manuals; reassuring.

**Bad Points** CrownAdmin left something to be desired.

**Conclusion** Good potential, but needs more work.



### Xerox 4510

Only a corporation such as Xerox could have a setup utility to install the printer setup utility (the catchy XDS/P). It warns you that XDS/P requires 8Mb disk space and (bizarrely) a free serial port to install. You should have the latest version of CLIB.NLM on your NetWare server: this could be difficult to get as it's only available from Novell.

XDS/P itself is distinctly nifty, however. It automatically installs the printer with NetWare with far less fuss than many of the other utilities, although its insistence on sticking a 21Kb TSR in your autoexec.bat file is something of a pain.

Xerox is one of the biggest names in laser technology: it supplies the huge 4700 II which created near-photographic quality output with a built-in PC for our August issue, as well as lasers which can throw out up to

60ppm. Yet it is reminiscent of IBM in that it has excellent hardware and software technology which could achieve so much, were it not for the poor finish of its products. In this case, it is the XDS/P utility's ridiculous insistence on TSRs and a certain NLM which let down what is otherwise a fine product.

#### PCW Details

##### Xerox 4510

**Price** RRP £2,087 with 10Mb; Street £1,774.

**Contact** Xerox 0800 454197

**Good Points** A small and well-built printer.

**Bad Points** The poor XDS/P setup utility, despite the fact that the XDS/P itself is good.

**Conclusion** The software could do with some polish.

**F**rom Xerox — the home of the GUI, photocopying, and countless other bases of our office life — comes one of the most compact printers tested.

## Editor's Choice

If you've arrived at this point, there's a good chance you've got two or more PCs and want to be able to print from them all. The solution is not necessarily a network printer. As with any other purchase, sit down and have a good think about exactly what you're after. Consider how many and what type of machines you want to be able to print from, the volume of work and the typical size of the files.

Think about the quality of output, too: if you're just knocking out pages, then accuracy and consistency may not be paramount. But if you are proofing for pre-press work, then a good PostScript Level 2 printer is required.

The prices of the nine printers reviewed here are between £1,500 and £3,700 — that's a lot of money if you have less than five PCs. With good 300dpi personal GDI lasers available for about £300 each, you may be able to buy one for each user. Admittedly all the machines tested here are a lot quicker, higher quality 600dpi affairs, but even then, for the same price, you'd be able to buy two or three personal 600dpi machines instead.

Once again consider your environment: do you already have a suitable physical network onto which a network printer may be installed? Is it client server, or peer to peer? What network operating system is in use: Novell NetWare, Windows NT or Windows for Workgroups?

An ideal situation for a network printer is in our own office at PCW: we have ten PCs mostly running Windows 95, and 15 Apple Macs. A single Hewlett-Packard LaserJet 4SiMX was chosen as our office workhorse. It's a 16ppm A4 PostScript 600dpi printer with a huge paper capacity, and we hammer it on a daily basis. Along with an A3 DataProducts LZR-1580 printer, it is used not only for printing day-to-day documents, but for page proofing as well. The dual platform and proofing nature of our workgroup necessitates PostScript machines. Both are connected to our thin Ethernet 10base2 network, running Novell NetWare 3.11 on a single server.

If you're still reading, then you're definitely in the market for a network laser. So without further ado, here are our conclusions.

Unlike our August colour printers group test, there were no printers in this test that were identical but sporting different badges. But it was plain that the idea of remote configurability and SNMP (Simple Network Management Protocol) had caught on in a big way, and all the printers, except the Dataproducts T16, had implemented some form of remote configuration.

It was quite a surprise that no manufacturer had followed Kyocera's substantial lead and brought in lower costs for end-users by separating out the toner cartridge from the other internal mechanics;



perhaps HP's experiment in this area some years ago had scared others off, even though the company never followed it through.

Some of the most modern features appear to change the way in which printers are used. Accountability of usage can be a very big issue in a highly networked environment, and it looks as though printers will soon all be able to tell the system administrator which user printed which job, from which computer, at what time, and how many pages the job used.

In the meantime, there is still some sense of exploration among the more interesting possibilities thrown up by the ever-expanding workgroup printer market, with PCMCIA slots and other goodies thrown up by R&D departments all over the world. Surprisingly, no manufacturer of our nine printers had chosen to include an infra-red interface, but that too can surely be only a matter of time.

Brother's HL-1260 deserves a mention for being the cheapest printer reviewed here. Despite being the second slowest overall it's text score was good, and proves a network printer can be purchased for a little over £1,600.

Kyocera's FS-1600, although not as quick as our winner, was still above average in terms of speed, and wins brownie points for its environmentally friendly operation, longest toner life, and cost of operation. This latter is certainly an important issue in a network environment where the printer is sometimes being used almost non-stop. The FS-1600 was one of the cheapest printers on test.

Established network printer manufacturer DataProducts'

T16 came in third place for performance, with good overall results.

In terms of performance, there were two clear leaders: Hewlett-Packard's LaserJet 4MV, and Lexmark's Optra Lxi. HP beat Lexmark on text performance, but in the area of graphics the Optra was the leader and came out slightly ahead overall. Slight differences here are pretty much irrelevant however, since both machines were way ahead of anything else; DataProducts' T-16 came a close third.

Both printers have one big advantage over the other: with Lexmark, it's the Optra's excellent 1200dpi engine capable of producing camera-ready output, especially when good-quality paper is used; HP's 4MV can boast A3 output, as well as A4. The big difference, though, is price: Lexmark's Optra Lxi costs £3,634 (RRP) compared to HP's 4MV at £2,749 (RRP). Lexmark could not quote a street price — otherwise, this would surely have been much lower than the RRP. HP has a reputation for very low street prices, and at an expected cost of £2,129 is our winner.

However, the forthcoming LaserJet 5 network printers are not too far away. For this reason, despite earning itself Editor's Choice in this group test, we would recommend waiting for the new models before plumping for the LaserJet 4MV. The 4MV is however the least long in the tooth: it is the ageing 4si which most deserves a successor. And a well-deserved Highly Commended for the excellent Lexmark Optra Lxi.

**Colour Networks '95  
National Roadshow**  
Call 01628 403601 for your nearest venue.

al Sales

1995

Femme Naturelle



VOLUME 2 NUMÉRO 6

SAVA

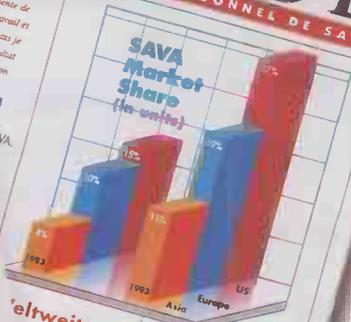
HOUSE  
FORMATION POUR LE PERSONNEL DE SAVA

AOÛT

Cela représente de  
heures de travail et  
efforts, mais je  
ai le résultat  
impression



SAVA  
avec  
se  
10



eltweiter  
rktanteil

rganisationen  
chni haben wir  
che  
öglichkeiten  
nd  
Markt  
effie

Wir konzentrieren uns auf  
eine angemessene Methode  
für unseren globalen  
Kundenkreis. Unsere Firma  
hat enorme Möglichkeiten  
Unsere Aufgabe besteht  
darin, das Potential unserer  
Firma freizulegen für unsere  
Investoren, Kunden und  
Angestellten.

IN QUESTO  
NUMERO

- Momenti manageriali nel tuo  
posto di lavoro ..... 2
- Lavoro e famiglia: come il tuo  
datore di lavoro risponde ..... 2
- Il colore nella tua  
presentazione! ..... 3
- Scegli per un anno di  
lavoro ..... 3
- Stili del manager ..... 4

## Is your business waiting for the fast, economical, quality colour printer? Our business is making it for you.

You don't need us to tell you about the advantages of colour printing in today's competitive market: Colour means the power to persuade - the power to inspire - the power to set your company apart.

But until now, the right combination of speed, image quality and simplicity of use just wasn't available at the right price.

Introducing the revolutionary new Tektronix Phaser 340: a desktop colour printer that brings crisp, vibrant colour to your documents and overheads at a quality and a price nothing on the market can touch.

The Phaser 340 is built for the office network. With its powerful RISC processor, superfast memory management and remarkable solid ink technology, you get 4 razor-sharp colour pages per minute on most papers, plus economical, clean and environment-friendly refilling that's as simple as a stapler.



It's the revolution your business has been waiting for. And best of all, it's from Tektronix: a Fortune 500 leader, that's been making highly acclaimed colour printers for 13 years - using the broadest range of colour technologies.

For further information on the Phaser 340, our FREE 20 page colour guide and some astonishing print samples, please return the coupon today, or call us on 01628 403601.

Yes. Please send me more details of the Phaser 340, my FREE Colour Printer Guide and sample output.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

5106

Tektronix UK, Snowdon Drive, Winter Hill, Milton Keynes, Bucks MK6 1HQ.  
Fax: 01628 403617

Designed for  
Microsoft  
Windows 95

MacOS

yes  
it runs with  
NetWare

MICROSOFT  
WINDOWS  
COMPATIBLE

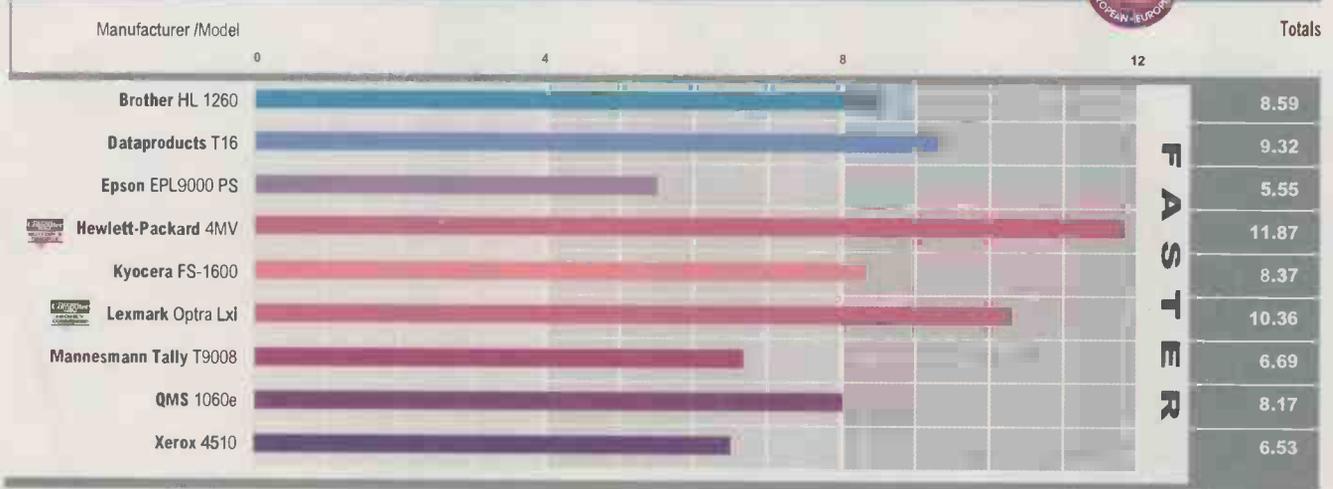
# Tektronix

Real colour printers

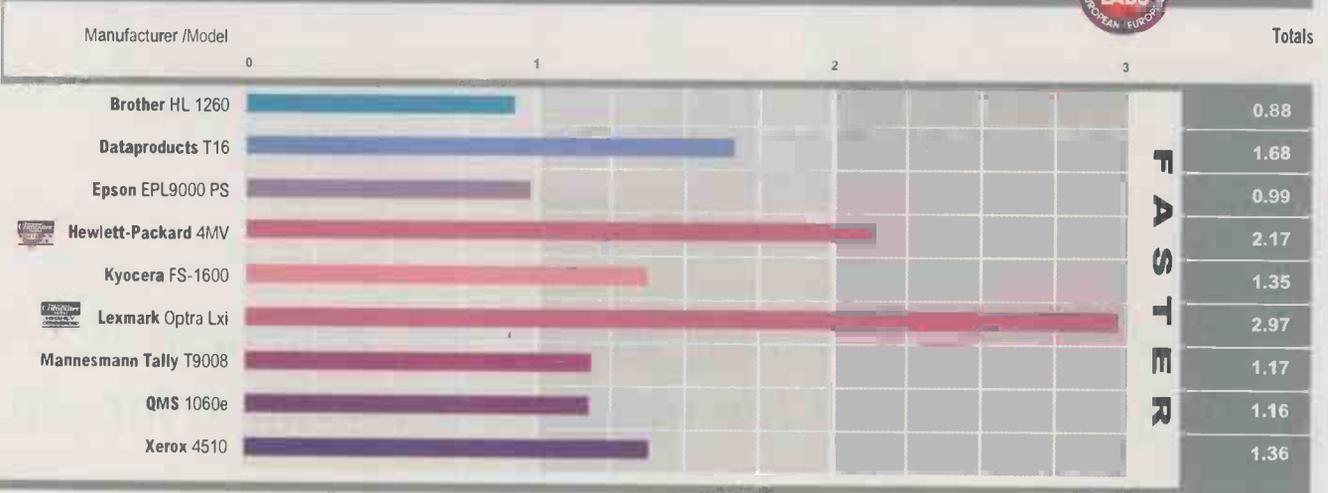
177  
PERSONAL COMPUTER WORLD  
DECEMBER 1995

## Performance Results

### Text



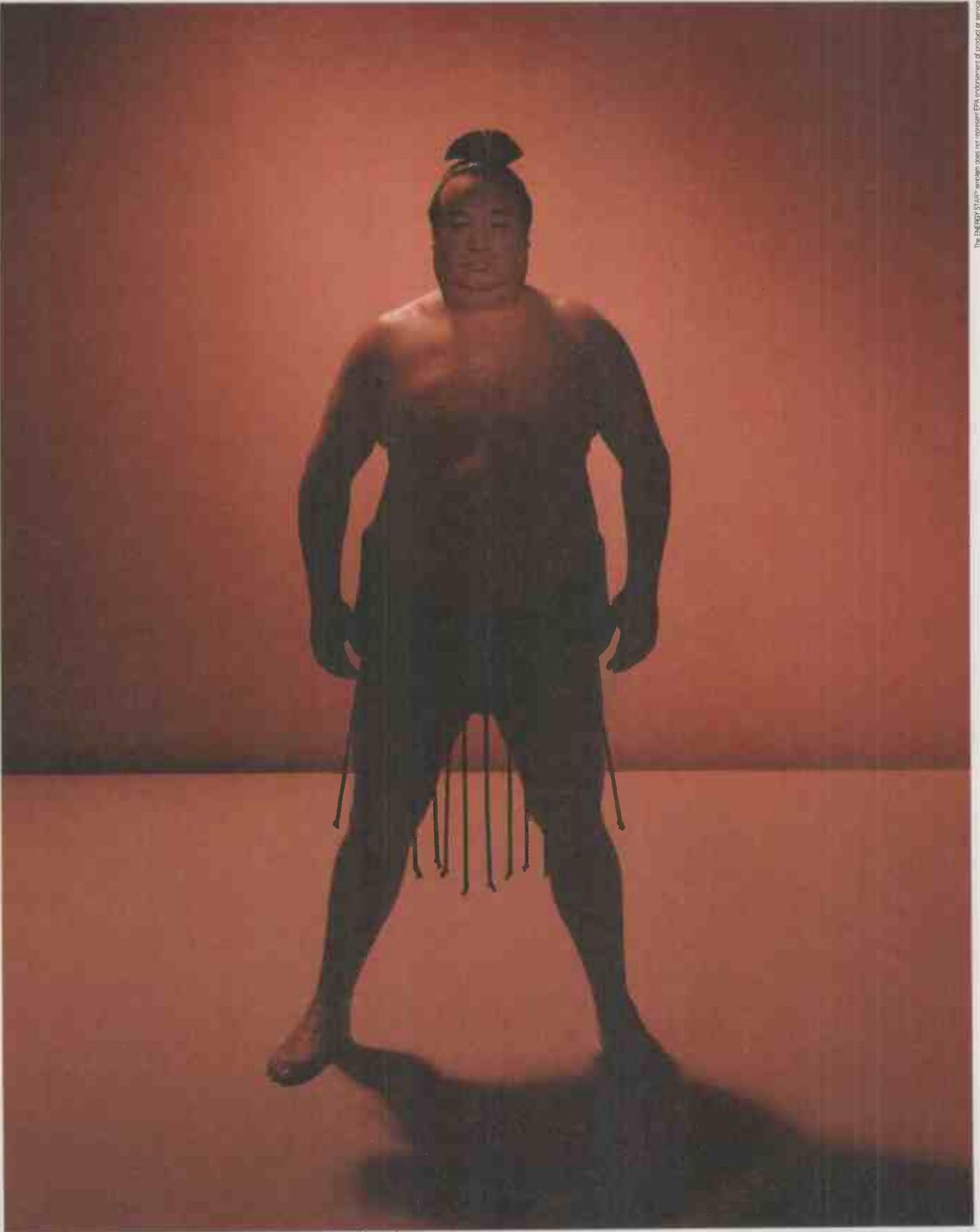
### Graphics



### Overall



The ENERGY STAR™ emblem does not represent EPA endorsement of product or service.



*When big is beautiful*

It is said that beauty is in the eye of the beholder. Behold, the Taxan Ergovision 1080 LR, a fully featured 20" monitor at a price that is particularly pleasing to the eye. Call 01344 484646 to have a look.



**TAXAN**  
MONITORS

NETWORK LASER PRINTERS POWER LEVEL

Manufacturer	Brother	Dataproducts	Epson	Hewlett-Packard	Kyocera
Model	HL1260	T16	EPL9000 PS	4MV	FS1600
Laser or LED	Laser	Laser	Laser	Laser	LED
Max resolution	600	600	600	600	600
PostScript	●	●	●	●	optional
PCL level	5e	5	5e	5e	5
Engine speed, PPM	12	16	8	16	10
Standard memory	2Mb	12Mb	6Mb	12Mb	2Mb
Maximum memory	26Mb	68Mb	64Mb	44Mb	66Mb
Memory supplied	10Mb	12Mb	6Mb	12Mb	8Mb
Apple LocalTalk	●	●	●	●	optional
Ethernet	optional	optional	optional	●	optional
Maximum sheets in input tray	500	250	250	350	250
Toner life at 5% A4 page coverage	6,000 pages	6,500 pages	6,500 pages	8,100 pages	10,000 pages
Size inc. trays (WDH, mm)	371 x 326 x 343	439 x 476 x 290	437 x 473 x 270	459 x 522 x 317	345 x 350 x 245
Weight (kg)	15	21	17	23.2	10
Telephone number	0161 330 6531	01734 884777	0800 289622	01344 369222	01734 311500
Fax number	0161 971 2205	01734 883993	01442 227227	0171 735 5565	01734 311108
RRP as reviewed	£2,036	£3,495	£2,608	£2,749	£2,318
Street price as reviewed	£1,630	£2,800	n/a	£2,129	£1,739

NETWORK LASER PRINTERS POWER LEVEL

Manufacturer	Lexmark	Mannesmann Tally	QMS	Xerox
Model	Optra Lxi	T9008	1060e	4510
Laser or LED	Laser	Laser	Laser	Laser
Max resolution	1200	600	600	600
PostScript	●	optional	●	optional
PCL level	5e	5e	5	5e
Engine speed, PPM	16	8	10	10
Standard memory	4Mb	2Mb	8Mb	2Mb
Maximum memory	64Mb	32Mb	64Mb	16Mb
Memory supplied	12Mb	10Mb	8Mb	10Mb
Apple LocalTalk	yes	optional	optional	optional
Ethernet	yes: 10baseT	optional	optional	optional
Maximum sheets in input tray	500	350	650	250
Toner life at 5% A4 page coverage	7000 pages	5000 pages	6000 pages	5000 pages
Size inc trays (WDH, mm)	410 x 537 x 436	395 x 370 x 285	411 x 482 x 363	352 x 394 x 254
Weight (kg)	22.8	14	17	14
Telephone number	01628 481500	01734 788711	01784 442255	0800 454197
Fax number	01628 481893	01734 791491	01784 461641	0800 454198
RRP as reviewed	£3,634	£2,256	n/a	£2,087
Street price as reviewed	n/a	£1,750	£2,195	£1,774



\* All information supplied by manufacturers, except prices which were obtained by PCW, E&OE.



## THE SUPERHIGHWAY CODE



*Never underestimate the damage caused by loose chips. We don't. That's why ATI make the chipsets for their graphic accelerators. That's why we sell them. Avoid the road to ruin and call Taxan on (01344) 484646*



**TAXAN**

O N B O A R D W I T H

ATI Graphics Pro Turbo and ATI Graphics Xpression

# Twice the RAM to ewes

RAM doublers — a extra shot of RAM can put the joys of Spring back into a tired old system. Tim Nott tests two software packages that claim to make things jump; or are they merely sheep in wolves' clothing?

Software and operating systems continue to make increasing demands on hardware: bigger disks, faster processors and more memory. During the past two years, hard disk prices have dropped dramatically — a one-gigabyte drive can now be bought for a quarter of its 1993 price. Processors and local-bus motherboards as well, have tumbled by well over 50 percent. One commodity that has held its price resolutely, however, is random access memory (RAM). And in general, it's a shot of RAM that will make the greatest performance difference to any Windows system. Increasingly, applications and suites are moving from "four megs good, eight megs better", to double those figures — an expensive upgrade. Hence, any software that makes better use of existing memory has got to be seen as a GOOD THING.

Having reviewed the brand leader, RAM Doubler for Windows (October issue), we now put two other similar applications through their paces: SoftRAM, and Hurricane. Each works in a different way and each claims to make a significant improvement.

## Hurricane

The version of Hurricane reviewed was for Windows 3.1 but a free upgrade to the

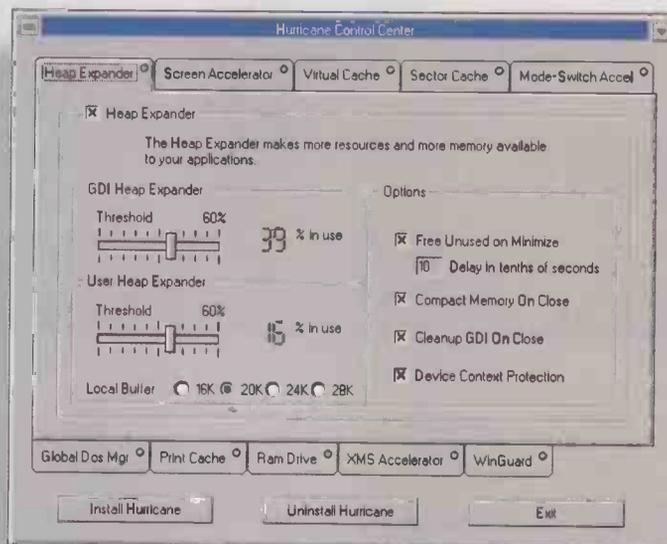
PCW Illustration by Stephen Caplin

Windows 95 version will be made available shortly. A well-behaved installation routine copies the files from the single floppy to their own directory so you don't get any excess baggage in the Windows or System directories. It then updates the SYSTEM.INI file, copies the original to the Hurricane directory with a "B4" extension, and is also provided with an uninstaller. Five new icons are created in Program Manager. WinGauge monitors the

amount of physical and virtual memory in use, the state of the GDI heap, CPU activity, swap-file requests and more. Eight warning lights indicate potential problems and conflicts as they arise, from the simple but harmless lack of physical memory — the system slows down as the swapfile comes into play — to the ominous "Unlocked Memory", which indicates that Windows is about to come to an abrupt halt and you should save everything and exit. As the help panel states: "Hopefully, you will never see this warning

light".

For those with an unquenchable thirst for Windows knowledge, there's a lot here: for instance, if you want to monitor the number of V86 mode



*Hurricane's Control Centre — not for the technically faint-hearted*



switches, or Page Faults, that are happening on your PC, you can.

Next, the Discover icon goes much further than the Microsoft Diagnostics or System Information utilities in telling you everything you might want to know about your hardware and software: from the make and model of your hard disk to the details of Virtual Device Drivers loaded. The amount of detail available is almost overwhelming and a suite of benchmark tests are included. A Print Cache Manager takes over from the standard Windows Print Manager. The Uninstall icon is self-explanatory.

The heart of the matter is the Hurricane Control Centre. This is a dialogue box with ten tabs to control the settings of Hurricane's various enhancements which include: the Heap Expander, Virtual Cache, Screen, Mode-Switch and

XMS acceleration, RAM drive, Print Cache and Global DOS Manager. Each page has a short explanation, but unlike the Discover Utility there is no help file. Many of the settings and options are fearsomely technical but the manual does provide further information: fortunately, it also states that the setup process will "turn on all appropriate utilities and set all settings to the best value for your system, so you generally need not use the Control Centre". If you want to use the RAM drive, you will have to read the manual and edit AUTOEXEC.BAT by hand.

Hurricane manages memory by swapping areas around and discarding regions that are not currently in use, which includes the 64Kb "resource heaps" — that notorious Windows 3.1

bottleneck. Unused resources are removed from memory and reloaded from the .EXE file on disk when needed. Similarly, memory is made available to the caching and spooling software when applications don't need it, and grabbed back when they do. Hurricane also compresses memory — not by compressing the data itself like a disk doubler, but by freeing unused ranges more like a disk defragmenter.

### SoftRAM

SoftRAM is far less complex. Apart from a Readme file, which provides information on upgrading to Windows 95, there's just one icon for the main SoftRAM control panel, with far fewer buttons and gauges, plus an option to uninstall. There are three components here: the RAM compressor, resource extender, and the

**You don't have to  
go through PEARLY GATES  
to find your Windows Heaven**

**Before you consider an expensive upgrade from Windows 3.1 and 3.11, here's a cost-effective solution that tens of thousands have already discovered.**

## **MoreMem™**

**pcuser**

**GOLD AWARD**

Quit application ... Sound familiar? You run three or more of the myriad applications available and base memory suddenly drops to its knees! MoreMem is an industrial strength package moving DLL's out of base memory. Many clients can now run 10 applications simultaneously.

## **AnyView™**

AnyView solves GDI Resource problems, accelerates graphics, allows colour depth and resolution changes on the fly.

**So are these products really as good as they sound? Contact Accurate Technology, to discover why and how MoreMem and AnyView make perfect heavenly office partners.**



**Tel: 01734 773889**

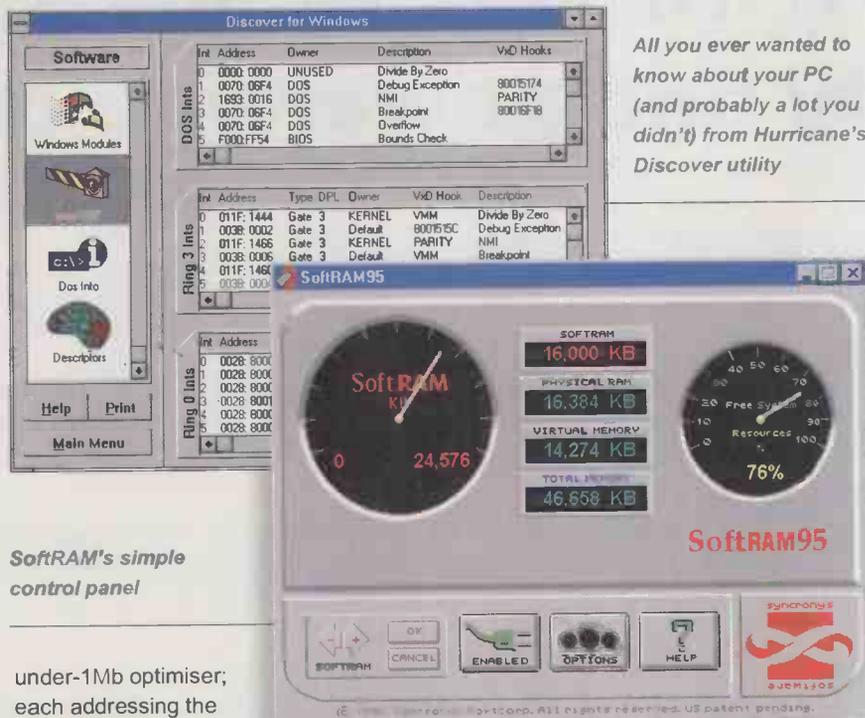
**Fax: 01734 771260**

**BBS: 01734 773887**

**Accurate Technology Internet: [info@accurate.co.uk](mailto:info@accurate.co.uk)**

Farrier House, 48 Denmark Street, Wokingham, Berkshire RG40 2BB

Windows is a registered trademark of Microsoft



SoftRAM's simple control panel

under-1Mb optimiser; each addressing the most common Windows 3.1 memory limitations.

The single floppy disk contains both Windows 3.1 and 95 versions. With the latter, you don't get the resource extender or under-1Mb optimiser because they're no longer needed. Under both versions, the default settings create as much SoftRAM as you have real RAM, although you can override these settings. Unlike Hurricane it actually compresses data held in memory, in a similar way to disk-doubling software.

### Real-world tests

In an ideal world we would be testing these packages on a variety of machines and configurations, using a purpose-designed set of benchmarks. But as this technology is still fairly new, we don't have the benchmarks (unless you count those built into the software, which can't be assumed to be impartial). So instead we devised some "real world" tests, but bear in mind that these were conducted on one PC — other setups may show very different results.

Neither application alters the CONFIG.SYS or AUTOEXEC.BAT files: both are strictly for use with Windows, so we first made a back-up of the existing initialisation files WIN.INI and SYSTEM.INI. The system was an 8Mb 486DX/50, with an existing 17Mb "swap-file" of virtual memory. We then tested the PC with no RAM enhancement, with Hurricane, with SoftRAM, and finally with an extra 8Mb of real RAM, restoring the .INI files between each session to ensure

All you ever wanted to know about your PC (and probably a lot you didn't) from Hurricane's Discover utility

a level playing field.

In each test we initially loaded two copies of Paintshop, each with a very large (2.2Mb) bitmap. We next loaded CorelDraw, Excel, and Word — all with substantial files. Finally, we loaded File Manager. On the unadorned machine this used all available physical memory; so we were now reliant on the virtual memory — paging data in and out of the hard-disk swapfile. We had also reached the Windows resource limit: it wasn't possible to load any more applications or documents, even though there was a considerable amount of virtual memory remaining free.

### What happened

In terms of load times there wasn't a lot of difference between plain Windows, SoftRAM and Hurricane. SoftRAM didn't seem to make any difference to the remaining System Resources: at nine percent this was the same as undoubled Windows. Hurricane, however, reported an astonishing 46 percent free and we were able to load two more copies of Word. But this wasn't as useful as it seemed because the subsequent paging to disk reduced the system to a crawl.

With all the applications and data files loaded, results varied. SoftRAM was about 20 percent quicker than undoubled Windows when swapping between applications. Hurricane switched between the two bitmaps almost twice as fast, but switching from one of these back to Word was 25 percent slower. SoftRAM

did better than plain Windows when closing applications, but Hurricane was extremely slow, with a lot of disk activity taking place before control returned to the user.

### Best of all

The best performer of all was (as you might expect) another 8Mb of real memory: switching from a bitmap to Word took a fifth of the time of an undoubled 8Mb. Closing down applications was much faster, too; by between half to one eighth of the time. Leaving the extra memory installed, we also compared the performance under Windows 95, with and without SoftRAM, using a variety of graphics applications with a total of 17 images loaded. Despite this entailing considerable disk swapping without SoftRAM, no increase in performance was noted with it — loading and swapping applications was, on average, 12 percent slower.

Overall, neither SoftRAM nor Hurricane were impressive. It may well be, with fine-tuning (and SoftRAM claims to tune itself by "learning" how you work), that better results could be obtained, but the technicality of Hurricane's options would probably daunt the average user. In any case, even the company literature only claims an increase of between 10 and 30 percent. SoftRAM's literature claims that it "REALLY doubles RAM" but makes no further claims concerning performance. It must be pointed out that although Hurricane made a considerable improvement to Windows 3.1's resource limit, so would upgrading to Windows 95.

### PCW Details

#### Hurricane

Price £69.95

Contact POW! Distribution 01202 716726

**Good Points** Makes a remarkable improvement to Windows 3.1 resource limits.  
**Bad Points** Fearsomely complex. Only a slight performance increase noted on the test machine.

**Conclusion** You would probably be better off upgrading to Windows 95.

#### SoftRAM 95

Price £69

Contact Roderick Manhattan Group  
0181 875 4444

**Good Points** Simple to use and configure.  
**Bad Points** Doesn't significantly improve Windows 3.1 system resources. Little overall performance increase.

**Conclusion** No substitute for the real thing.



# The New Viglen XX SERVER

## reliability and power you can

You want power, reliability and a system that's future proof! You need a server that can be installed, maintained and upgraded with ease! Not only that, you want a server that has the ability to work with everything in your current environment.

In answer to your needs, Viglen brings you the new XX SERVER incorporating the most advanced technology available. Just look at some of these features;



### Reliability

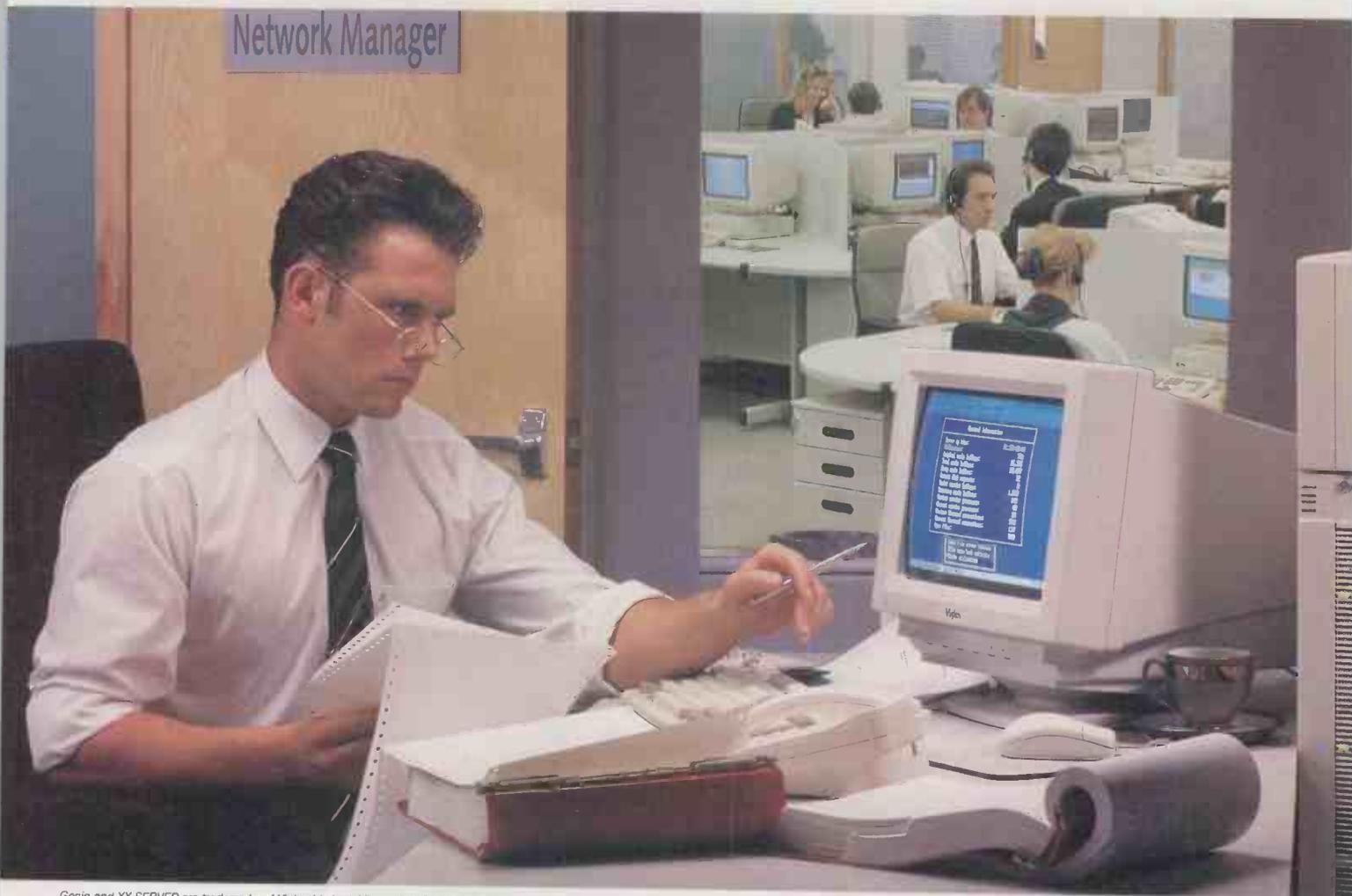
With inbuilt ECC error checking memory, RAID and Hot swapping capability and internal environmental monitor, the Viglen XX provides one of the most reliable platforms for server applications as well as providing an easy to integrate and service range.

### Performance

The Viglen XX SERVER provides scalable performance from one Pentium® Processor to four and is capable of delivering over 1000 transactions per second. This performance is supplemented by high two speed PCI channels (133MB per second) as well as EISA and ISA bus structures.

### Upgradeability

The Viglen XX SERVER provides a future proofed platform with a modular and scalable architecture allowing processor upgradeability from a Single, Dual and Quadruple Pentium® processor, up to generations beyond the Pentium® Processor.



Genie and XX SERVER are trademarks of Viglen Limited, Microsoft, MS-DOS, Windows 95 and Microsoft Ready To Run are trademarks of Microsoft Corporation. The Intel Inside and Pentium Processor logos are trademarks of Intel corporation. SCO is a (registered) trademark of Santa Cruz Operation, Inc., Unix is a (registered) trademark, licenced exclusively through X/Open Company Ltd. IBM O/S 2 is a trademark of International Business Corporation, Novell, Netware and the Novell logos are trademarks of Novell Inc. SMC is a trademark of standard Microsystems Corporation. All other trademarks are acknowledged.

Tel **0181 758 7000** Please ask for our NETWORK SYSTEMS DIVISION  
Fax **0181 758 7080**



186

Viglen Limited, Viglen House, Alpertons Lane, Alpertons, Middlesex HA0 1DX.

# depend on.

## Security and ease of management

In addition to all the standard security features, the Viglen XX SERVER has bay door locks with intrusion detection. With the optional battery backed server management board, further security measures can be made available, including temperature and voltage monitoring, watchdog timer waiting for S/W poll, POST code capture, Console and TAP pager alert as well as remote access and monitoring. The XX SERVER range provides this "Plug and Forget" security management and peace of mind.



**XXSERVER**

## Promoting new Industry standards

The Viglen XX SERVER provides a host of new Industry standards including dual channel PCI Bus at full speed of 133MB per second (as well as EISA slots), DMI/DMTF Network and Server Management Capability with remote Access and Alerting, and SCA (SCSI Connector Architecture for Standardised 'Hot Swap'), ECC memory and Multi-processing support.



**NOVELL**  
Authorised OEM

## Approved by major Network O/S

Undergoing full approval for use with major operating systems such as Novell® Netware, Microsoft® Windows NT and SCO Unix. The openness of the Viglen XX SERVER range not only gives you complete integration, but also provides the very best in Networking technology and a wide platform of support, all with unprecedented value.

**Viglen**  
Taking the work out of networking.



## THE VIGLEN XX SERVER SPECIFICATION

- Choice of Intel Pentium® processor, memory, hard disk and operating system
- Module upgradeable to 768MB of ECC RAM
- One 1.44MB Floppy Drive
- One Quad speed SCSI CD ROM Drive
- 8 I/O bus slots, 4 EISA, 2 PCI (Full Speed Dual channel) and 2 PCI/EISA shared
- 100Mbit, PCI Ethernet card
- Two channel PCI, PCI Fast and Wide SCSI-2 support
- 2 serial, 1 parallel port
- SVGA Graphics
- 512K Paged Flash BIOS
- Server Management hooks for temperature and voltage sensing
- Viglen ENVY 14P 14" Colour Super VGA Monitor
- 102 key compact keyboard

### Case Specification

- 4 External Drive Bays
- 6 External 'Hot Swap' bays with SCA (SCSI connector Architecture)
- Fan failure detection

The following are some ready to run server configurations.



## VIGLEN XX NETWORK SERVER

HARD DISK	RAM	Pentium® processor 100MHz	Pentium® processor 133MHz
2GB SCSI 2	32MB	£7069	£7419
4GB RAID 5	32MB	£9369	£9719
8GB RAID 5	64MB	£11529	£11879

The XX Network SERVER includes Novell® Netware 4.1 pre-installed with a 25 user licence. To increase the number of users please add £479 for a 50 user licence, £1219 for 100 user licence, £3249 for a 250 user licence, £7849 for 500 user licence and £16319 for 1000 user licence (for SFT III 4.1 please add £599 for 100 users or less and £1494 for more than 100 users).

## VIGLEN XX NT SERVER

HARD DISK	RAM	Pentium® processor 100MHz	Dual Pentium® processor 133MHz
2GB SCSI 2	32MB	£6339	£8924
4GB RAID 5	32MB	£8639	£11234
8GB RAID 5	64MB	£10799	£13354

The Viglen XX NT SERVER includes Microsoft Windows™ NT 3.5 Server. For client licences, please add £29 for single user client and £469 for 20 user clients licences.



## VIGLEN XX SCO UNIX SERVER

HARD DISK	RAM	Pentium® processor 100MHz	Dual Pentium® processor 133MHz
2GB SCSI 2	32MB	£6839	£9384
4GB RAID 5	32MB	£9139	£11694
8GB RAID 5	64MB	£11299	£13854

The Viglen XX SCO Unix SERVER includes SCO OPEN SERVER ENTERPRISE 5 USER CD. Please add £319 for a 10 User Licence, £639 for a 25 User Licence and £1919 for a 500 Use Licence.

ALL PRICES EXCLUDE VAT AT 17.5%

**FOR MORE INFORMATION AND YOUR FREE COPY OF THE VIGLEN DIRECT GUIDE PHONE OR RETURN THE COUPON**

Name \_\_\_\_\_ Title \_\_\_\_\_  
 Address \_\_\_\_\_  
 Postcode \_\_\_\_\_ Telephone \_\_\_\_\_

Please send me more information on the Viglen range of personal computers.

Business/Education use  Home Personal use  Networks use  
NET/PCW/12/95



# Speaking in tongues

**Computer-based language learning programs have been around for some time, but there are more and more “all inclusive” packages appearing on the market — vocabulary, grammar and emphasis on the spoken language are benefiting from CD-ROM technology. Adele Dyer looks at the pick of the bunch.**

**M**ethods of language learning have gone through major changes in the past few years. Of all subjects, modern language learning has probably been prey to more fads and fashions than any other school subject. It was once taught in much the same way as dead languages like Greek and Latin, but now the idea of translation is anathema to language teachers, and thinking in the language from day one is in. This has been reinforced by a National Curriculum where the emphasis is on communication and everyday language use.

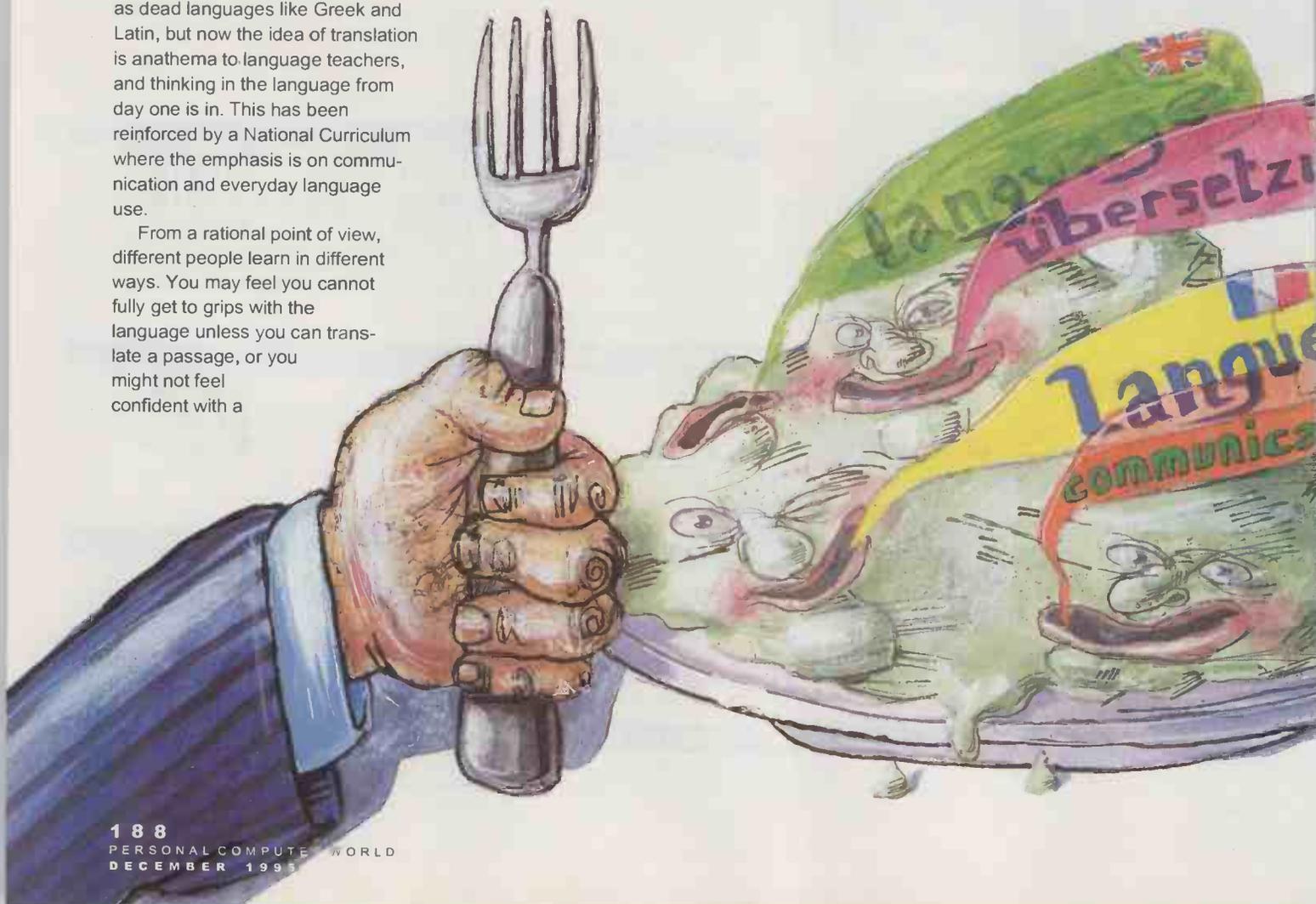
From a rational point of view, different people learn in different ways. You may feel you cannot fully get to grips with the language unless you can translate a passage, or you might not feel confident with a

grammar point until you have correctly completed enough exercises to really hammer it home. When learning at home, it is important to find a method which suits your own individual style of learning, but also covers all the basic skills: listening, reading, speaking and writing.

All but one of the packages included in

POV Illustration by Jake Abrams

this round-up came on CD-ROM. This is tough on those without a CD-ROM drive, but the advantages of the medium are immediately apparent. Unlike disk-based versions, they offer vastly increased sound facilities. Not only can you record your own voice, you also get the opportu-



**The Berlitz approach is to teach by absorption: the course aims to have you not only speaking, but thinking in German**

nity to hear and, in the case of the Learn to Speak series, see a native narrator, learning to imitate their accent. Learning packages are not useless without this, but if you want to improve your accent this is just about the only way to do it using your PC.

Most of the packages we looked at were learning and revision aids rather than complete courses. Only the Berlitz Think and Talk and Learn to Speak series were self-contained packages. Each have been judged according to their function, not their overall teaching potential.

### Berlitz Think and Talk German

The Berlitz philosophy is that language is learnt by absorption. It argues that you don't need translation or tedious learning by heart of grammar points to get to



grips with a language. To achieve fluency you need to think in the language from the start, and you cannot do this if you are constantly translating your thoughts from English.

This simple approach allows you to start learning from the CDs immediately. There is no need to go to textbooks, dictionaries or grammar books for reference. Everything you need is included on the nine CDs.

The course takes you from scratch and leaves you at about GCSE standard, giving you a good grounding and certainly enough for you to survive in the country concerned. However basic the method, none of the main skills are left out. The course covers listening, speaking, reading and writing.

The course is divided into scenes. Each one introduces one idea and drums it in by repeating it over and over again in various forms. You are left to work out for yourself exactly what the point is and how it works in the language. Each scene is subdivided into the separate skills to help you, and the further you get through the scene, the clearer the grammar becomes.

The first part of each scene is listening and piecing together the meaning. In the very first scene, you are aided by various sounds and "das ist ein..." to introduce the vocabulary. In this listening section there is great stress laid on pronunciation. Vowel

sounds in particular are picked out, causing great hilarity as the narrator goes through apparent agony while demonstrating how to pronounce the German "a". There are sufficient breaks in the narrative to allow you to repeat the phrases to yourself after the narrator. The scene is then in written form and you can highlight any sections you wish to hear them again.

To practice the spoken and written language, you hear sentences and then have to write them. Finally, you have the chance to record your own voice and compare it to the voice of the narrator. The grammar points are explained at the end, and there are exercises to reinforce



**Learn to Speak Spanish: Like Think and Talk, Berlitz Learn to Speak is an all-inclusive learning package. It is not for absolute beginners, however**

them if you are still having difficulties.

As a complete learning package, this was by far the best in the round-up as it was the only one to be fully self-contained, entertaining and capable of stretching without over-reaching you.

### PCW Details

**Conclusion** An excellent product for beginners — Editor's Choice. Available in French, German, Spanish and Italian.

**Price** £139

**Contact** Guildsoft 01752 895100

### Learn to Speak Spanish

The opening sequence to Learn to Speak Spanish features Latin American guitar music played alarmingly loud, and swirling picture postcards of Mexico. The South American connection had me foxed until I twigged it is being aimed at an North American audience.

Despite the catalogue's assurances to

the contrary, this is not a complete beginner's course. You will need to have done some Spanish before as this package throws you straight in at the deep end with complete sentences to understand. However, you are not required to have a huge knowledge. I did O Level over ten years ago and was quite able to follow the course.

Each lesson includes a plethora of exercises and games, in addition to a textbook which you are advised to work through. It is more like the language learning you experienced in school.

First up is a huge vocabulary list that you are supposed to learn. To help you there are little videos of the various narrators saying sentences using the word — it is actually easier to understand if you can see someone's lips moving. In addition, you can choose to see the sentence written in Spanish and/or the translation. The vocabulary lists are then used in the following exercises, including the next one, a drill to make sure you have done as you were told and learnt the vocabulary.

The exercises use the vocabulary learnt in context. For each lesson there is a story and a conversation, with accompanying video. The videos go slowly, speaking the sentences at a reasonable pace but pausing between each sentence

while the narrator gives you an unnerving, cheesy grin.

The other exercises are less taxing. There is a listen-and-fill-in-the-blanks round and a few more game-like exercises before the game round proper. These games are something of an anomaly. Having been almost sadistic in approach up to now, the authors now offer you hard labour in the form of games. You are required to concentrate hard, and although they are effective and educational, they are far from light relief.

Learning Spanish is probably a more thorough way of learning the language than any of the others, but it's far from easy going. It is therefore recommended really only for those who are determined to get ahead in the language but who have to work on their own.

**PCW Details**

**Conclusion** Very thorough if hard work. Available in Spanish, French and Japanese.

**Price** £139

**Contact** Guldsoft 01752 895100

**Learning French, Beginners to GCSE**  
**Learning French, A Level course work**  
**Learning German, Beginners to GCSE**  
**Learning German, A Level course work**

This was the only set of language learning packages in the round-up based around the National Curriculum. In their original form they were sold to schools and have now been adapted for home use by individual students. Interestingly, these were the only ones to come on

disk and to run under DOS.

Divided into beginners to GCSE and A Level course work, both levels in the French and the German versions follow the same pattern. There are a number of different exercises, mostly based around multiple-choice answers, designed to test verbs, vocabulary and grammar points.

The vocabulary modules follow two patterns — find the right answer to a question, or fill in the appropriate missing word. In the GCSE packages this was simple, more of a familiarisation exercise; but in the A Level version it stretches your knowledge, including such things as workman's tools, or parts of a car.

You learn grammar through having to sort out jumbled words in sentences. In the beginners' section this is straightforward, but the A Level version points of idiom and structure are effectively taught by this method.

The verb section specifies number, tense and verb and asks you to find the correct answer. Unfortunately, all the answers remained the same all the way through the conjugation process and the number, for example "tu" or "du", was specified throughout, so possible sensible choices were limited. However, it is still a reasonable familiarisation exercise. The range of tenses covered is greater in the A Level version.

There are also several modules that you can put together yourself and this is where the original purpose as a teacher's aid becomes evident. There is a whole authoring section where you can add your own exercises, not necessarily a good idea if you do not know what you are doing.

The dictation package and playback facilities only work by recording someone's voice — the trade-off for not producing a CD where you can add a narrator's voice. This is a shame, as with a little more thought in converting for home use, this could have been an excellent package. But for two reasons this is still a useful aid. Firstly, the exercises are tailored to their purpose with reasonable learning potential. Secondly, it is the only one on disk and many people do not have a CD player. In spite of the limitations this imposes, it works in the program's favour.



*The Learning French package takes a conservative, thorough approach, with extensive vocabulary, verb and grammar testing. Unfortunately, this is reflected in the less than appealing interface*

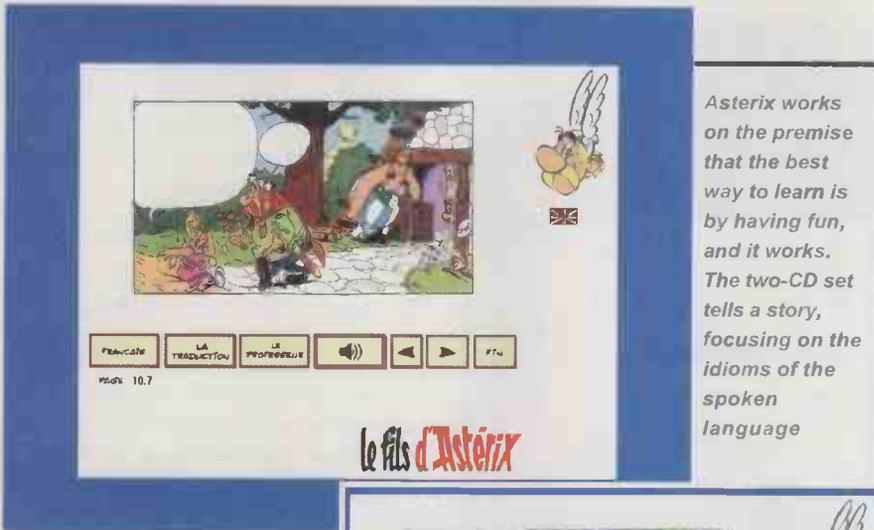


**PCW Details**

**Conclusion** Instructive, but a naff interface.

**Price** £19.99

**Contact** VCI Software 01923 255558



*Asterix works on the premise that the best way to learn is by having fun, and it works. The two-CD set tells a story, focusing on the idioms of the spoken language*

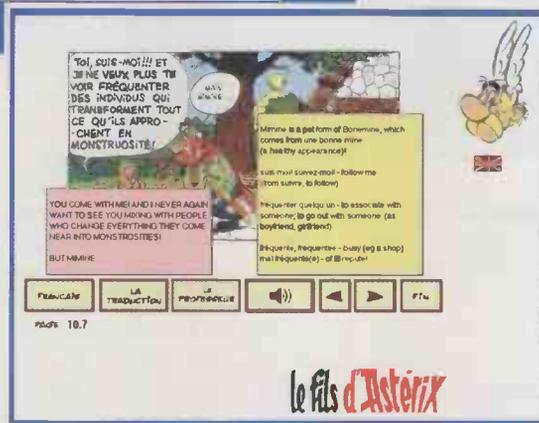
**Apprendre le français avec le fils d'Asterix**

This is by far the most fun product in this round-up. It is aimed at children, but it should please anyone. However, this does not mean it is lacking in educational value. Working on the basis that you learn best when you are enjoying yourself, this CD takes a difficult text and teaches through context. Most language is absorbed rather than learnt as you soak it up through familiarity and repetition. It concentrates primarily on teaching listening skills and uses this to introduce reading skills, vocabulary building and grammar points.

Most of the two-CD set is taken up with a single story. The first approach is to listen to it all the way through simply using the cartoons and the voices to help you. You can then step through slowly, taking each frame at a time in a more interactive approach to learning. Here you can display the French in the speech balloons and you can choose to see the translations and/or the help boxes. You can replay the sound as many times as you want, slowly grasping the meaning and familiarising yourself with the words.

True to the idea of immersing the user in French, the quiz is entirely in French and the multiple choice questions are all read aloud by a character from the story. Other sections include a question and answer section between the user, Obelix and Asterix, and a page where the characters introduce themselves.

The standard of French is high, but the story is such fun it makes you want to fully understand it. It also, of course, prolongs the life of the CD if you keep going back to it. Not recommended for beginners, but if you



have basic French, the grammar is not too difficult. The main learning areas are vocabulary and idiom. The presentation, learning potential and entertainment value make this disk highly recommendable.

**PCW Details**

**Conclusion** Brilliant idea, very nicely executed.  
Available in French and Spanish.

**Price** Disk £242, double pack £65

**Contact** EuroTalk 0171 371 7711



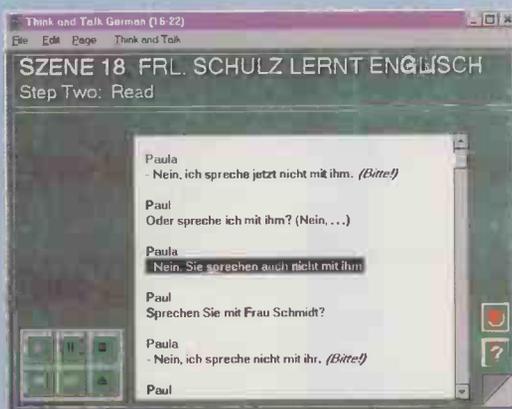
more from the narrative. At the end of each lesson there is a little quiz

*Écoutez-bien hones and tests your listening skills, but it's a little weak on grammar and vocabulary*

## Editor's Choice



While many of the packages in this test concentrate on specific skills, or merely on brushing up your existing knowledge, we felt the Editor's Choice should go to a package that offered it all. That made it a toss-up between the worthy Learn to Speak Spanish and the Berlitz Think and Talk German. The Berlitz package won for two simple reasons: it is the only one to cover all the skills you need on one disk and without recourse to other sources, and it was fun. After all, speaking a language should not be an



arduous task and the Berlitz managed to make the whole process just a little less painful.

which lets you answer questions with or without text to help you.

Although I was initially sceptical of the value of this package, it did prove a useful revision and reinforcement tool, as well as an excellent confidence booster.

### PCW Details

**Conclusion** Fun quizzes and games, good for improving your listening skills. Available in French only.

**Price** Écoutez-bien Dix Leçons or Dix Autres Leçons £42 each, double pack £65

**Contact** EuroTalk 0171 371 7711

### Best of the rest

There are numerous other language learning aids and here is a selection. First up is EZ Language from IMSI. This contains quick brush-up exercises for French, German, Spanish, Italian, Japanese and Russian. None are dealt with in detail; they are intended rather as quick reminders of the basics. There are quizzes and the chance to hear your voice spoken. *Price: £69.95 (each language also sold separately on floppy for £39.95 per language. Contact: IMSI 0181 581 2000.*

Triple Play Plus from Syracuse Language Systems includes a series of games for those with limited French to

practice their skills. The usual subjects are covered, including food, travel, people, numbers, home and office, and activities. Some of the games can be infuriating and of limited educational value, but useful for children.

*Price: £59.99 inc VAT.*

*Contact: J&S Software 01225 760743.*

French Your Way and Spanish Your Way are new packages from Random House New Media. At the time of going to press we only had a Beta copy, but the premise was easy to see. It includes a series of conversations in various scenes with cartoon visual aids and a certain amount of interaction, as you can choose options to make the conversation take slightly different directions.

*Price: £99.*

*Contact: Random House New Media 01621 816900.*

Finally, Vocabulary Builder and Pronunciation Tutor, available in French, German and Spanish, are both by Hyper-Glot and are in the same series as Learn to Speak Spanish. Both deal specifically with particular areas of language learning which could hold up your progress, and both are very thorough. The vocabulary builder has a huge dictionary divided into easily digestible chunks through subject headings. The pronunciation tutor carefully teaches exactly where in the mouth to pronounce sounds and makes extensive use of recording the user's voice. *Vocabulary Builder — Price: £44.95. Contact: Guildsoft 01752 895100. Pronunciation Builder — Price: £44.95. Contact: Guildsoft 01752 895100.*

## Translation

Why bother to learn a language at all these days? Why not just get a piece of software to run on your PC, producing a perfect translation of everything you type into it? At the moment, this idea is about as workable as the Babel fish in Douglas Adams' Hitchhiker's Guide to the Galaxy.

The idea of machine translation (MT) has been around almost as long as the idea of natural language processing. Many people automatically assume all translation is now done by software, and it is true that some professional translators do use certain pieces of software, especially for technical translation, and some of the larger organisations, such as the Commission of the European Community, use MT for their everyday internal mail. These professional applications do not run on PCs, however, but on Sun workstations or IBM mainframes.

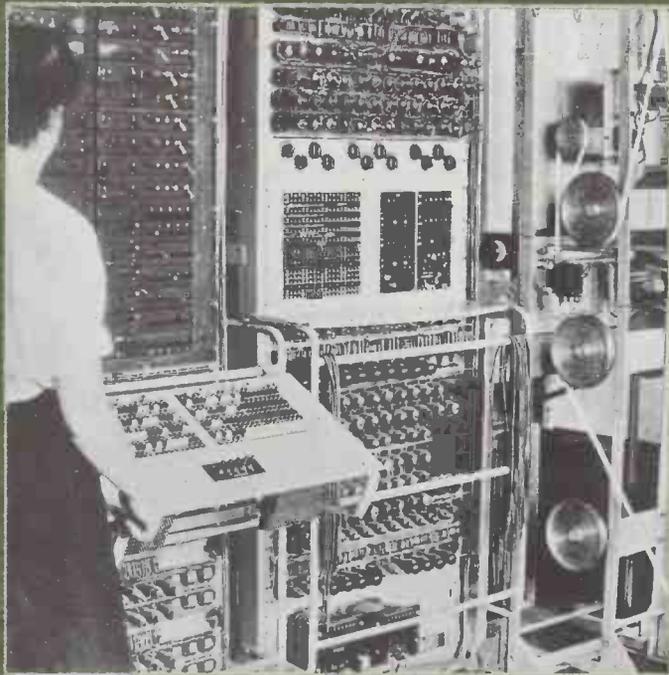
At present, all working MT systems work on language pairs: two languages are paired together and the code is written specifically for those two languages. This eases them together through a series of what often turns into make-do-and-mend solutions. The ultimate dream of MT researchers is to produce a translation

system that can "translate" one language into an intermediary form and, from there, translate it into several other languages. This way, the necessary code is significantly reduced, but as yet this method is still in its early development stages.

The success of MT depends very much on the complexity of the language used and the amount of customisation one is prepared to carry out on the dictionaries and glossaries contained within the software. For these reasons, technical documents are ideal candidates for MT. They tend to be syntactically simple, repetitive and dependent on a specific, limited dictionary.

For other translation needs such as business letters, there is a crop of MT software which you can run on your PC at home and will cost anything from £399 for Power Translator Professional, to £49 for the Language Assistant series, both from Globalink. Both use language pairs and neither claims to be a translation panacea. They are intended to produce rough translations which act as a good grounding, but they will need to be post-edited. They are business aids, not mechanical translators.

"The earliest programmable electronic computer was a 1500 valve giant code named 'Colossus'.



Formulated by Professor Max HA Newman and built by TH Flowers, it was installed at Bletchley Park, Bucks in December 1943 to assist Britain's secret code breakers during World War II.



Today, 52 years on, we are proud to announce 'System 95' by Colossus,



the ultimate new range of PC systems that release the power, compatibility and versatility of Windows® 95."



Colossus unlock the power,  
compatibility and the versatility  
of Windows 95.



Meet our new  
'System 95' by Colossus



SYSTEM 95  
by COLOSSUS

Make no mistake about it "System 95" by Colossus is special, even unique, and heralds a breakthrough in 32-bit computing. Since the birth of the IBM compatible in the early 80's that remarkable and time resilient bolt-on system has demonstrated, time and time again, its ability to adapt and access extra features via third party add-in cards. These "add-in" cards were most times, highly innovative, sometimes expensive, but more often than not they could not perform to their full capability because of conflicts and bottlenecks when installed in the existing system. Our research team at Colossus, while examining and evaluating the potential of Windows 95 took a long and hard look at these incompatibilities and bottlenecks and with the collaboration of some of the world's technology leaders have developed and integrated new configuration procedures that take Plug and Play compatibility, ease of use and indeed raw speed and power to the ultimate. Hand on heart "System 95" by Colossus is state of the art in a PC and there is nothing around (we know) to touch it.



All Systems are fully  
plug and play compatible  
and include:

- PCI Bus
- Intel's Triton chipset architecture
- 256k burst mode SRAM cache
- Flash BIOS for future upgrades
- MPEG video playback with full Digital Control Interface (DCI) and Indeo® video
- Orchid NuSound sound card featuring 3D spatializer surround sound effects and voice recognition
- Six speed CD-ROM drive 190ms access time
- 70 Watt premium stereo speakers
- 8 or 16Mb EDO RAM memory expandable to 128Mb
- 2 Enhanced serial and 1 parallel port
- Mouse and keyboard
- 3.5" floppy disk drive
- 15" or 17" Non interlaced SVGA colour monitor
- Windows 95
- Novell PerfectOffice (for details see opposite page)
- Encarta® '95 plus 6 CD multimedia titles
- Choice of desktop, midi tower or full tower case styles



'System 95' by Colossus model P100 Midi-Tower

- Intel 100MHz Pentium® processor
- 16Mb EDO RAM
- 1.08Gb 11ms EIDE drive mode-4 F80A-2
- Diamond Stealth 64 3200 2Mb VRAM video card
- 15" Non interlaced SVGA colour monitor
- Midi tower case

Plus all the specifications listed alongside

£1999 +VAT

£2729  
+VAT

P150 model £2999+VAT

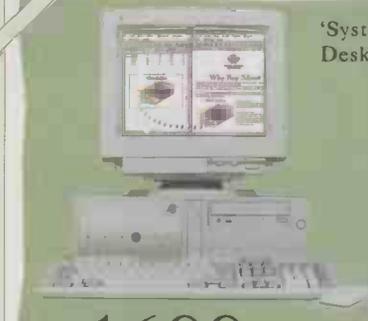


'System 95' by Colossus model P133

- Intel 133MHz Pentium® processor
- 16Mb EDO RAM
- 1.6Gb 11ms EIDE drive mode-4 F80A
- Diamond Stealth 64 3200 4Mb VRAM video card
- 17" Non interlaced SVGA colour monitor
- Full tower case

Plus all the specifications listed above

'System 95' by Colossus Desktop model P100



- Intel 100MHz Pentium® processor
- 850Mb 11ms EIDE drive
- 8Mb EDO RAM
- Diamond Stealth 64 3200 2Mb VRAM video card
- 15" Non interlaced SVGA colour monitor
- Desktop case

Plus all the specifications listed above

£1699 +VAT

ENGINE SPECIFICATION

- Intel Pentium® P75/100/133/150 CPU
- 8/16Mb of memory, expandable to 128Mb
- Intel Triton chipset, full PnP compliant PCI bus
- SMC 37C665 Multi I/O chip
- Enhanced IDE interface supporting up to 4 EIDE devices fast 4-mode
- Two high speed 16550 serial ports
- One high speed enhanced parallel port
- 256Kb mixed mode fast burst SRAM cache exp. to 512Kb
- 4 ISA (PnP) and 4 PCI (PnP) expansion slots
- Memory to PCI bus transfer rate of up to 100Mb p/sec

VIDEO SPECIFICATION

- Diamond Stealth 64 video 3200 graphics engine
- 2Mb fast VRAM expandable to 4Mb
- 64-bit graphics performance
- Flicker free refresh rate up to 120Hz
- MPEG playback
- Fully PnP compliant
- Accelerated real time video playback
- MPEG, INDEO and CINEpack compatible
- Full support for DCI (Digital Control Interface)

AUDIO SPECIFICATION

- Orchid NuSound PnP Audio Card
- Plug and Play 16-bit sound card
- CD-quality 16-bit audio with 64x over sampling
- Hardware wave table synthesis and MIDI support, 3D Spatializer audio technology giving surround sound
- MPC level II, Soundblaster pro, Roland MT-32 and MPU-401 compatible
- 1Mb Wave table in compressed ROM
- Up to 32 simultaneous voices, 190 instrument sounds and voice recognition
- 5 Channel sound (4 stereo, 1 mono)

# Meet the New Colossus SBF Office Series

We are good at building PCs and could easily build Colossus down to a price, for example, we could offer you just 4Mb RAM, but how are you going to run Windows 95? (included in the price) with anything less than 8Mb. We could offer you a dual speed CD-ROM drive, or no CD-ROM drive at all, but we include a fast access quad speed drive. We could offer you systems without PCI bus and without PCI cards, or no external cache, or perhaps a monitor that was interleaved. Even a cheaper chassis... but we don't. We offer you "the business, the best", because, to take advantage of Novell PerfectOffice (also included in the price) and new 32-bit software that is just around the corner, it makes no sense to consider anything less. Add-on for add-on, specification for specification, price for price, check us out. You might just get a surprise.



Now with DX4-100 processor and 850Mb hard disk as standard

### Colossus SBF Office Systems Standard Specification

- 486DX4-100 processor
- High performance PCI bus
- Pentium\* upgradeable
- 64 bit PCI graphics 1Mb
- 256k fast cache
- 8Mb RAM
- 3.5" 1.44Mb floppy drive
- 7 bay desk top case
- 14" low radiation 0.28 DP colour monitor non interleaved SVGA
- 1 parallel and 2 serial ports
- 850Mb 11ms enhanced IDE disk
- Quad speed CD-ROM drive
- 102 Keyboard and mouse
- Latest MS Windows 95 (or MS DOS and Windows for Workgroups 3.11 optional)
- Novell PerfectOffice with 6 leading software applications pre-loaded and ready to use

**£999** +VAT

### Colossus SBF Office Series Processor Options (specifications as above)

DX4-100 £999 +VAT	Pentium* processor models are inclusive of the Intel Triton Chipset	75MHz Pentium* £1099 +VAT	100MHz Pentium* £1259 +VAT
DX2-66 £949 +VAT		90MHz Pentium* £1179 +VAT	133MHz Pentium* £1499 +VAT

### Colossus SBF Upgrade Options (add the following amount)

<b>Card upgrades</b>	<b>Monitor upgrades</b>
16-bit sound card and stereo speakers +£50	14" to 15" +£70
16-bit ethernet LR2000 combi card +£40	14" to 17" +£300
14,400 BAPT internal fax/data modem with fax and data software +£80	<b>Memory upgrades</b>
<b>Hard disk drive upgrades</b>	System RAM upgrade for each 4Mb RAM +£100
From 850Mb to 1.08Gb +£50	Video DRAM upgrade to 2Mb +£40
From 850Mb to 1.60Gb +£150	Video upgrade to 2Mb VRAM +£140
From 850Mb to 540Mb -£30	Video upgrade to 4Mb VRAM +£260
	Six speed CD-ROM drive +£5

### Colossus Finance Example:

Max APR 19.8% Example: DX4-100 £999 +VAT  
 Delivery = £1196.16, 10% Deposit = £119.16, Balance = £1077.00  
 or 12 monthly payments of £98.73, or 24 monthly payments of £53.85  
 or 36 monthly payments of £38.89

For further details please ask for our finance brochure. Finance is available subject to status. Written quotations are available on request.



Certificate No. FS 28122  
BS EN ISO 9002:1994

**NOVELL**



Telephone

Northern Sales Office 01 282 77 00 88  
Facsimile 01 707 26 74 00

**01 707 25 88 99**

Colossus Computer Corporation Ltd. Colossus House, Travellers Lane, Welham Green, Hertfordshire. AL9 7DA

### About Colossus

We are Colossus Computer Corporation Ltd, a wholly owned subsidiary of the Granville Technology Group of Companies, the UK's premier direct PC supplier, with a customer base approaching 200,000. While we are fascinated about the early history of electronic computers (and happy to send you more information), our main task, of course, is to ensure that you, our customer, get the best deal around.

The Colossus Company is uniquely positioned in the PC marketplace in that we enjoy the stability of being part of a thoroughly and financially sound parent company, however, at the same time we have the flexibility of a manufacturing base that enables us to build and formulate system(s) and solution(s) specifically and, indeed, individually to our customers needs.

### Colossus Quality and Service

Our manufacturing facility is streamlined. We use the most advanced design and engineering techniques and our "Burn In" testing procedures coupled with the fact that we buy only the finest components for our systems will guarantee "Award Winning" Colossus reliability. As far as our service is concerned, from placing your order, through the delivery process, right through to free Technical Support, you will find at Colossus only knowledgeable and helpful people to advise you.

### The Colossus Range

Whatever system or systems you choose, you will discover that we can meet your every need to enable you to cope with today's, and importantly, tomorrow's fast moving developments in software and hardware technology. At Colossus we build every PC, client server, workstation, and transportable using our "Building Block" principle of upgrade paths right through to full solutions. Our Networking Division provide advice on complete range of advanced networking services which include Mission Critical Raid Level 5 Fault Tolerant Systems. Our service also includes consultancy, comprehensive quotations, full installation, cabling, implementation of multi-user network applications, training and support.

### Colossus BS5750

Having achieved BS EN ISO 9002 (BS5750 Quality Standards), we at Colossus have proven beyond doubt our ability to build, configure, install and maintain computer systems, and it is testament to the quality of our service and the reliability of our product, as well as our consistent value for money that the majority of our business comes from existing and recommended customers.

### Colossus Warranties

In our book "The Customer is King". (that's part of our mission statement), so, customer satisfaction and peace of mind are key objectives for us at Colossus. All our systems carry a full back-to-base 12 months parts and labour warranty as well as technical telephone support and we also offer a choice of on-site maintenance options and extended warranties.

### Colossus Terms of Trading

We offer credit facilities and business leasing to corporate customers (according to status). Official Government and Educational orders are welcomed. Payment can also be made by Visa, Access, Amex, cheque, etc. We can also offer finance facilities for individual customers, please ask for our Finance brochure.

### The Colossus Range - Want to know more?

Just give us a call on the number below and you will be in touch with one of a team of knowledgeable and highly trained sales staff.



All prices exclude delivery and VAT (17.5%). Delivery-Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. Software is pre-loaded, back-up CD and manuals are available as options. Intel Inside and Pentium\* processor logos are trademarks of Intel\* Corporation. All trademarks are acknowledged. E&OE.

Sales lines are open Monday - Friday 9.00am - 6.00pm

COLOFFIA

# Meet the New Colossus SBF Power Notebook Systems

The New Range of Colossus "on the move" Power Notebooks incorporate advanced features and high specifications such as exchangeable hard disk drives up to 1.2Gb, RAM capacity up to 32Mb as well as multimedia capabilities. With advanced touch pad mouse, Vesa

Local Bus Graphics, a choice of upgradeable screens and pre-loaded with Novell PerfectOffice (with its six leading applications), the high specification Colossus Notebook systems can be specifically built and formulated (SBF) by us for you at prices that are highly competitive.

## Colossus SBF Mono



£1159 +VAT

- 486DX4-100 processor
- 4Mb RAM expandable to 32Mb
- Removable 1.44Mb 3.5" floppy disk drive
- Removable 340Mb hard disk drive
- Choice of mono, dual scan or TFT screen
- 1Mb VESA local bus graphics
- 86 Key keyboard, 12 function keys
- One DB-25 pin parallel port, bi-directional with EPP/ECP support. One 9 pin serial port (16550 UART), keyboard, external monitor and mouse ports PS/2 type
- Additional ports for docking and optional IRDA and TV tuner modules

## Colossus SBF Dual Scan



£1529 +VAT

## Colossus SBF TFT



£1999 +VAT

- Two speakers built-in (Soundblaster and Windows Sound System 2.0 compatible). Optional - sound card module
- Two type II, or one type III PCMCIA slot
- LCD icon indicators
- Nickel metal hydride (NiMH) battery, 120/240 auto-switching adaptor. Full APM support. System supports suspend to RAM and suspend to disk functions
- Phoenix Systems BIOS, Flash upgradeable. Includes setup in ROM, user-defined power management options
- 8.85"(D) x 11.62"(W) x 1.97"(H). Weight 6.2 pounds
- Windows 95 (MS DOS & Windows for Workgroups optional)
- Novell PerfectOffice suite pre-loaded



## STOP PRESS! JUST ARRIVING Colossus SBF Pentium® Notebook Systems

We are pleased to announce the arrival of our new Colossus SBF Pentium® Notebook Systems. These, our fastest notebooks feature:

- Intel Pentium® 75 or 90MHz processor
- Minimum of 8Mb RAM
- Minimum 540Mb hard disk drive
- 16-bit sound card, built-in internal speakers
- Quad speed CD-ROM drive
- Built-in MPEG
- Choice of dual scan or SVGA TFT screens
- Windows 95 and Novell PerfectOffice pre-loaded
- Prices from around £2000

### Colossus 75MHz Pentium® Multimedia Notebook Computer

Hard Disk	8Mb	16Mb	32Mb
540Mb	£2179	£2259	£3029
810Mb	£2299	£2579	£3139
1200Mb	£2509	£2799	£3359

For 90MHz Pentium® CPU model +£200  
For 10.5" SVGA TFT model +£500

### Upgrades & Options

RAM upgrade per 4Mb	+£140
From 340Mb to 540Mb hard disk	+£90
From 340Mb to 810Mb hard disk	+£260
From 340Mb to 1.2Gb hard disk	+£480
12v DC car adaptor	+£60
Additional NiMH battery	+£99
Docking station	+£329
SMART battery pack	+£120
Sound card module	+£80
TV tuner module, infra-red & port replicator	£TBA
28.8 PCMCIA modem	£199
486DX4-75	£199

# Meet the New Colossus SBF Power Portable & Comms Systems



pentium  
PROCESSOR

The new Colossus Power Portable range provides substantial computing power for users who need desktop performance in a portable package. They are designed for mobile and industrial applications that require speed, expandability, and ruggedness and the most popular uses are in

network management, instrumentation, data capture, presentations and multimedia applications. Add a14.4 BABT voice/data fax modem card and you transform your power portable into a state of the art comms system.

## Colossus SBF CRT Colour



£1679 +VAT

- Colossus CRT portable features 9" Sony SVGA colour monitor
- Colossus "Lunchbox" portable case features LCD VGA mono, dual scan colour or TFT colour screens
- 486DX4-100 processor
- 8Mb RAM expandable to 128Mb
- 256k external cache & PCI bus

## Colossus SBF Mono



£1399 +VAT

- 540Mb IDE hard disk
- 3 drive bays and 5 slots
- 3.5" 1.44Mb floppy drive
- PCI s3 64-bit 1Mb graphics on CRT model (special card in others)
- Parallel & 2 serial ports and keyboard
- Windows 95 (MS DOS & Windows 3.11 for Workgroups optional)

## Colossus SBF Dual Scan



£2099 +VAT

## Colossus SBF TFT



£2999 +VAT

### Colossus Portable Upgrades

From 540Mb to 850Mb	+£30
From 540Mb to 1.08Gb	+£80
From 540Mb to 1.60Gb	+£180
From 540Mb to 2Gb SCSI II	+£580
Adaptec 2940 PCI SCSI controller	+£200

### Processor Upgrades

From 486DX4-100 to P75 Triton	+£100
From 486DX4-100 to P90 Triton	+£180
From 486DX4-100 to P100 Triton	+£260
From 486DX4-100 to P133 Triton	+£500

### Alternative Processor

From 486DX4-100 to 486DX2-66	£30
------------------------------	-----

### Other Options

NEC 6Xi SCSI CD-ROM	+£300
NEC SCSI/AT adaptor	+£60
16-bit sound card	+£40
Soundblaster AWE 32 Value	+£130
14" additional screen	+£160
15" additional screen	+£230
17" additional screen	+£460
14.4 BABT fax/data modem	+£80
28.8 BABT fax/data modem	+£150
800Mb tape back-up	+£150
1.7Gb tape back-up	+£220

### Additional RAM

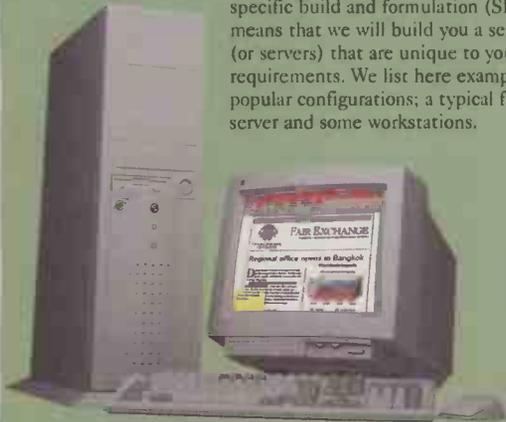
RAM per additional 4Mb	+£100
------------------------	-------

COLNOTZA

# Meet the New Colossus SBF Servers & Workstations



We did think about giving you lists and lists of specifications of our Novell Server options, but, frankly, server specifications are so unique to each individual business, our philosophy of specific build and formulation (SBF) means that we will build you a server (or servers) that are unique to your requirements. We list here examples of popular configurations: a typical file server and some workstations.



Colossus SBF 90MHz Pentium Processor Server

- Intel 90MHz Pentium processor
- Intel Triton PCI chipset
- Heavy duty power supply
- 9 drive bay full tower
- 16Mb RAM
- 256K fast cache
- 1.6Gb IDE hard disk
- SCSI II drive options with Adaptec 2940 PCI SCSI controller available
- 16-bit ethernet card
- 3.5" 1.44Mb floppy drive
- 64-bit PCI bus graphic with 1Mb
- 14" SVGA 0.28 colour monitor
- 102 keyboard and mouse
- Select desired Novell Netware operating system
- Select required server options

**£1439** +VAT  
Intel 100MHz Pentium +£80

## Colossus SBF Desktop Network Workstation



- 486DX2-66 processor
- PCI bus
- 8Mb RAM
- 256K fast cache
- 540Mb 11ms IDE hard disk
- 3.5" 1.44Mb floppy drive
- 64-bit PCI bus graphics with 1Mb
- 14" 0.28 colour SVGA monitor
- 16-bit ethernet card
- 102 keyboard & mouse
- MS Windows '95 (MS DOS and Windows for Workgroups 3.11 optional)

**£809** +VAT

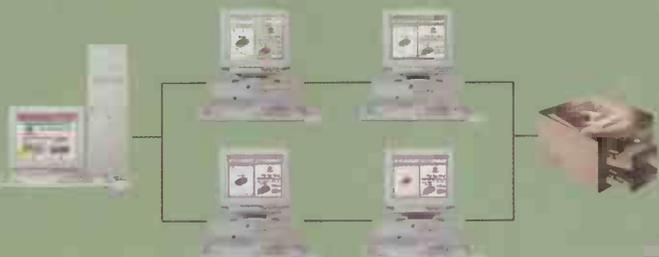
### Processor Upgrades

- 90MHz Pentium +£50 +VAT
- 75MHz Pentium +£150 +VAT
- 80MHz Pentium +£230 +VAT

Midi Tower case +£10.00

### Networking Example

Network configurations are infinite. Whether you require a peer to peer Network or a Client Server Network, we can offer you a complete Network Solution. Just call the number below and ask for the Network Division. Our typical Client Server plus 4 Network Stations plus software can cost as little as £5,000.



## Colossus SBF Server & Networking Upgrade Options (add the following amount)

- Hard Disk Upgrades**
- 540Mb to 850Mb +£30
  - 540Mb to 1.08Gb +£80
  - 540Mb to 1.60Gb +£180
  - 850Mb to 1.08Gb +£30
  - 850Mb to 1.6Gb +£130
  - 1.08Gb to 1.6Gb +£80
  - 1.6Gb to 2Gb SCSI II +£380
  - Adaptec SCSI controller +£200

- Memory Upgrades**
- System RAM per 4Mb +£100
  - 1Mb video RAM to 2Mb +£40
- Monitor Upgrade**
- 14" SVGA to 15" SVGA +£70
  - 14" SVGA to 17" SVGA +£300
- Case Style**
- Midi tower case +£10
  - Full tower case +£50

- Multimedia**
- Double speed CD-ROM +£60
  - Quad Speed CD-ROM +£100
  - 16-bit sound card +£40
  - Soundblaster AWE32 Value +£130
  - 16-bit ethernet card combi +£40
  - 16-bit ethernet 3COM +£70
  - 32-bit PCI ethernet card +£150

- Modems**
- 14,400 BABT fax/voice/data modem including software +£80
  - 28.8 fax/data Modem +£150
  - Tape Back-up +£150
  - 800Mb tape back-up +£150
  - 3.2Gb tape back-up +£220
  - 2Gb SCSI DAT drive only +£600
  - 4Gb SCSI DAT drive only +£750

- Server Options (Call for details)**
- Novell Netware 4.1.5 User
  - Novell Netware 4.1.10 User
  - Novell Netware 4.1.25 User
  - Cheyenne ARCserve Software
  - APC Smart-UPS 600
  - APC Smart-UPS 900
  - Powerchute Plus for Novell
  - Network installation & cabling

Mylex Raid Level 5 (12Mb cache) Controller £1899

### Colossus SBF Stand Alone Workstation 1



486DX2-66  
**£799**  
+VAT

DX4-100 CPU +£50

- 486DX2-66 processor with PCI bus
- 8Mb RAM
- 256K fast cache
- 850Mb 11ms IDE hard disk
- 3.5" 1.44Mb floppy drive
- 64-bit PCI bus graphic with 1Mb
- 14" 0.28 colour SVGA monitor
- 102 keyboard and mouse
- MS Windows 95 (MS DOS and Windows for Workgroups 3.11 optional)

### Colossus SBF Stand Alone Workstation 2



75MHz Pentium®  
**£999**  
+VAT

90MHz Pentium +£80  
100MHz Pentium +£160

- Intel 75MHz Pentium processor
- PCI bus with Intel Triton chipset
- 8Mb RAM
- 256K fast cache
- 1.08Gb 11ms enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- 64-bit PCI bus graphics with 1Mb
- 14" 0.28 colour SVGA monitor
- 102 keyboard and mouse
- MS Windows 95 (MS DOS and Windows for Workgroups 3.11 optional)

### Colossus SBF Stand Alone Workstation 3



100MHz Pentium®  
**£1499**  
+VAT

120MHz Pentium +£160  
133MHz Pentium +£240

- Intel 100MHz Pentium processor
- PCI bus with Intel Triton chipset
- 16Mb RAM
- 256K fast cache
- 1.6Gb 10ms enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- 64-bit PCI bus graphics with 2Mb
- 14" 0.28 colour SVGA monitor
- 102 keyboard and mouse
- MS Windows 95 (MS DOS and Windows for Workgroups 3.11 optional)

All prices exclude delivery and VAT (17.5%). Delivery: Systems £19, Laptops and large items £15, software and small items £10. Visa Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. Software is Pre-loaded, back-up CD and manuals are available as options. Intel® Inside and Pentium® processor logos are trademarks of Intel Corporation. All trademarks are acknowledged. E&OE.

Sales Lines are open Monday - Friday 9.00am - 6.00pm



Telephone

**01 707 25 88 99**

Colossus Computer Corporation Ltd. Colossus House, Travellers Lane, Welham Green, Hertfordshire. AL9 7DA

Northern Office Sales 01 282 77 00 88  
Facsimile 01 707 26 74 00



COLOSSUS

COLWK1A

# Meet the New Colossus Home/Office High-Spec Multimedia & More

If you are taking the plunge on multimedia, PLEASE DO IT PROPERLY. We have taken a long, hard look at the minimum specifications we believe make sense for our systems. We have decided to make Colossus High-spec's Internet ready and so include PCI plug and play, a fax/data modem, as well as a PIPEX Internet 30 day trial pack. We have also included a top quality quad speed CD-ROM drive and, indeed, Novell PerfectOffice.

Together with Encarta '95 and 6 more CDs as standard, we offer you a multimedia specification second to none.

£1099 +VAT  
486DX4-100 +£50



- 486DX2-66 processor
- High performance PCI bus
- 8Mb RAM
- 256K fast cache
- 850Mb 11ms IDE hard disk
- 3.5" 1.44Mb floppy drive
- 64-bit s3 PCI bus graphics with 1Mb
- 8 bay Midi-Tower case (or 7 bay desktop case £10 less)
- 14" 0.28 colour SVGA monitor

- 102 keyboard and mouse
- BAPT approved 14,400 fax/data modem
- Quad speed CD-ROM drive
- 16-bit sound card and speakers
- MS Windows 95 (MS DOS and MS Windows for Workgroups 3.11 optional)
- Novell PerfectOffice Software
- PIPEX Internet access pack

#### CD Software

Pack now includes MS Encarta '95

- Time Almanac CD
- Bodyworks 3.0 CD
- UFO for Windows CD
- Dinosaur Museum CD
- EZ Language CD
- Play and Learn Educational CD



#### Colossus 75MHz Pentium® High-Spec Multimedia

£1369 +VAT

- Intel 75MHz Pentium processor
- Intel Triton PCI chipset
- 8Mb RAM & 256K fast cache
- 1.08Gb 10ms enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- 64-bit PCI bus graphics with 1Mb
- 7 bay desktop case (Midi tower optional)
- 15" 0.28 colour SVGA monitor
- 102 keyboard and mouse
- 14,400 BAPT fax/data modem
- Quad speed CD-ROM drive
- 16-bit sound card and speakers
- Novell PerfectOffice software suite
- Encarta '95 plus 6 CD multimedia titles
- PIPEX Internet access 30 day trial pack
- MS Windows '95 (MS DOS & Windows for Workgroups 3.11 optional)

#### Colossus 90MHz Pentium® High-Spec Multimedia

£1689 +VAT

- Intel 90MHz Pentium processor
- Intel Triton PCI chipset
- 16Mb RAM & 256K fast cache
- 1.08Gb 10ms enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- 64-bit PCI bus graphics with 2Mb
- 7 bay desktop case (Midi tower optional)
- 15" 0.28 colour SVGA monitor
- 102 keyboard and mouse
- 14,400 BAPT fax/data modem
- Quad speed CD-ROM drive
- 16-bit sound card and speakers
- Novell PerfectOffice software suite
- Encarta '95 plus 6 CD multimedia titles
- PIPEX Internet access 30 day trial pack
- MS Windows 95 (MS DOS & Windows for Workgroups 3.11 optional)

#### Colossus 100MHz Pentium® High-Spec Multimedia

£2099 +VAT

- as 90MHz Pentium with
- Intel 100MHz Pentium processor
- 1.6Gb 10ms IDE hard disk
- 64-bit PCI bus graphics with 2Mb
- 17" 0.28 colour SVGA monitor

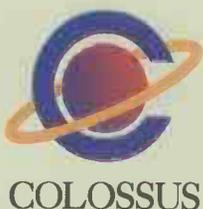
#### Colossus 133MHz Pentium® High-Spec Multimedia

£2599 +VAT

- as 100MHz with 133MHz Pentium® processor and 4Mb VRAM Video RAM

#### High-Spec Multimedia Options

- PC TV card with Teletext \_\_\_\_\_ +£160
- Soundblaster AWE32 value upg. \_\_\_\_\_ +£90
- 14.4 to 28.8 fax/data modem upg. \_\_\_\_\_ +£70



Telephone

01 707 25 88 99

Colossus Computer Corporation Ltd. Colossus House, Travellers Lane, Welham Green, Hertfordshire. AL9 7DA

Northern Sales Office 01 282 77 00 88

Facsimile 01 707 26 74 00



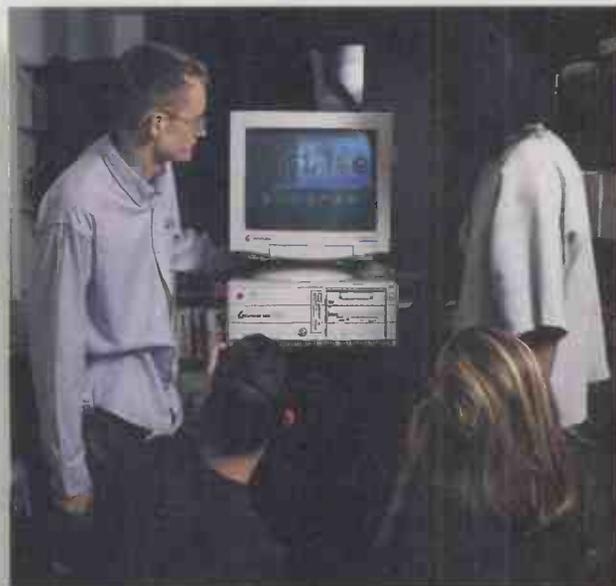
All prices exclude delivery and VAT (17.5%). Delivery: Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. Software is pre-loaded, back-up CD and manuals are available as options. Intel® Inside and Pentium® processor logos are trademarks of Intel® Corporation. All trademarks are acknowledged. E&OE.

Sales Lines are open Monday - Friday 9.00am - 6.00pm

COLMM1A

# How The Program was made

A television programme about computers couldn't look like *The Antiques Roadshow*. Malcolm Sutherland, director of Granada's *The Program*, takes you through the process of giving TV techs-appeal.



**C**omputers are under-represented on our TV screens. After the car, the PC is the most valuable domestic purchase made by consumers, but this is a market that has sprung out of nowhere. As a result, Granada decided to create a computer consumer show. What to buy, how well it worked, what to watch out for.

One of the biggest issues surrounding a show like this is the visual expectations of a computer-literate audience. How to create a programme about computers that looked as interesting as a computers game show? The answer was to look closely at the possibility of going fully digital in the editing and graphics side of the show, using a mixture of dedicated systems and desktop PCs.

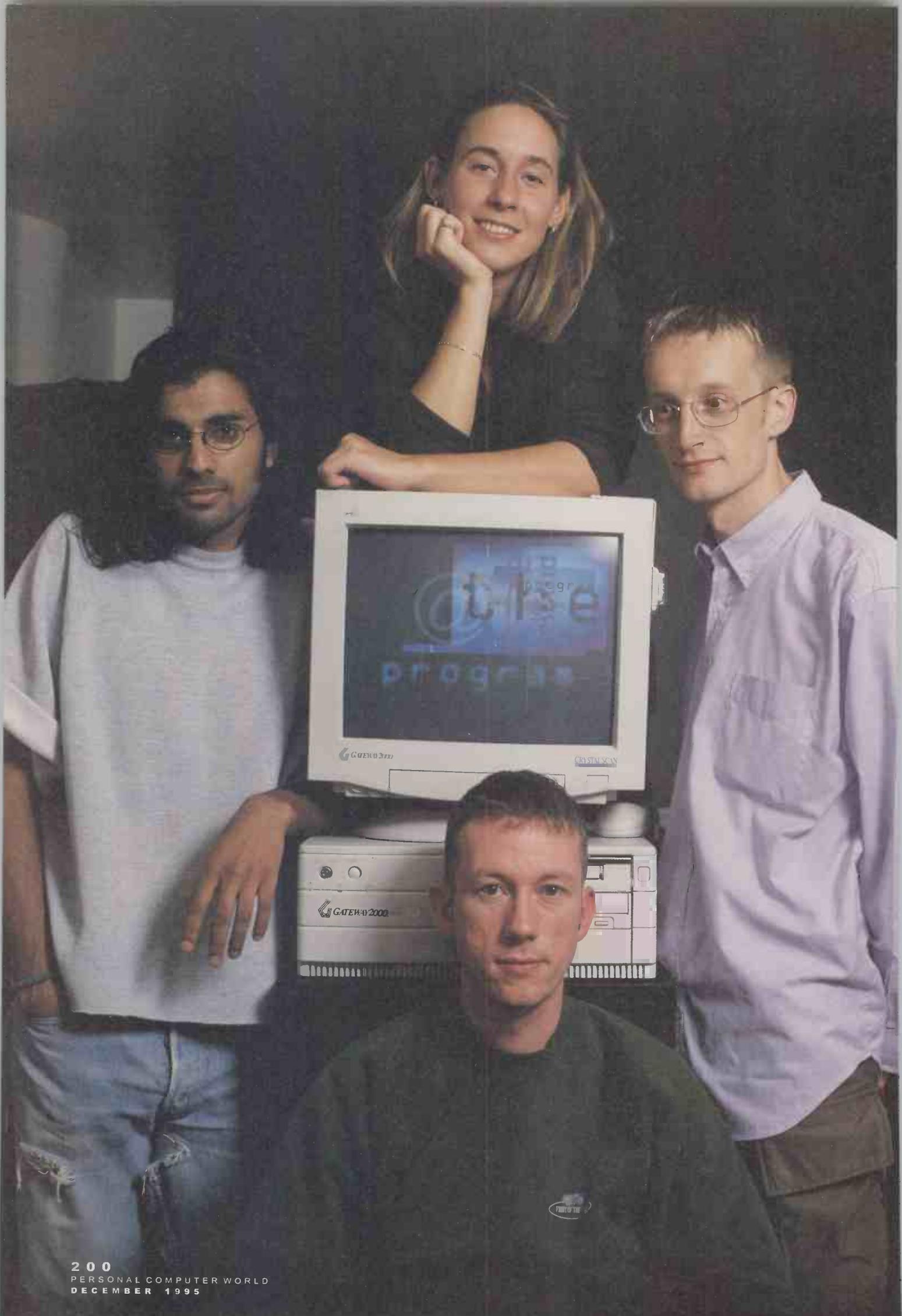
We looked carefully at two systems for editing, both Macintosh-based: Avid Media's Composer and Data Translations' Media 100. We settled for Avid, and used two quality levels for the programme: AVR 2 for rough-cutting tape, and AVR 27 for final laydown to tape. AVR 2 manages 30 minutes of footage per gigabyte and AVR 27 stores just over three minutes. The Avid machine came with 48Mb of RAM, dedicated sound and video boards and 27Gb of storage, which was just enough for one half-hour programme. Thank goodness storage costs have dropped so much in the last year!

We decided to create all the graphics using desktop packages. Photoshop was used for painting and storage,

AfterEffects 2.0 for animations. We bought a Power Mac 8100/80 and added 72Mb RAM, and an extra 2Gb hard disk. It worked like a dream.

The final challenge was to use a virtual studio. We filmed the show in a small, blue box and used a Silicon Graphics machine to create and render a backdrop design. I then went into the blue box for a rehearsal with cameras and decided on a provisional set of shots for the show. Robotic camera heads were used to ensure that the positions could be precisely reproduced. We stuck a large, wooden box in the centre of the space to allow the Silicon Graphics experts to match the shots I had chosen to the 3D background.

We ended up with a choice of 16



pre-formatted shots, with 16 backgrounds stored on disk. When we cut from a wide shot of the studio ("shot 1") to a close-up of our presenter, Tony Wilson ("shot 2"), the background changed from "background 1" to "background 2" at the same time. By the end of the series we were experimenting with animations within the backdrop. At the moment it isn't possible to move the camera within the virtual studio, but that's just a question of time; and when it is possible you will see some amazing visual effects.

Some of the results of the show are included on this month's cover disk. What you will see is quite distinct from the TV show, but we think it provides a taster. And some of the properties of a CD-ROM — the ability to consult a text note for instance — help some of the more informative reports. Ironically, although most of the work was created using Macintosh computers, with Quicktime 2.0 the vehicle for video, this CD-ROM is purely for Windows. We hope to go dual-platform next time.

We would like feedback, both about the CD-ROM, and about what you would like to see in a computer show on television. You can reach us on our web site <http://www.u-net.com/program/>.

### Producing high-quality digital video for CD-ROM

*Cimex's Ian Hayes explains how the CD was put together:*

The problems of sound and storage space have pretty much been solved on desktop computers, but when personal computers were conceived they were never intended to play digital video. To achieve full screen, full frame-rate video (as seen on our television sets), a data rate of 30Mb/sec is required. Most graphics cards are unable to cope with this throughput, and standard double-speed CD-ROMs can manage only 300Kb/sec. The solution is to compress.

Multimedia developers currently face two main solutions. The first is MPEG-1, which achieves near-VHS quality video but requires an additional board (MPEG Playback board, £300) to be slotted into your PC. MPEG worked well for applications Cimex has done for exhibitions and touch-screen kiosks, but the main drawback is that not many people have an MPEG card. The solution for the program CD-ROM was to use software-only playback of the digital video; this relies solely on the processing power and graphics hardware of the host machine. The two mainstream software video

solutions are Microsoft's Video for Windows, and Apple's Quicktime which is cross-platform (Mac/PC).

### Source material

There are several stages involved in producing the highest-quality material. The quality of the source is vital. It is easy to think you can make do with VHS video because your movies are only going to play in a small window, but this is not the case. Lack of image quality, and frame-to-frame differences caused by VHS, conspire to thwart the compression algorithms which are looking for identical areas in an image and small frame-to-frame differences.

The next stage is digitisation of the source. We were lucky with some clips which were held in digital format from the Avid digital video editing system, but the rest had to be captured. We used a PowerMac and a hardware (JPEG) compression board to reduce the data sufficiently to ensure the hard disk could cope with the flow of information, allowing us to easily grab quarter-screen 25fps video with the minimum of compression.

### Editing

Once grabbed, the video was ready to edit. Special effects were then added and graphic elements overlaid using alpha channels. (An alpha channel is an extra channel of information, over and above the Red/Green/Blue which contains information on how transparent a graphic element is.)

Before final compression, a smoothing filter was applied to each sequence to minimise artifacts caused by the original JPEG compression. These may not be visible, but reduce the effectiveness of the final compression algorithm. If the video had to be resized, we ensured that a high-quality bi-cubic spline interpolation method was used to maintain the linearity of the digital images, rather than nearest-neighbour methods as used by the majority of low-end digital video editing packages.

### Final compression

The cross-platform Cinepak codec (compression/decompression algorithm) was chosen for final compression. At this stage, the data rate and the final 15-per-second frame rate used for most of the clips is set to ensure satisfactory playback from a double-speed CD-ROM. Digital video codecs are designed to allow fast decompression, but one

## How a TV programme is made

The traditional way to make a television programme is to shoot on broadcast-quality video (Betacam SP), create a rough edit (called an offline) and then conform that to broadcast quality (in an online suite). Traditionally, offline editing has been done using VHS-type quality tapes. In recent years, companies like Avid and Lightworks have brought out offline-computer based systems, turnkey systems that use basic PC platforms (Mac or DOS) allied to expensive customised hardware. Tapes are digitised onto hard disks and editing is carried out electronically. Their big advantage is that they allow an editor to work in a non-linear way. At the end of this electronic offline process, an EDI (edit decision list) is created. This is taken into the online suite where the various decisions are recreated at higher quality using dedicated equipment. Graphics and sound are also integrated. A typical online suite costs £1million.

Graphics platforms were digital ten years ago, and most broadcast work is centred around Quantel workstations. Photoshop work is done on a system called Paintbox; animations are created using HAL or Harriet. The cost of these systems means complicated graphics are expensive to create, which mitigates against low-cost shows. As the power of desktop systems increases, the software effects which used to be the preserve of high-end digital systems are being successfully reproduced on Macs and Intel platforms.

There is no doubt that TV is going to change its reproduction methods dramatically over the next two years. Digital video capabilities are trickling down to consumer machines very fast. The new Power Mac range is impressive, and it won't be more than two or three years before there are post-production suites that cost no more than £5,000.

minute of video can take around an hour to compress, even on a fast Power PC Macintosh.

### PCW Contacts

Cimex 0171 609 3050  
 Compuserve  
 100640.261@compuserve.com  
 The Program <http://www.u-net.com/program/>



# Get started with Delphi

It's hands on this month, as the free space application is developed into a truly useful utility. Subjects tackled include calling the Windows API, creating objects at runtime and using the timer control. By Tim Anderson.

Last month's introduction to Delphi showed how to create a program to inspect the free space remaining on your hard drive. Let's face it, it was a pretty hopeless utility. It did not monitor free space, but only reported when you clicked a button. And it only worked on one drive; the C drive. A useful space monitor would update regularly and would show space on all your drives, not just one.

This tutorial shows how to enhance the utility to do just that, also displaying a small gauge for each drive to show what percentage of the disk is full. Along the way many important features of Delphi are revealed. The enhanced version is substantially different, so it is best to start a new Delphi project rather than amend the old one.

The application will need to run through several stages. Here is the sequence:

1. Find out how many drives are on the system.
2. Create labels and gauge controls for each drive and then place them on a form.
3. Size the form appropriately.
4. Update the controls at regular intervals.

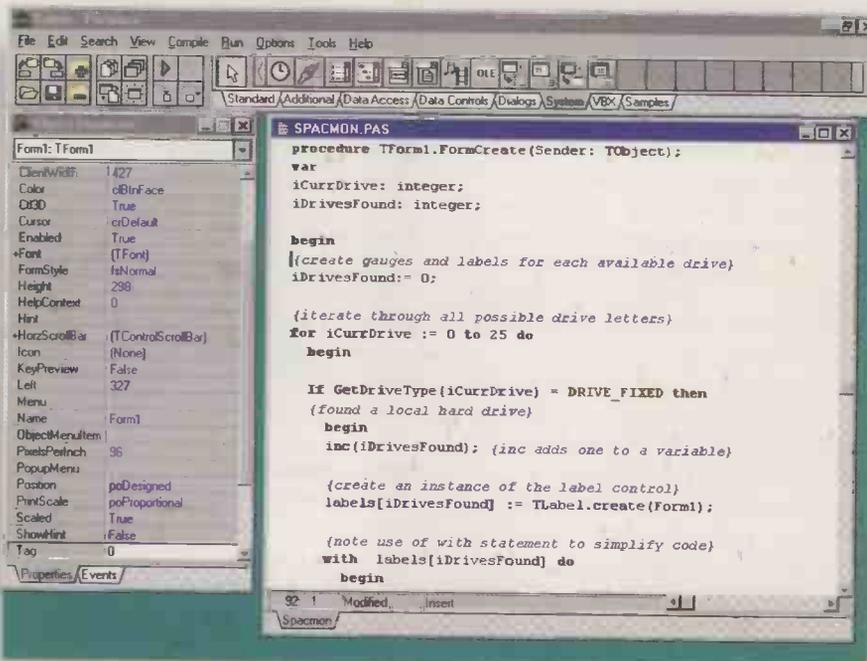
## Searching out the drives

The simplest way to find out how many drives are on the system is to run through each possible drive letter, from A to Z, and to call a Windows API function, `GetDriveType`, to discover what type of

drive it is. Delphi's online help has an API section which gives Delphi-specific syntax. It shows that `GetDriveType` takes an integer which specifies the drive (0=A, 1=B, etc.) and returns one of four values: 0: drive does not exist  
DRIVE\_REMOVABLE, DRIVE\_FIXED or DRIVE\_REMOTE: shows type of drive.

Delphi makes calling API functions particularly easy, since all the necessary declarations and constants have been done for you (in the `WINPROCS.PAS` unit).

It is unlikely that a user would want to monitor space on removable or network drives. Therefore, the space monitor



Double-clicking a Delphi form opens the `FormCreate` method; ideal for code which sets up controls on the form

checks all the possible drives testing for the DRIVE\_FIXED result with an "if" statement. Other drive types are ignored.

### Creating labels and gauges

When the application runs, it needs to create a label and a gauge for each relevant drive. There is a gauge control supplied with Delphi, on the Samples tab of the component palette. But it is not putting a gauge or two on the form at design time, since there is no way of knowing how many are needed. The answer is to create them at runtime. The technique used is as follows:

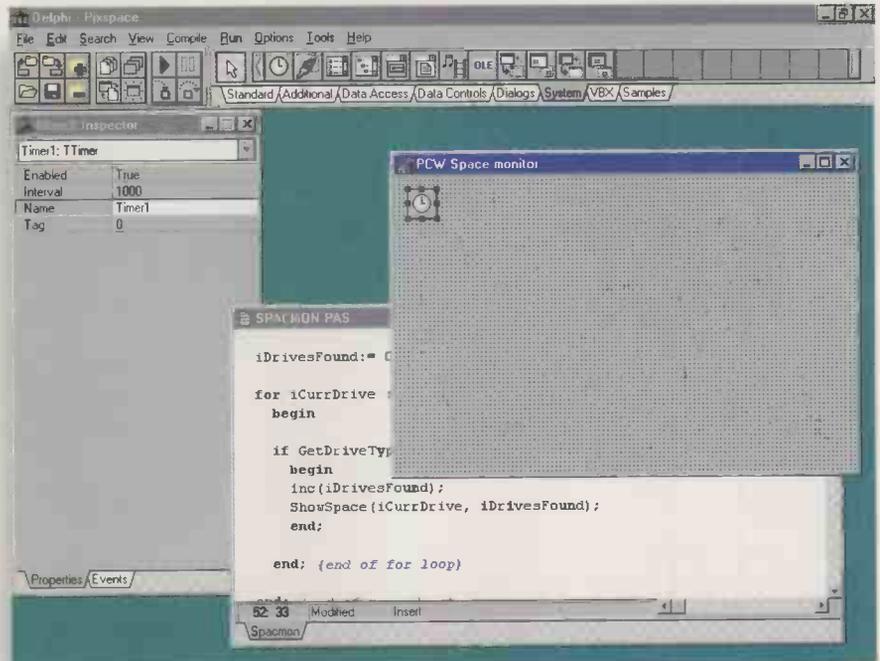
1. Start a new project.
2. Click on the unit tab and find the use clause near the top. Add Gauges and StdCtrls to the list of comma-separated units. Delphi would add these automatically if we drew a gauge and label at design time, but in this case the controls are created at runtime so the reference has to be inserted by hand.
3. Just below the uses clause, find the section that declares the TForm1 class. There is space here to add private declarations, properties and methods that belong to TForm1. In this private section add:

```
Gauges: Array[1..26] of TGauge;
Labels: Array[1..26] of TLabel;
```

This declares two arrays of 26 elements, type TGauge and TLabel respectively. Because they are declared here, they will be visible to any of TForm1's functions or procedures.

4. Press F12 to redisplay the form, and double-click to open the FormCreate method. This code will execute when the form first opens, so is ideal for setting up the form as you want it. Enter code as shown in Fig 1.

This code creates a label and a gauge control for each local hard drive. Note the three essential stages in creating each control. First, a variable of that type is declared: this was done by declaring arrays. Second, a control object is instantiated (that is, an instance of that object is created) by calling the create method of the appropriate class. The create method takes one parameter, indicating the owner of the object, in this case Form1. That means the memory for the owned component will be freed when Form1's memory is freed. Finally, the control's parent property is set. A control's parent is the container in which the control resides, in this case also Form1. Other properties are set as required, but without a parent property the control could not be displayed.



The form at design-time looks alarmingly blank, since all the Space Monitor controls are created at runtime

### Fig 1 Code for the FormCreate method

(Cont'd over...)

```
procedure TForm1.FormCreate(Sender: TObject);
var
  iCurrDrive: integer;
  iDrivesFound: integer;

begin
  {create gauges and labels for each available drive}
  iDrivesFound := 0;

  {iterate through all possible drive letters}
  for iCurrDrive := 0 to 25 do
    begin
      If GetDriveType(iCurrDrive) = DRIVE_FIXED then
        {found a local hard drive}
        begin
          inc(iDrivesFound); {inc adds one to a variable}

          {create an instance of the label control}
          labels[iDrivesFound] := TLabel.create(Form1);

          {note use of with statement to simplify code}
          with labels[iDrivesFound] do
            begin
              height := 20;
              top := (25 * iDrivesFound) - 20;
              left := 5;
              parent := Form1;
            end;

          {now create an instance of the Gauge control}
```

**Fig 1 (cont'd) Code for the FormCreate method**

```

gauges[iDrivesFound] := TGauge.create(Form1);

{initialise the control's properties. Note use of
With statement to simplify code}
with gauges[iDrivesFound] do
begin
left := 100;
Top := (25 * iDrivesFound) - 20;
height := 20;
Width := 100;
MinValue := 0;
MaxValue := 100;
ForeColor := clAqua; {or a colour of your choice}
parent := Form1;
end;
end; {end of DRIVE_FIXED if statement}

end; {end of for loop}

{Now size form to neatly enclose controls}
width := 215;
height := iDrivesFound * 25 + 30;

{make always on top}
SetWindowPos(form1.handle,HWND_TOPMOST,0,0,0,0,SWP_NOSIZE or SWP_NOMOVE);

{call updateForm}
UpdateForm;

end;

```

**Fig 2 Code for GetDrive Type and iDrivesFound procedures** (Cont'd over...)

```

procedure TForm1.UpdateForm;

var
iCurrDrive: integer;
iDrivesFound: integer;

begin
iDrivesFound:= 0;

for iCurrDrive := 0 to 25 do
begin

if GetDriveType(iCurrDrive) = DRIVE_FIXED then
begin
inc(iDrivesFound);
ShowSpace(iCurrDrive, iDrivesFound);
end;

end; {end of for loop}

end; {end of procedure}

procedure TForm1.ShowSpace(iCurrDrive, iDrivesFound: integer);

```

Once the form is set up, the API function `SetWindowPos` is called to make the form always on top. The idea is that the disk-space monitor should show when other applications have the focus, for example when the setup program is running. The always-on-top setting ensures it is always visible. Finally, the code calls `UpdateForm` to fill the controls with the correct details. You have to write that, so don't look for it in Delphi's online help.

### Updating the form

With the form and controls created, it is easy to write the routine to fill in the details. There are two user-defined procedures involved. One iterates through the available drives, while the other actually calculates the free space. Both must be declared, in the Private section of the `TForm1` class definition:

```

procedure UpdateForm;
procedure ShowSpace(iCurrDrive,
iDrivesFound: integer);

```

The `ShowSpace` routine takes two parameters. The first is the number of the drive, as used when calling the `GetDriveType` function. The second, `iDrivesFound`, counts the number of drives for which we actually want to work out the free space. *Fig 2* is the code for the two procedures, which is entered in the Implementation section of the unit.

The `UpdateForm` routine detects the relevant drives in the same way as used in the `FormCreate` method. It is `ShowSpace` that does the real work, using a similar routine to that given last month. Note that the drive number, `iCurrDrive`, is incremented by one before calling the Delphi functions `DiskFree` and `DiskSize`. This is because the API function, `GetDriveType`, starts with 0 for drive A; while `DiskFree` starts with 1 for drive A, using 0 to mean the current drive. It's a typical inconvenience which would not happen in a perfect world, but at least it keeps programmers on their toes.

Delphi's string formatting functions are not as rich as some other languages, but one which is used here is particularly useful. The misleadingly-named `Copy` function is like Visual Basic's `Mid$` and returns a string that is part of another string. Therefore, `copy(somestring,1,2)` returns two characters beginning at the first character in the string.

### Adding a timer

The last enhancement makes the application monitor disk space at regular intervals. This job is ideally suited for a



**Increase your productivity with these companion products:**

-  **The RAD Pack for Delphi**  
All the development tools you'll need for maximum productivity and Rapid Application Development.
-  **Visual Solutions Pack**  
A collection of more than 30 custom controls for you to plug into your favourite visual tool.
-  **Delphi/Link for Lotus Notes®**
-  **Paradox Developer Tools**
-  **Paradox Runtime**
-  **Visual dBASE Compiler**
-  **Borland Database Engine**  
High performance database engine for Windows applications.

**Puts you in control of your business data**  
Visual dBASE® combines leading edge visual tools with a flexible yet easy programming language to deliver the most productive database for business professionals and applications developers.

**The scalable SQL server**  
This high-performance SQL server is specially designed to make it easy for you to scale PC and network applications up to the robust world of Client/Server.

**RADical performance windows development**  
Delphi™ is the next generation visual development tool. It combines an optimising native code compiler, visual RAD tools, and a scalable database engine, making it the fastest way to the latest applications.

**The high productivity C and C++ toolset**  
Borland® C++ targets DOS, Windows 3.1, and Win32 from a single development environment. Buy now and after Windows 95 ships you'll receive a free Borland C++ 4.5 update.

**Easy and integrated database power**  
Superior ease of use makes Paradox® a favourite desktop database with end users and developers alike. It's the best integrated companion for users of office suites.

**Spectacular reports from any data**  
It's the easiest way to create spectacular reports. Seamless connectivity to every major SQL and PC database lets you work directly and interactively with "live" data.

**A single-minded focus on developer productivity**

Borland has consistently listened to software developers and, as a result, we have come up with a complete range of development tools. Each product, a component of our development toolset, is designed with one objective in mind... making programming easier so that you become more productive.

**Visual tools, reusable code, incredible performance**

Borland tools give developers what they want... ease of use, innovative features, speed, and reliability. Take the Graphical Data Modelling in Paradox that maintains your entire Applications' Table Relationships or the Two-Way-Tools™ in

Visual dBASE that create code for you automatically while you design visually. Or Borland C++, the only tool that lets you reuse VBX controls in both 16 and 32 bit applications. Or the blazing speed of Delphi that lets you create .EXEs that are 10-20 times faster than interpreted code.

**Superior tools for DOS, Windows, and Windows 95 development**

Whether you're developing mission-critical custom applications, or shrink-wrapped software, Borland offers the most complete selection of high-performance, high-productivity programming tools. Combining power, innovation, and ease of use in an open

development environment, there's a Borland programming tool that's right for you. Call us, or see your local reseller to find out more about the exciting development products shown here. And don't forget to ask about our many productivity enhancing "companion products".

**Borland Connections - your partnership with Borland**

The Borland Connections scheme is designed to support relationships with organisations using Borland products, including Corporate organisations, Resellers, Training Companies and System Integrators. Members are provided with a special range of goods and services to ensure that their work with Borland products is as productive as possible.

**Visit your reseller, or for more information please call 0990 561281**

Internet: <http://www.borland.com/> • CompuServe: GO BORLAND

**Borland**  
Making Development Easier

**REGISTER NOW!**

**Borland Developer Roadshow Seminars and Workshops • for more information please call 0990 561281**

**DEVELOPMENT JUST GOT EASIER**

Copyright © 1995 Borland International, Inc. All rights reserved. All Borland product names are trademarks of Borland International, Inc. Borland's DELPHI products and services are not associated with or sponsored by Delphi Internet, an on-line service and Internet access provider. BI 6480

# VISION MASTER™ 17

*New*

High resolution. On-Screen Display menus with clear symbols and text. Full geometry, colour, convergence and moiré control

VESA-DPMS, Energy Star and NUTEK power saving

Compact cabinet design to save desk space

3 button user panel for ease of set-up and adjustment via OSD

## VISION MASTER PRO 17

Up to 1600x1200 at 72Hz,  
1280x1024 at 85Hz  
flicker-free refresh  
DiamondTron 0.25mm  
AG tube  
27-92KHz, 50-160Hz

**£619<sup>+</sup>**



Windows 95 Plug-and-Play (DDC) compatible

Anti-Reflect, Anti-Static Coating for clear, crisp display

CE mark

Ecologically manufactured, fully recyclable

Easy to operate tilt and turn base

## VISION MASTER 17

Up to 1600x1200 at 69Hz,  
1280x1024 at 80Hz  
flicker-free refresh  
Advanced FST 0.26mm  
DP tube  
27-86KHz, 50-160Hz

**£549<sup>+</sup>**

## POWER • PERFORMANCE • QUALITY

Just when the competition thought it was catching up *iiyama* announces the **BRAND NEW VISION MASTER 17** and **VISION MASTER PRO 17** colour monitors. Both models have top-end performance and features but at prices that won't make your eyes water. To date *iiyama* has won 18 major UK computer magazine awards in as many months for its current **VISION MASTER** range. No other manufacturer has come even close to matching this unique achievement. Building on this fantastic success the engineers at *iiyama* have redesigned the family, added new models and many advanced features, making them perfect for today's demanding GUI based applications. All backed with an unrivalled 3 year warranty, 30 day money-back guarantee and free technical support from *iiyama direct*.

See the 15", 17" and 21" VISION MASTER models for the complete picture

## THE AWARD WINNING 17 & 21 TEAM



Computer Buyer  
Sept 1994



Personal Computer World  
Feb 1995



What Personal Computer  
July 1994  
Sept 1995



PC Plus  
June 1995



PC Magazine  
April 1995



Windows User  
June 1994



What PC?  
July 1994  
March 1995



Computer Shopper  
May 1994  
May 1995



PC Pro  
January 1995



PC User  
August 1995



contact your nearest authorised *iiyama* dealer for more information

AVON COMPUADD 0117 988 6600	CAMBRIDGESHIRE REDBOX 01480 405541	FOX COMPUTERS 01621 744500	HAMPSHIRE TARAN MICROSYSTEMS 01256 817007	01254 676921 SCAN INTERNATIONAL 0161 725 9059	SIMPLY COMPUTERS 0181-523 4020	CD REVOLUTION 01932 562000	PANRIX ELEXTRONIX 0113 2444958
BEDFORDSHIRE GRAPHICS EXPRESS 01582 450525	COUNTY ANTRIM BIC SYSTEMS 01232 233278	SOLIDISK 01702 354674	MANITEK COMPUTER SERV 01489 576176	LEICESTERSHIRE CITY BUSINESS SYS 0116 2511000	MIDDLESEX AZOE LTD 0181 943 2299	TAYSIDE TAYSIDE COMP TECH 01382 203965	WORCESTERSHIRE EVESHAM MICROS 01386 765500
MENTOR 01582 483381	DERBY DERWENT GRAPHICS SYSTEMS LTD 01332 203426	TEXATRON FIFE ITEK 01592 772737	HERTFORDSHIRE BEEBUG LIMITED 01727 840303	LONDON CARRERA TECHNOLOGY 0171-830 0586	INNOVATION DIRECT 0181 381 1117	WARWICKSHIRE COMPUTERS DIRECT 01203 673666	SCOTLAND ALIPA COMPUTING 01506 635100
BERKSHIRE GRAPHICS DIRECT 01635 873000	MONITOR'S DIRECT 01332 205552	GLOUCESTERSHIRE MONITOR MAN 01453 885599	HERTFORDSHIRE BEEBUG LIMITED 01727 840303	DISCOUNT DIRECT 0171-252 0000	WESTERN SYSTEMS 0181-842 0071	WEST YORKS COMPUTERS DIRECT 01675 464450	ALIPA COMPUTING 01506 635100
BUCKINGHAMSHIRE COMPUSYS 01296 395531	DORSET MICAL-DATA LIMITED 01425 271243	GREATERT MANCHESTER ADAMS TECHNOLOGY LIMITED 0161 8778822	LANCASHIRE TERMINAL DISPLAY SYSTEMS 01254 676921	EURO-ASIA 0171-498 7816	SUFFOLK COMPUTER CONNECTION 01473 232282	AIRESDALE BUS COMPUTERS 01274 737277	COMPUTERS DIRECT 0141 636 6866
PC WAREHOUSE 01908 221252	ESSEX		PINEAPPLE 0181-795 0971	SURREY	DATAFACTORS 01449 774044	GOLF COMPUTERS 01924 499366	WALES GENESIS TECHNOLOGY 01222 522212

+Average buy prices are indications of end-user pricing and exclude VAT and carriage. Depending on circumstances actual prices may be higher or lower. Specifications and prices subject to change without notice. E&OE. All trademarks and registered trademarks acknowledged.

*iiyama* UK Limited, 6-8-Viewpoint, Babbage Road, Stevenage, Herts, SG1 2EQ. U.K. Tel: 01438 745482 Fax: 01438 745483

**iiyama**



*The disk space monitor at work; revealing yet another hard disk under pressure*

timer component, which you will find on the System tab of the component palette. The timer is a non-visible component, so although it is placed on a form you will not see it at runtime. It has just four properties and one event. Set the interval property to specify how often the timer fires, in milliseconds.

This is a compromise. The more often it fires, the more up-to-date the space monitor will be; but if it is too short an interval, the application will grab too much processor time and the system will feel slow. The default of one second is reasonable.

Finally, the OnTimer event specifies what happens when the timer fires, and in this example all you need do is call the UpdateForm function, like this:

**Fig 2 (cont'd) Code for GetDrive Type and iDrivesFound procedures**

```
var
  sDrives: string[26];
  lFreeSpace: Longint;
  lDiskSize: Longint;
  iMegFree: Integer;
  sSpace: String;

begin

  sDrives:= 'ABCDEFGHJKLMNPOQRSTUVWXYZ';
  {A convenient way to map drive letters to numbers.
  The first char in the string has index of 0, second 1, etc}

  {work out free space}
  lFreeSpace := DiskFree(iCurrDrive+1);
  lDiskSize := DiskSize(iCurrDrive+1);

  {update gauge}
  form1.gauges[iDrivesFound].progress := trunc(100*((lDiskSize -
  lFreeSpace)/lDiskSize));

  {format free space and update label}
  iMegFree := Trunc(lFreeSpace/1000000);
  lFreeSpace := lFreeSpace - (iMegFree*1000000);
  sSpace := IntToStr(iMegFree) + '.'
    + copy(IntToStr(lFreeSpace),1,2) + ' MB';
  form1.labels[iDrivesFound].caption := sDrives[iCurrDrive +1] + ': ' +
  sSpace;
end;
```

```
procedure TForm1.Timer1Timer
  (Sender: TObject);
```

```
begin
  UpdateForm;
end;
```

On my 486 DX2/66 the whole routine takes approximately 0.015 seconds to execute, so the interval would need to be extremely short before there were any noticeable slowdown. Delphi is very fast indeed.

If you have Windows 95, you will find it interesting to run SpaceMon and watch the space change on the drive where you have your temporary files, especially when running Office 95, Exchange or the Microsoft Network. Windows 95 is greedy for disk space, and will display a misleading "Out of memory" message when it runs out. With the space monitor, all is revealed.

## Recommended reading

### Teach Yourself Delphi in 21 days

Authors: Andrew Wozniewwicz &

Namir Shammas with Tom Campbell

Publisher: SAMS Publishing

Pages: 944

Price: £23

Contact: Computer Manuals 0121 706 6000

If PCW's tutorial leaves you thirsting for more, you could do worse than this hefty tome from SAMS Publishing. It is divided into 21 day-at-a-time sections, although it is hard to believe that anyone would really use the book like this. That does not matter, since it is a well-indexed and thorough guide to Delphi which is rather more advanced than its title implies.

It tells you how to create your own Windows message handlers, and covers programming DLLs, DDE and OLE. Summaries, exercises, quizzes and do's and don'ts are sprinkled liberally through the book. If you have the patience for these, you will find them good and thought-provoking learning tools.

I was glad to see over 100 pages given to explaining object orientation in Delphi, a subject all but ignored by most other Delphi titles I have seen. This will be particularly useful for programmers coming from Visual Basic or xBase, to whom most of this is new territory. It is well-presented, combining general object theory with strong Delphi-specific and practical content. Unfortunately there are weaknesses as well. There is nothing on how to use pointers, and the database content is thin. But overall I highly recommend this title, the best introduction to Delphi I have seen.

### PCW Details

All the code for the Space Monitor project, together with an executable anyone can run, is included on the PCW cover disk/CD.

Contact **Tim Anderson** with your comments and queries, at the usual PCW address or email [freer@cix.compulink.co.uk](mailto:freer@cix.compulink.co.uk)

The  
notebooks  
that act  
like  
desktops.



**AcerNote 760i**

**£849\***

486DX4 75MHz processor  
4Mb RAM  
340Mb removable hard disk  
PCMCIA Type III slot  
Local Bus graphics accelerator  
9.5 inch backlit monochrome display  
with 64 grey shades  
MS® Windows® 95 or Windows for  
Workgroups™ operating system

**AcerNote 767ic**

**£1299\***

486DX4 75MHz processor  
4Mb RAM  
420Mb removable hard disk  
PCMCIA Type III slot  
Local Bus graphics accelerator  
9.5 inch DualScan STN colour display  
MS Windows 95 or Windows for  
Workgroups operating system

**AcerNote 767ic**

**£1399\***

486DX4 75MHz processor  
4Mb RAM  
510Mb removable hard disk  
PCMCIA Type III slot  
Local Bus graphics accelerator  
9.5 inch DualScan STN colour display  
MS Windows 95 or Windows for  
Workgroups operating system



**Micro  
Anvika**  
C.o.m.p.u.t.e.r  
*solutions*

**TEL: 0171 636 2547**

Micro Anvika Computers Ltd  
London

**Portable.**  
COMPUTERS

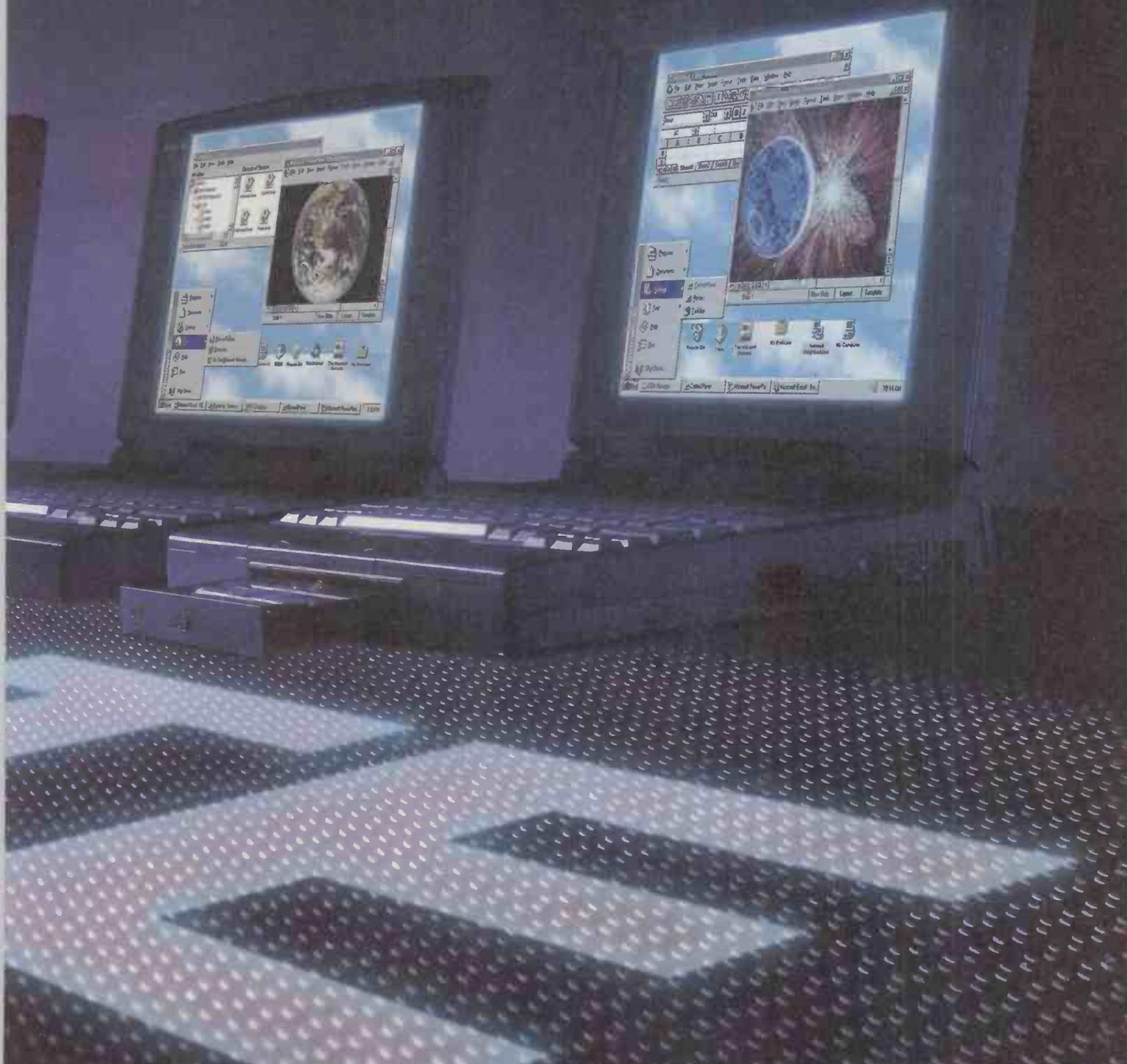
**TEL: 0800 252230**

Portable Computers Limited  
Redditch, Midlands

**NAGA**

**TEL: 0181 384 2001**

Naga Electronics Limited  
Uxbridge



**AcerNote 350**  
**£1599\***

5x86 100MHz processor  
 8Mb RAM  
 420Mb removable hard disk  
 PCMCIA Type II slot, optional  
 PCMCIA Type III slot module  
 Local Bus graphics accelerator  
 10.4 inch DualScan STN  
 colour display  
 EastTouch™ touchpad  
 MS Windows 95 or Windows for  
 Workgroups operating system

**AcerNote 950**  
**£3149\***

Intel® 75MHz Pentium® processor  
 8Mb RAM  
 Removable 510Mb hard disk,  
 CD-ROM drive and diskette drive  
 Internal/removable AC adapter  
 PCMCIA Type III slot  
 Local Bus graphics accelerator  
 10.4 inch Active Matrix  
 colour display  
 AcerDock 1 docking station option  
 EastTouch™ touchpad  
 MS Windows 95 or Windows for  
 Workgroups operating system



TECHNOLOGY  
 for  
 Business  
 P L C

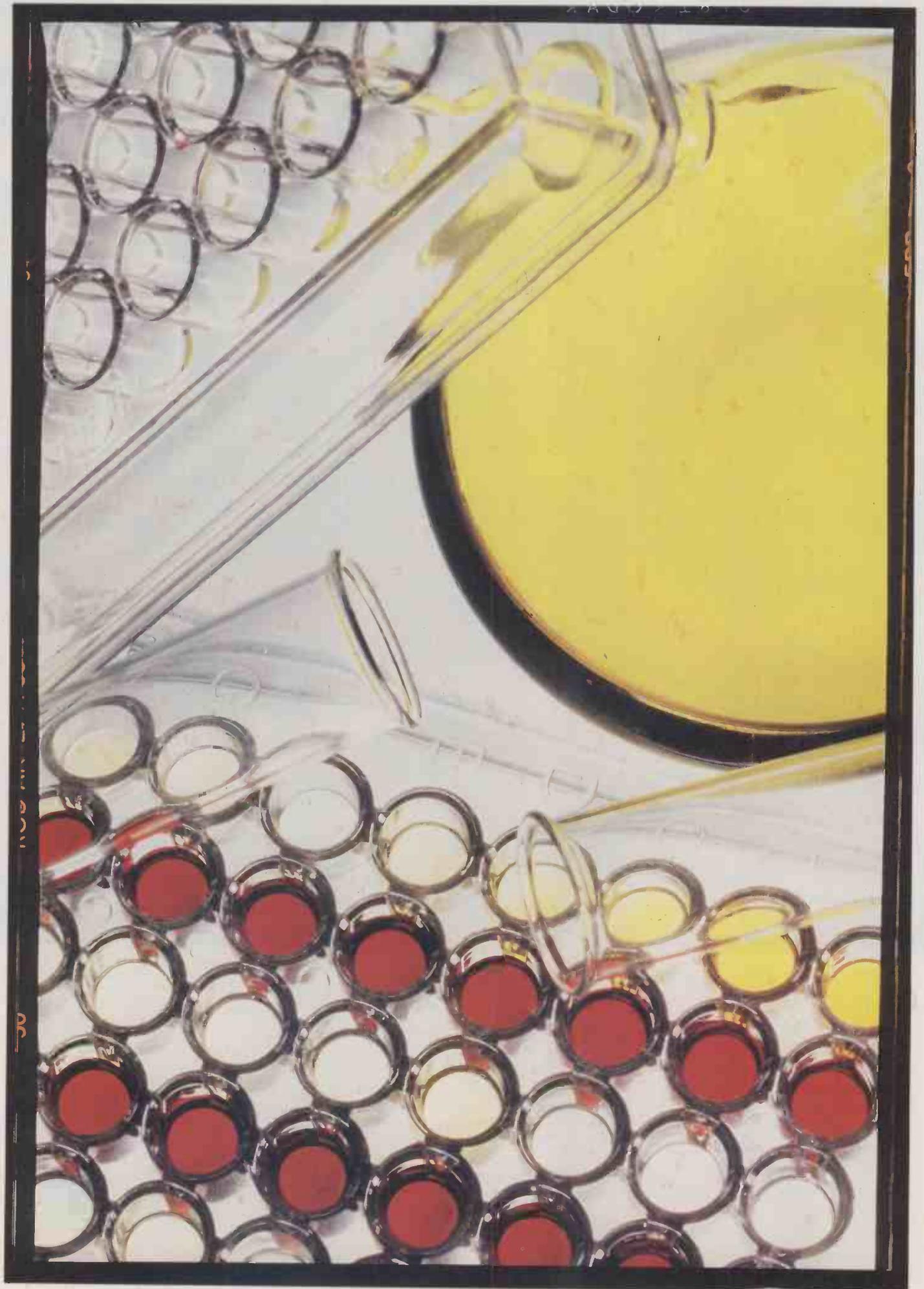
**TEL: 01932 781120**

Technology for Business plc  
 Middlesex



**Global Brand, Local Touch.**

Acer UK Limited, Maddison House, Thomas Road, Wooburn Green, High Wycombe, Bucks HP10 0PE.  
 \* All prices shown exclude VAT and delivery charges. All prices and specifications shown are subject of change without notice or obligation. Pentium and the Intel Inside and Pentium Processor Logos are registered trademarks of Intel Corporation. Windows is a registered trademark of Microsoft Corporation.



# Germ warfare

The result of a virus infecting your PC can be devastating. Both home and corporate PCs alike need adequate protection, so Adrian Mars tested eight anti-virus packages to help you fight the infection. And because forewarned is forearmed, he passes on a comprehensive battle plan of virus types, what to do if you think you have one, assesses the high risks, and more.

If you get a virus you can count yourself fairly unlucky. The risk is on a par with losing a hard disk, but the chance of a virus damaging your data is considerably lower. Viruses do, though, pose a special threat. Hard-drive failures only affect one machine at a time, but having to phone everyone who has floppies that have been in your PC is embarrassing enough. When a business is involved it is worse: in the absence of up-to-date anti-virus software, a virus can spread throughout an organisation before it is detected.

Even though well over 96 percent of viruses are not designed to damage data, they are still a nuisance. Because nearly all common viruses install themselves in memory and stay active, they can interfere with other programs. For example, the "Jerusalem" virus uses DOS interrupt 21h which is also used by Novell's NetWare network operating system. It therefore disables NetWare and brings down network servers. Even worse, because of a bug, it can unintentionally overwrite

parts of Windows executable program files. And some viruses compound the harm each has done. If a machine becomes infected by more than one virus, the potential for a bug in the virus-writer's code causing problems becomes greater. Another reason for removing viruses is that is difficult to be certain that the strain identified by an anti-virus package has not been modified.

The cost to a business of removing a virus in terms of lost time and money, can be considerable. It takes several minutes to check a PC and a minute or so to scan each floppy. And every disk needs to be checked. Since these can run into the hundreds or even thousands, a supposedly benign virus is much more than an annoyance.

Some of the most problematic viruses contain a destructive "payload" set for a specific date. The virus merrily spreads its way from PC to PC. Nobody suspects a thing, then, wham! — the damage can,

PCW Photographic Illustration by David Whyte

Anti-virus software Contents	
214	F-PROT (shareware)
214	Microsoft Anti-Virus (MSDOS 6)
218	Dr Solomon's A-V Toolkit
219	McAfee VirusScan Win95
219	McAfee VirusScan Win/DOS
220	Sophos Sweep
223	Norton Anti-Virus Win95 & Norton Anti-Virus, Win/DOS
212	Protecting servers
223	Editor's Choice
224	Think you may have a virus?
224	Where do viruses come from?
226	Types of virus
226	Table of features

on occasions, be appalling. The most notorious, Michelangelo, is a boot-sector virus. On 6th March — Michelangelo's birthday — it wipes both hard and floppy drives as soon as the PC is switched on.

## Types of scanner

"Checksum" virus scanners look for unexpected changes to executable files. They generate a checksum (or Cyclic Redundancy Check) for every executable program each time the scanner is run. If a checksum changes between scans — because of the extra bytes a file virus adds — the file may be infected. Checksummers are unable to identify viruses by name and are prone to false alarms, particularly when software is upgraded.

Some software, such as LapLink 3, writes its settings to the end of its open executable file, also triggering a false alarm. Some viruses such as "Starship" cunningly infect files only when they are copied from hard disk to floppy. When the file is copied back to the hard disk, the user tells the scanner that this is an

expected new file, when in fact it is infected — thereby totally foiling CRC or checksumming. Starship is also capable of creating a new boot partition on the hard disk containing the virus code which then runs the real boot sector stored in the original partition. Scanners that check for changed files also miss this trick.

Although they have many flaws, checksum/CRC generators are most likely to detect new breeds of virus missed by the most useful form of scanner; those that search for the known characteristics of specific viruses. In the early days when there were few viruses around, scanners simply stepped through every byte in a file looking for a known signature. Now that there are around 7,000 viruses and variants at large including polymorphic (viruses capable of changing form) viruses, scanners have to be more sophisticated. In order to check files at reasonable speed, they look for the tell-tale signs of specific viruses only at an expected number of bytes offset from the end of the file under examination. To confirm infection by a polymorphic virus, most scanners execute the virus in a secure area of memory, thereby using the virus's own decryption routine. Once the virus has decrypted itself, it can be identified. Scanners that look for specific viruses are available both as TSRs (terminate and stay resident programs) that check files and disks as they are accessed, or as DOS or Windows applications that will step through each file and examine the boot sector.

"Heuristic" scanners look for unknown viruses by detecting suspicious-looking code or behaviour. They are not a solution in themselves. They will always trigger false alarms, but a heuristic scanner is a useful addition to anti-virus software. If a virus is suspected but can't be identified, they can provide further confirmation.

Other tools, such as Dissent by Reflex Technology, work in partnership with a third party's anti-virus software. It is designed to be used in standalone PCs which write a "stamp" to floppies to confirm that they have been checked. A TSR running on desktop PCs rejects all unchecked disks.

Useful protection against boot-sector viruses is supplied as Firmware on ROM. Many BIOSs (Basic Input Output Systems) can be set to flag writes to the boot sector. Because they are run before a floppy disk is booted, anti-virus TSRs loaded from the hard disk cannot be

bypassed. Some BIOSs such as AMI's (American Megatrends Inc.) incorporate this method of protection. As a more draconian measure, many can also be set to boot from hard disk in preference to floppy, thereby preventing a boot sector virus being booted in the first place. AMI's BIOS has one fault; that the pop-up warning of a boot-sector write fails to mention it was generated by the BIOS. This can lead to potentially confusing virus alarms that apparently come from nowhere. A similar approach is taken by companies such as McAfee and Trend Micro Devices which produces ROMShield. It plugs into the empty Boot-ROM socket on Ethernet cards. Some security products supplied on AT expansion cards do the same job. Digipron Control Systems' Vigilant Plus is just such a card.

BIOS's protection of the Boot sector can be overcome by relatively few viruses that communicate directly with the disk controller thereby bypassing the BIOS, though they will not work at all in some machines as PC hardware varies too much.

#### Other operating systems

Windows NT is relatively safe from boot sector viruses. Research by Ian Whalley, editor of the *Virus Bulletin*, tested NT with nine common master boot sector viruses. Seven of them prevented Windows NT from booting, while two others successfully infected the boot sector but were unable to infect other floppies. File viruses were not tested, but experience suggests they behave normally but need a DOS box in order to execute.

Windows 95 will, in most cases, handle DOS viruses the same way as would DOS. Most boot sector viruses can successfully infect the hard disk and then go on to infect floppies — though Win95 will generate a warning if it detects changes to the boot sector. Almost all file viruses are able to replicate in a DOS box, and most will do so without one. In some cases though, Windows 95 will block them and issue an alert if it detects a low level write. Old DOS and Windows scanners will pick up most viruses under 95, although using them to repair damage can cause considerably more.

A few viruses have been written specifically for OS/2 although most of the problem is, unsurprisingly, posed by DOS viruses. Even though many are rendered impotent, others can run successfully from a DOS box. Anti-virus software specifically for OS/2 is available, and is just as necessary as on a DOS machine.

### Protecting servers



The only way a server can be infected by a boot sector virus is to boot it from an infected floppy. In any case, a DOS boot sector virus infecting a server cannot get access to users' files stored there. File viruses don't do anything special on a network. To spread from one machine to another, an executable file must be copied from workstation to workstation and then executed, just as if the infected executable had come from a floppy disk or via a modem. Corporate email systems that are able to transfer executables files with ease, increase the risks.

Many companies produce NLMs (network loadable modules), programs that work with Novell NetWare to either scan all files on the server as they are accessed or periodically scan files in the background. These are sold as separate packages by many anti-virus manufacturers. Since they use the same virus data file as their workstation-based products, the reliability of companies' standalone products is a good indicator of the effectiveness of their network versions. Since only one copy per server is needed, they offer good value for money when compared to workstation-based solutions.

Nevertheless, workstations should be periodically scanned for viruses. This can be triggered by network login scripts. Many workstation packages include facilities to schedule scans. Login scripts can also be used to download updated scanner data files to workstations.

Memory-resident scanners loaded by workstations at boot-up provide excellent protection, in particular against boot sector viruses stored on floppies that are unlikely to be specifically scanned. In network environments though, conventional memory is often in short supply. A few viruses have been written specifically to steal Novel passwords. They monitor login and write the password to a file in a known account.



# Kills 99%\* of all known viruses... Dead!

**\* Virus Bulletin (1995)**

- One clear winner ... the top product in terms of detection.

In the Wild	-	100%
Boot Sector	-	100%
Standard	-	100%
Polymorphic	-	99.5%

**\* PC Direct (1995)**

- Dr. Solomon excels at virus identification ... for first line protection against viruses you couldn't buy a better product.

**\* What PC & Software (1995)**

- ... has long enjoyed a reputation as one of the most complete and effective anti-virus solutions.

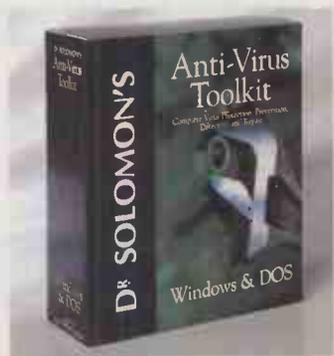
Version 7.5 of Dr. Solomon's award-winning Anti-Virus Toolkit is the most comprehensive virus protection yet. It now features WinGuard, a new "on-access" virus protection tool for Windows 3.x and Windows '95 users, as well as Advanced Heuristic Analysis, a technique that even finds unknown viruses.

And it doesn't stop there.

Version 7.5 scours ZIP, ARJ, PKLite, LZExe ARC and ICE compressed files. It already detects over 6,600† viruses and is uncovering new ones at the rate of 150/200 per month.

Available in Windows 3.x, DOS, OS/2, Windows '95, Netware, SCO UNIX, Windows NT and Macintosh versions, it provides the best possible protection for your enterprise, network or stand-alone PC.

Combining the best virus detection system on the market with the expertise of the world's leading research laboratory, version 7 is sure to clean up.



† (As of July 1995)

**DR SOLOMON'S**

Please send me more details of:  
Dr. Solomon's Anti-Virus Toolkit version 7

Name

Company

Job Title  No. of PC's

Address

Postcode  Tel No.



S&S International Plc, Alton House Business Park, Gatehouse Way, Aylesbury, Buckinghamshire HP19 3XU.  
Tel: 01296 318700 Fax: 01296 318711  
email: support@sands.co.uk

PCW 12/95

## F-PROT (shareware version)

**F-PROT** comes from Iceland and was created by the respected virus researcher, Fridrik Skulason. There's no charge for private use and organisations pay only US\$1 to register a copy.

The online virus data is of excellent quality and detail — the Professional (commercial) version lists more viruses. Even if this is not your main anti-virus tool it's worth downloading for the list alone. Unfortunately, it can't be searched.

Information is reached via an alphabetical list of viruses but this makes it impossible to find a virus if the software vendor refers to it by a different name.

There are two scan options. The heuristic scan checks for suspicious virus-like codes. "Secure" is a conventional scanner that looks for known viruses. This one has a couple of clever tricks up its sleeve: it looks for large blocks of data within executables, where viruses often hide, and it additionally uses two different search strings per virus. So it's more likely to spot unknown modifications to a known virus.

If it does find one, F-PROT offers configurable alternatives of reporting, deleting it or attempting to repair the file. Sensibly, it also offers the option of renaming infected files .VXE or .VOM so they can't be executed by mistake.



The list of DOS file extensions which F-PROT considers executable, can be edited. By default it searches the boot sector, executables and compressed files. And it warns you if it finds a compressed file form that it can't handle. The usual "scan all files" option is there, too.

F-PROT includes a DOS TSR (terminate and stay resident) called VirStop. This steps in and aborts an attempt to execute infected files or floppies. It doesn't include a companion pop-up message program within Windows, and in tests it missed several viruses. The documentation does warn, however, that the TSR will not detect as many viruses as the scanner.

A nice facility is the ability to add virus search strings by hand. You can check if F-PROT works by using a supplied file

called the EICAR (European Institute of Computer Anti-virus Research) standard anti-virus test file. Many other anti-virus products will also spot it. It is, in fact, a standard text file with a .COM extension containing the following line:

```
X5O!P%@AP[4\PZX54(P^7CC)7]SEICAR-
STANDARD-ANTIVIRUS-TEST-FILE!$H+H*
```

The professional version is updated more frequently, and includes a full Windows scanner and Windows virtual device driver. There's also a DOS and Windows checksummer.

You get an effective DOS-based virus scanner and a less effective TSR for free. If you're on a tight budget, F-PROT is a good choice.

### PCW Details

#### F-PROT

**Price** Shareware version is free to individuals. Organisations must buy the professional version.

**Contact** Frisk Software  
001 354 5617 273 (Iceland)  
Command Software 0171 259 5710  
(professional version). FTP: complex.is

**Good Points** It's free and it works.

**Bad Points** DOS only and there's no checksummer. The TSR fails to spot many viruses.

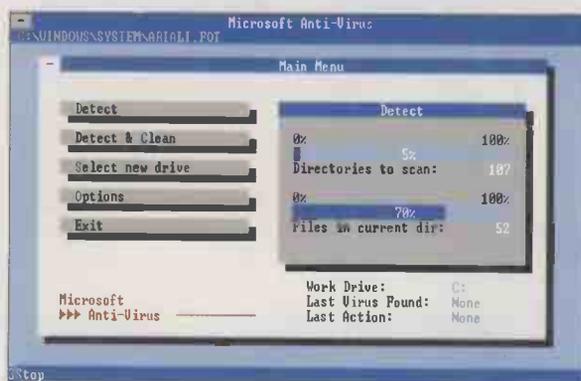
**Conclusion** A bargain, worth downloading as a backup even if you have other A-V software.

## Microsoft Anti-Virus (supplied with MSDOS 6)

**MSDOS** A-V is basically a version of Central Point's old anti-virus, minus its TSR memory-loading options and scan-scheduling ability.

It's a perfectly decent package that was more or less free until recently (it was installed on most new PCs). It has only one major drawback, but it's a big one: in its supplied state, its 1993 virus data file is hopelessly outdated. Microsoft provides a single phone number (in their DOS manual) for their US bulletin board but the telephone just rings and rings. Microsoft UK Customer Services can't help either: so after having made several phone calls, it transpires that Symantec is now supporting the product.

The checksum verifier (which Microsoft calls an "integrity checker") and the scanner's search for known viruses, are performed in the same scan. There



virus is already suspected. A minor oddity is that it cannot scan more than one drive at a time without resorting to command line parameters.

The DOS program, sensibly, is as similar to the Windows version as possible and includes optional mouse support. Both have decent online help. Knowing one is as good as knowing both and there's not much to learn.

Most virus packages have become considerably more sophisticated since 1993 although one omission in this case is the lack of onscreen information on specific viruses — otherwise a feature of most packages reviewed here.

The TSR, VSafe, can prevent all disk writes and halt low-level formats. It can also flag accesses to executables infected with the limited number of

is the option of switching off the checksummer but it cannot be set to either include or exclude specific files. Checksumming will, therefore, inevitably lead to false alarms on most machines, including each time a Windows DLL or driver is updated by an install. Checksumming, in most situations, will only be of real use if an unidentifiable

# DO YOU TRADE WITH THE USA? THEN YOU NEED TO CALL US!

Low cost airfreight rates sold to you direct, not your agent.

- \* Airport to Airport \*
- \* Airport to Door \*
- \* Door to Door \*

## EXAMPLE WHOLESALE AIRFREIGHT TARIFF

### US DOOR TO UK AIRPORT SERVICE

From	Minimum Charge	Up to 300kgs	Over 300kgs	Over 500kgs	Over 1000kgs
New York	£9.50	£0.66	£0.59	£0.56	£0.53
San Francisco	£13.00	£0.99	£0.96	£0.93	£0.89

### US DOOR TO AIRPORT SERVICE

From	Minimum Charge	Up to 300kgs	Over 300kgs	Over 500kgs	Over 1000kgs
New York	£29.50	£0.83	£0.79	£0.73	£0.66
San Francisco	£29.50	£1.19	£1.13	£1.03	£0.99

For more information on other routes simply call EUROSELL  
EUROSELL = LOW COST  
AIRFREIGHT, NO MIDDLEMEN,  
RATES SOLD DIRECT

**eurossell**  
12 Getwick Metro Centre

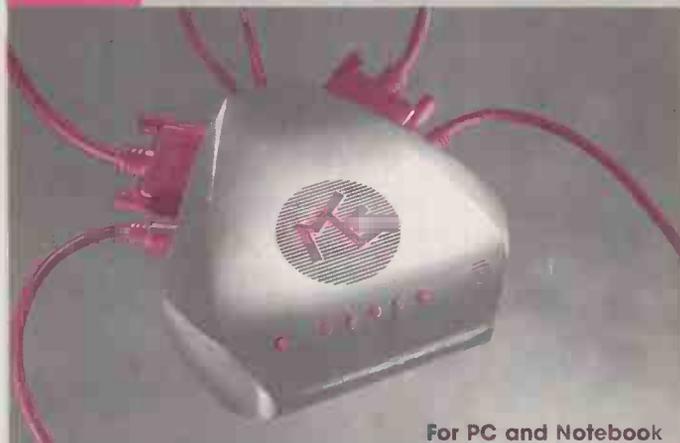
**TEL: (44) 01293 - 821721**

# SpiderMan



**NEW!**

*Operates without  
your PC!*



For PC and Notebook

**SpiderMan - the first PMC - Personal Messaging Center**

BABT  
approved

### It works on one telephone line!

SpiderMan stores your incoming faxes, prints them out on your printer and switches your printer off afterwards. It will even do this when your PC is not connected or switched on. It also handles your outgoing messages, allowing you to send faxes and data across the globe. All this on one telephone line.

### It's a fax

SpiderMan will receive faxes and store them in its internal memory. It allows you to send faxes from your PC to any fax machine in the world.

### It controls your printer

SpiderMan controls your printer, switching it on, printing the incoming fax on ordinary paper and switching it off afterwards.

### Works even without your PC

Even when SpiderMan is not connected to your PC, it receives, stores and prints all incoming faxes.

### It's an answering machine

SpiderMan is an answering machine which you use as any other - there's no need for a separate unit.

### High speed modem

With SpiderMan you can send and receive data, access on-line services, e-mail your colleagues - It's a high speed modem and more.

**SpiderMan Infoline: 01628 819 006**

Martignoni Electronics AG  
Technopark  
Pflingstweidstrasse 30  
CH-8005 Zürich, Switzerland



# Discover the benefits of computerised accounting with TAS BOOKS...

**Over 30,000 copies sold!**

## ...we guarantee you'll love it or your money back!

Wouldn't you like to know exactly how much profit you made this month? How much stock is on back-order? Your marketing costs, advertising, salaries, motor & travel expenses? Wouldn't you like to know exactly how much you are owed and get some help to collect overdue accounts? TAS Books will do all of this and more, quickly and easily.

More than 30,000 businesses have now bought TAS Books because it makes book-keeping easier than ever before. **The unique "Account Processor"™ concept allows any mistake to be corrected** (like a word processor) so the transactions accurately reflect your source documents (invoices, receipts, payments etc.) giving you accounts which are 100% correct.

Similarly, **when the bank reconciles you know "the money is right"**. Everything else is a matter of income and expense allocation which, because of the Account Processor concept, is easily corrected. In addition you have the assurance that TAS Books is **accredited\* by the Institute of Chartered Accountants in England and Wales**.

So how revolutionary is it? How easy is it to use? Is it suitable for your business... and how soon can you benefit from it? These are just a few of the questions that will be answered when you try TAS Books yourself! And remember... we guarantee you'll love it or we'll refund your money in full. Immediately!

### Quick to Learn, Easy to Use

TAS Books includes a tutorial that will show you step-by-step how to get your accounts up and running with a minimum of fuss and disruption, safe in the knowledge that, because of the "Account Processor" concept, any mistakes can be easily and quickly put right.

Users regularly compliment us on the clarity and value of this tutorial. Many said this part of the package alone is worth more than the price of the software. Even chartered accountants said that the explanation of double entry bookkeeping in the tutorial is the best they had ever seen!

### There's help when you need it

Since computing or accounting is probably not your main line of business, any worry is soon overcome by Megatech's friendly, professional telephone help team who answer questions, sort out any problems you may have and give helpful advice.

With that security even the most technophobic user can quickly become an expert in TAS Books. This technical support is free during the first three months and thereafter can be subscribed to at a low annual cost. This service also includes legislative and program updates to the accounting software.



"The packaging for TAS Books is probably unequalled... Few products come with such complete documentation, all aspects of computerising your accounts are covered," writes Tim Woodward in PC User Magazine.

**TAS BOOKS...** "Without doubt, this is one of the best accounting packages currently available and I recommend it wholeheartedly", writes Ged Start in PC Today Magazine.

With more than 30,000 copies shipped, TAS Books has proved to be a perfect entry-level accounting system. Currently on **Special Offer starting at just £99** with a 90-day money back guarantee, it offers an ideal opportunity to computerise the accounting functions of your company.

If you haven't computerised your business before, you can start with the £99 TAS Books package. This provides full financial ledgers and high-speed order processing and invoicing.

If required, you can upgrade to TAS Books 2 later and also add TAS Payroll (more information from the sales department) at a later date.

**TAS BOOKS 2...** "represents the best buy for a small to medium sized company with around 3-5 dedicated accounting staff." PC Magazine.

TAS Books 2 incorporates the three ledgers and cash book of TAS Books, but has added powerful Stock Control and high-speed, real-time Sales and Purchase Order Processing modules.

It includes advanced features such as EC Intrastat, Serial and Batch Number Tracking, full Cost Analysis and Sales Person Commission as standard! TAS Books 2 is a large system (240+programs) and will suit most businesses that sell goods and/or services.

TAS Books 2 is currently on **Special Offer starting at just £349** with a 90-Day Money Back Guarantee so there is absolutely no risk!

**Reviewed against formidable products like Sage Sovereign, Pegasus Opera and Scala, the October '94 issue of PC Magazine awarded TAS Books 2 both Editor's Choice as well as the coveted Usability award!**



### TAS Books 2... Advanced Features are Standard...

- High-speed order processing that displays the stock record details, updates your stock in real-time and allows for back-orders and negative stock.
- Unique dual purchase order processing module allows for the ordering of goods (for resale) as well as consumables (not for resale).
- Handles over-deliveries and short-deliveries, as well as price and quantity mismatches without needing to change the original order. Variance discrepancies that are not easily handled by traditional systems.
- Payment of incomplete or non-approved orders can be prevented. Other advanced features include full product movement history, sales analysis, sales person commission administration and full serial and batch number tracking, as well as EC Intrastat reporting.

**To order your copy... simply complete and fax the coupon today!**

**Balance Sheet**

**Profit & Loss**

**Trend Analysis**

**Sales Analysis**

**Aged Debtors**

**Aged Creditors**

**Stock Movement**

**Reconcile Bank**

**And much more!**

Create management accounts including Balance Sheet, Profit & Loss Statement and Supporting Schedules... in Seconds! Measure performance against budgets, covering multiple periods and years in 1 to 13 columns. Know the exact financial position and net worth of your company. Get trading results by the day. Improve your cash-flow. Make vital decisions based on real facts!

# Accredited\* by the Institute of Chartered Accountants in England and Wales and winner of more than 10 British Awards!



Editors' Choice  
Jan 1993



Best Value Business  
Software - April 1993



Best Accounting  
Software - May 1993



Best Financial Software  
March 1994



Fair Trading Award  
December 1994



Editors' Choice  
May 1995

## Instant Drill Down

Drill down is a means of instantly displaying the underlying details of any transaction. Throughout the ledgers, you can instantly display account enquiries. These include customer accounts, supplier accounts, nominal accounts, bank accounts etc. For example, a customer account enquiry will display all transactions in a given period, or all unpaid invoices.

Using the up- and down-arrow keys, a highlighted bar can be moved to select a line on the enquiry screen and when you press the Return key, a menu pops up which allows you to "drill down" and display the actual invoice as well as the underlying double entry.

With a payment you could, for example, drill down to the double entry, the payment allocation (and any settlement discounts) as well as the invoices that were paid. This facility alone makes the system irreplaceable because you will never again have to walk to a filing cabinet to look up invoice details.

## Powerful Sales Analysis

TAS Books provides Daily and Monthly sales analysis reports as well as sales analysis by Customer, by Product or by Category. TAS Books retains as much information as possible.

Unlike other systems, TAS Books never needs to be cleared down to make space for more transactions. Disk space is cheap so why clear down at all? This means that you can analyse and re-analyse your sales. Similarly, invoices can be re-displayed or re-printed even from years ago.

## Unsurpassed Auditability

Because TAS Books never needs to be cleared down and you can keep all transactions on-line (stored on your hard disk), its auditability is truly phenomenal. This will please your accountant as well as the VAT inspector.

The Unique Account Processor concept allows the transactions on your system to 100% accurately reflect the source documents. And because each transaction / source document gets a unique posting number, you can take any source document and instantly find it on the computer. Similarly you can take any transaction and identify the source document it originated from.

## Easy Year-End Routine

Because TAS Books keeps all its transactions on disk, the year-end is a routine operation that simply changes the internal calendars (it knows about leap years) and brings the new year opening balances forward. If subsequently, a sale, purchase, cash payment or any other ledger transactions applies to the previous year, it can be entered and, because the system is date driven, will automatically be posted to the previous year. Perfect for late purchase invoices, accruals and year-end audit journals. Subsequently, a unique "soft close" of the previous year(s) allows you to re-compute the balances brought forward. This may be repeated time and time again!

### \*Accredited by the ICAEW

\*Purchasers should ensure that the Licensed Programmed Material (the Materials) meet their own specific requirements. Notwithstanding any accreditation of the Materials, the Institute of Chartered Accountants in England and Wales shall not be liable for any loss or damage incurred by any person, occasioned by the use of the Materials or any related products or services, howsoever caused.\*



## VAT is handled automatically

All VAT is handled automatically. Both the Standard VAT as well as the Cash Accounting method are (simultaneously) supported. If you are not VAT registered you can simply ignore it. VAT rates are stored centrally so, if a rate changes, the system will instantly start using the new VAT rates. The software complies with the latest EC VAT regulations and includes the EC Sales List. At the end of a period you simply run the VAT 100 report.

TAS Books 2 also includes Intrastat reporting. TAS Books has been inspected by the VAT office. The two VAT registers as well as the audit trail remain on disk. This allows you to re-run the Audit Trail, VAT 100 Form, and VAT Analysis at any time.

## Single-User / Multi-User Networks

The single-user version of TAS Books is for use on one computer. If you have a network, the single-user version can be accessed only by one user at a time, otherwise files could become corrupted. The multi-user version allows multiple users to simultaneously access the system on the network.

Note that many so called "multi-user" or "network" versions of accounting software have primitive file locking rather than record locking. File locking means that if, for example, you want to print a stock valuation report, the complete stock file is locked and another user cannot access the file, i.e. no orders can be entered!

TAS Books has sophisticated record locking which means that only individual records are locked, and only when being updated, not whilst being read to produce a report. The software can be upgraded at any time for the difference in price and this can be done by telephone.

## Multi-Books / Multi-Company

The "Multi-Books" version of TAS Books is needed for book-keeping bureaux or for those who want to keep accounts for more than one company on the same system. With the multi-books version, the hard disk requires only one set of programs so it doesn't need extra disk space. These programs are then shared by the different companies whose data files live in separate directories. The software can be upgraded at any time for the difference in price and this can be done by telephone.

## DOS, Windows or OS/2

TAS Books is a high-speed DOS application that will run on any PC or compatible computer with 640KB RAM and a hard disk. It runs absolutely perfectly under Windows and OS/2 and the package includes an Icon and PIP file.

Under Windows, the multi-user version (may be upgraded later) allows you to run multiple tasks concurrently and can also be used to demonstrate the sophisticated record locking as described in the previous paragraph.

## About Megatech Software

An accounting system is very much a long-term commitment, so it's important to know with whom you are dealing. MEGATECH Software is an operating division of ComelPharm Limited. Incorporated 20 years ago, it has been in the computer business for more than 18 years. Its revolutionary TAS BOOKS Account Processor concept broke new ground in computerised accounting. More than 30,000 copies have now been shipped and it currently has a 20% market share of the new business accounting software market. (Source: RONTI/2A).



In UK: 111-113 Wandsworth High Street, London, SW18 4HY. Tel: 0181-874 6511, Fax: 0181-877 1384  
In Eire: Gardiner House, 64 Lower Gardiner Street, Dublin 1. Tel: 01-855 1033, Fax: 01-855 1035

# 10 Reasons why our users said "Yes" to TAS BOOKS!

1. "I have never been as impressed with a company and its products ... good value for money ... does the job extremely well ... makes accounting easy for the layman to understand" M. H. Derby
2. "TAS Books has performed superbly ... enhanced our professional image ... and enabled the company to expand." M. London W4
3. "TAS Books literally saved my business." DRG, Cambridge
4. "As a chartered accountant, I must congratulate you on a superb product. Your competitors have inferior products selling at several times the price." PJP, Slough/Berks
5. "I must compliment you on your product. I am Finance Director of one of the country's biggest retailers and have experience of numerous accounting packages. In terms of value for money, the functionality of TAS Books is incredible." PCM, Leicester/Leicestershire
6. "A superb system ... my accounts have never seemed easier nor more professional. Anyone want to buy a three month old Sage System?" RDW, Devon
7. "I am still astounded by its high level of efficiency and user-friendliness." PB, Malta
8. "Wonderful software. I will certainly recommend it to others." PAW, Gravesend, Kent
9. "I could have done with your manual to explain double-entry books keeping 25 years ago." NMGW, Bristol
10. "I am an accountant and feel the package is excellent value for money." CB, London E17

## TAS BOOKS Account Processor™

Single-User-Version - Includes NIL, SL, P/L, C/B and Invoicing  
Multi-User / Network Version - Supports file & record locking on networks  
Multi-Books / Multi-Company Version (add-on) - Processes multiple companies

## TAS BOOKS 2

Single-User-Version - all of TAS Books but with added SOP, POP and Stock Control  
Multi-User / Network Version - Supports File & record locking on networks  
Multi-Books / Multi-Company Version (add-on) - Processes multiple companies

## Your "No-Nonsense" 90-Day Money Back Guarantee

You are invited to try the software "risk-free" for 90 days, so it's backed with a simple "no questions asked" 90-day money back guarantee. If you like it you keep it. If not, you simply send all of it back and your purchase price will be refunded in full. Immediately! There is absolutely no risk and this offer won't last long. So if you have always wanted to "have a go" at computerising your accounts, now is the time. Simply telephone us or complete the coupon below and fax us the page or mail it to the address below. Orders received by 2.30pm are shipped the same day so you can try it tomorrow!

# 10 Reasons why you should say "Yes" to TAS BOOKS!

1. TAS Books is accredited\* by the Institute of Chartered Accountants in England and Wales.
2. No formal training required. Unrivaled tutorial makes it easy to learn and use.
3. Unique "Account Processor" concept allows corrections to be made. No fear of making mistakes.
4. Superb "drill-down" feature will instantly display all underlying double-entry posting and invoice details.
5. System allows for postings into previous periods/years. There's no need to clear down transaction details. The only limitation is disk space.
6. Don't be fooled by the 599 price. TAS Books is a big system sold for a low, entry-level price.
7. Easy to use, high-speed DOS application. Also runs perfectly under Windows and OS/2.
8. Multi-user, network support with sophisticated record locking rather than primitive file locking.
9. The special offer prices will end soon. It's an opportunity you should not miss.
10. TAS Books is supplied with a 90-Day Full and Unconditional Money Back Guarantee, so there is absolutely no risk.

RRP	Special Offer	Total inc. postage
£399.00	£ 99.00	£126.91
£599.00	£199.00	£244.41
£200.00	£ 50.00	£ 58.75

£699.00	£349.00	£420.66
£999.00	£499.00	£596.90
£200.00	£100.00	£117.50

# Order now, phone or fax the coupon below... Tel: 0181-874 6511 (24hr), Fax: 0181-877 1384

Please copy and fax (or send) to: MEGATECH Software, 111-113 Wandsworth High Street, London, SW18 4HY. Tel: 0181-874 6511, Fax: 0181-877 1384



TAS Books Special Offer Prices: Single-User:  (£126.91), Multi-User:  (£244.41), Multi-Company:  (Add £ 58.75)  
TAS Books 2 Special Offer Prices: Single-User:  (£420.66), Multi-User:  (£596.90), Multi-Company:  (Add £117.50)

Prices in brackets include next (working) day UK mainland delivery and UK VAT. Note also that you can upgrade at any time for the price difference.

I understand that I can return the complete product within 90 days, in its original packaging, for a full and immediate refund of my purchase price. On that basis please supply the version(s) indicated above...

I enclose cheque no: \_\_\_\_\_ or charge the credit card below.

## Credit Card Information

## Company Information

Number: \_\_\_\_\_ Name: \_\_\_\_\_  
 Expiry Date: \_\_\_\_\_ Contact: \_\_\_\_\_  
 Name: \_\_\_\_\_ Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Postcode: \_\_\_\_\_ Postcode: \_\_\_\_\_  
 Tel: \_\_\_\_\_ Tel: \_\_\_\_\_  
 Fax: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Magazine: \_\_\_\_\_ Magazine: \_\_\_\_\_



Please help us make our advertising more effective and indicate in which magazine you read about TAS Books or whether the product was recommended to you. Thank you.

# MEGATECH SOFTWARE

viruses about which it knows. A feature that doesn't date much is its ability to flag writes to disk boot sectors.

Hotkeyed menus enable you to change these options at any time. The menus can also be skipped using command line switches. Included is the option to remove VSafe from RAM without rebooting. Its Windows companion,

VSafe Manager, displays pop-up VSafe messages and access to Vsafe's options from Windows. Its TSR and checksumming are still better than nothing, though anything that's been around this long can be overcome by some of the newer viruses. Without an update to its now obsolete virus data file, the scanner is almost useless and shouldn't be relied on.

Personal  
Computer  
World  
EDITOR'S  
CHOICE

## Dr Solomon's Anti-Virus Toolkit (for Windows and DOS 7.5)

**Version 7** adds a heuristic virus detector which is very handy if you suspect an unidentified virus. Another improvement to Toolkit is its repair feature. Previously, S&S International provided a range of generic tools capable of rewriting the boot sector, for instance, or chopping a fixed number of corrupted bytes from the ends of files: now it applies a clean-up that is tailored to individual viruses.

The relevant button is displayed whenever a virus is detected.

To prevent a virus from being loaded into memory, both the Windows and DOS portions of the toolkit are installed by a DOS program. After all, it's no good booting from a clean boot disk and then running a potentially infected Windows executable; you could load an undetectable stealth virus into memory.

The major components of Dr Solomon's A-V toolkit are typical of most virus packages. There's a scanner, to find known viruses, with the useful capability to look for virus signatures that are up to one byte different from those expected. Scans can be scheduled to run unattended and files excluded or included as required. A checksum integrity checker spots changes made to executables and the usual DOS TSR is there. But the companion pop-up message program has been replaced by Winguard.vxd, a low level, 32-bit device driver for Windows 3.1. When Windows is started, it replaces the DOS TSR from memory until Windows is exited. S&S calls this (rather cornily) "the changing of the guard".

A DOS and Windows Hex/ASCII disk viewer is a useful addition even if you don't know how to use one. In an emergency, S&S technical support can guide you by "remote control". The DOS



version has the option of attempting to beat stealth viruses in memory that may try to hide the contents of the disk.

The DOS interface mirrors that of Windows. Both provide the same functionality, and all functions of the toolkit can be accessed with DOS command line parameters, as well. All the command line programs return DOS error numbers and this makes it much easier to write sophisticated batch files.

A small DOS program called TKUTIL is included that adds considerable abilities to the humble .BAT: it returns a DOS error number for such useful items as day of the week, type of CPU and whether VirusGuard is running, it can search for text in a file or append text to one, and it has another 21 tricks up its sleeve. You also get a small (1Kb) memory resident program that will run any DOS program at a specified time if it sees a DOS prompt. Another places characters in the keyboard buffer at a chosen time.

A standalone toolbar allows quick access to most parts of the Windows package and enables you to begin scans with a single mouse click.

The documentation comes in three parts. The Virus Encyclopedia has a well-written history of viruses and gives good advice on virus prevention — it explains

### PCW Details

#### Microsoft Anti-Virus

**Price** £49 upgrade to DOS 6.2 (from Microsoft); £59 for 12-monthly virus updates (from Symantec); or download from CIS by typing GO SYMANTEC (or phone their Dutch bulletin board 00 317 353 169).

**Contact** The Microsoft Connection 0345 00 2000; Symantec 01638 592222/5923200

**Good Points** The checksum and TSR are still of limited use.

**Bad Points** The virus data file is now hopelessly outdated. Even with a new data file, its ability to catch the most sophisticated viruses is likely to be affected by the program's age.

**Conclusion** Don't buy MSDOS 6:2 for its anti-virus capability: even with the virus updates it shows it age.

the jargon of the virus-makers and chasers, too. The remainder documents 420 viruses, with a paragraph or two about each. The list isn't comprehensive but you'll learn plenty from it. The user manual is superb and explains everything clearly, with lots of screenshots. There's even more information on virus and anti-virus technology. The changes from version 7.0 to 7.5 are detailed in a slim companion volume. The online version has decent written descriptions of most viruses but the virus data update file does not update the encyclopedia. S&S promises a considerably more verbose version very soon. The software includes a useful and more up-to-date digital version of the virus information in the encyclopedia.

Dr Solomon's toolkit is an outstanding piece of software: it's effective, feature rich, and accompanied by outstanding documentation. A Windows 95 version should be available by the time you read this.

### PCW Details

#### Dr Solomon's Anti-Virus Toolkit

**Price** £125 DOS and Windows version; £99 DOS only. Both include four quarterly upgrades. Subsequent years' DOS and Windows upgrades: £75 per annum DOS/Windows; £50 per annum DOS only.

**Contact** S&S 01296 318800

**Good Points** Good documentation and almost every tool you could wish for, made accessible via an easy-to-use interface and DOS command line.

**Bad Points** Online virus encyclopedia does not include all viruses.

**Conclusion** One of the very best A-V packages.

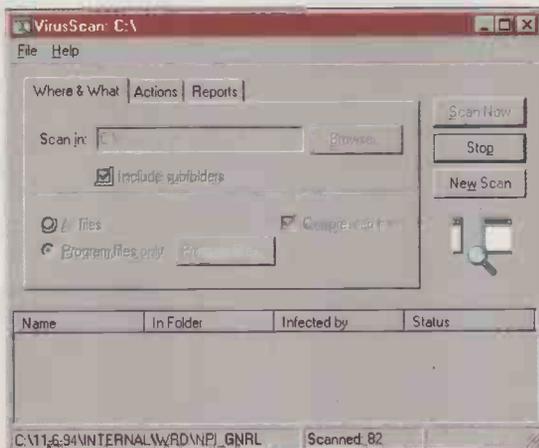
## McAfee VirusScan for Windows 95 1.0

**McAfee** anti-virus for Windows 95 looks entirely different when compared with the old Win 3.x version. Scan 95 should be faster than the 16-bit version, but version 1.1 is a big improvement. This is because it creates a separate Windows 95 thread for each drive being scanned. If you have an EIDE or SCSI drive you should really notice the difference because they support simultaneous access to more than one drive at a time.

The uncluttered interface uses three 95-style tabs to control what is scanned (using a Win95 file explorer dialogue), event logging, and what action to take when a virus is found. It always offers the option of attempting to repair virus damage, but alternatively it can be set to automatically delete infected files. Sadly, like the 3.x version, there's no option to amend the message that is displayed. Both the DOS product version and the VShield TSR can be customised in this way.

The major weakness of the Windows 95 version 1.0 of VirusScan is that it does not scan the boot sectors for viruses — and there's no warning about this in the documentation. McAfee says this has been fixed in version 1.1.

If a boot sector virus is executed it may well detect the virus in memory. Many stealth viruses are able to evade this method of detection. It is therefore particularly important that WinScan95 is



used with Vshield, the TSR. Hopefully, it will spot an infected floppy before you accidentally boot from it. Unlike the DOS/Windows version, specific files cannot be included or excluded from scans. And unlike the Windows 3.x version, there's no onscreen virus information. You'll have to turn to the command line driven 16-bit DOS version (supplied), which can be used to detect viruses under Win95 but could damage data if it's used to remove them.

Installation provides a quick dose of Win95-style clouds and checks for viruses in your system's boot sector and root directories. The install routine adds, if required, a command to autoexec.bat that loads a Vshield. It's the TSR that intercepts access to floppies with infected boot sectors or infected files. At present, this is the 16-bit version: it can't

be relied on to spot all infected files under Windows 95. The Windows program that displays a dialogue box, when Vshield finds a virus, is still the 3.x version. McAfee says it will soon be shipped with a replacement .VXD 32-bit windows device driver (the 16-bit version will continue to be included).

The context-sensitive help is sparse and fairly terse but fortunately most options are self-explanatory. The help file is no more than adequate. The product is easy to obtain, install and use, but it's marred by the inability of the

scanner to check boot sectors and partitions.

### PCW Details

#### McAfee for Windows 95

**Price** £89 (includes eight updates per annum, by post); £49 for a registered copy (download the updates yourself). Free evaluation for up to 30 days.

**Contact** IPE Corporation (formerly International Data Security)  
0171 436 2244.

FTP: ftp.mcafee.com/pub/. Bulletin board: 0171 916 1025

**Good Points** Easy to obtain and use.

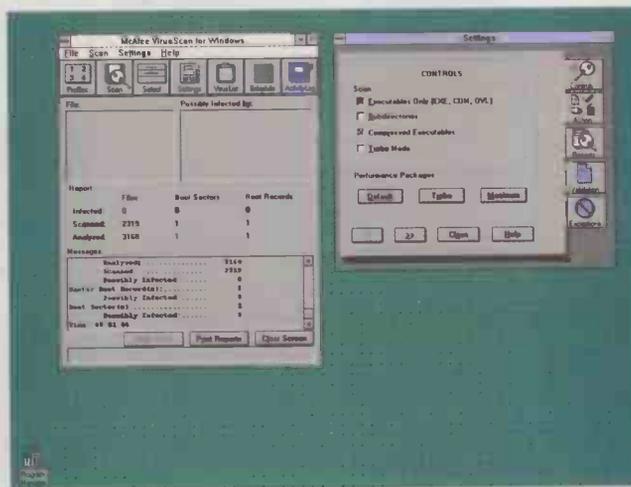
**Bad Points** Significantly fewer features than the Windows 3.1 version.

**Conclusion** Not to be relied on, though future releases are likely to resolve the criticisms.

## McAfee VirusScan for Windows & DOS version 2.2.6

**McAfee** for DOS and Windows offers more features than its newer Windows 95 stablemate. The DOS scanner is creatively named "Scan", a program that can be operated using command line switches from the DOS prompt.

The Windows version integrates all functions into a single program. Scan checks by default for known viruses. It can optionally check for changes to files and McAfee calls this "validation". Cyclic Redundancy Checksums can either be written to a data file or appended to the end of examined files. CRC data can be removed easily, too.



It can be set up with four profiles to define exactly what is scanned. You can

include or exclude specific files, directories, or disks from validation and scanning as required. You can maintain a report file of specified length and decide which events are worth recording, such as warnings of corrupted or modified files. The checksummer attempts to intelligently differentiate between damaged executable code and modified data and the information is then recorded in the log file. The online help is hardly voluble — for instance, it doesn't explain the difference between

"corrupted" or "modified" file warnings. Another feature is the scheduler.

Scans can be configured to scan or validate as and when required, though VirusScan for Windows must be loaded.

The on-screen virus information is minimal: the virus size and type is shown and McAfee tells you if it can zap it. Many viruses only list a name, but fear not as the missing information is available to the scanner.

Vshield can be set to load into EMS, XMS or high memory where it takes up 30Kb. If allowed to swap its data file in and out of memory as required, only 8Kb is needed. When started up, it checks master boot records, boot sectors, system files and itself for viruses. It remains

in memory checking program files for viruses as your computer executes but not when it copies them. And it checks floppies when they are accessed. A small windows program displays in a dialogue box any messages generated by Vshield.

The manual, also supplied as a text file, contains all the information required to operate the program but is not suitable for a novice — there is very little hand-holding.

## Sophos Sweep

**Sweep** has changed little over the years and there's still not a lot of it. (It has a big user-base in UK Government circles.)

When installed, the Sophos anti-virus consists of only two DOS programs: a command line scanner, SWEEP.EXE; and an interactive shell, SW.EXE. There are only three additional files: a Windows icon, a .PIF file and the virus data file.

Sweep's only concession to Windows 3.x is its setup: a Windows version of its DOS install program. It copies the files to a specified directory and installs an icon in program manager that starts the DOS shell. It doesn't check for the presence of viruses before installation.

Sweep is supplied uncompressed on a single floppy. With the aid of an uninfected boot disk, a virus can be tracked down before installation.

Customising the package is rather unfriendly — to add extra DOS file extensions to its list of files, it considers executables. A text file must be edited or command line parameters used. The same applies to the default message which Sweep displays when looking for a virus. It can be changed by adding a text file named SW.MSG.

Sweep offers the default option of deleting infected files. This is not to be encouraged, as apart from encouraging the removal of infected files that could be repaired with another package, it reduces the likelihood of a virus being saved for examination by a virus company. And it could turn out to be a hitherto unknown strain of an existing virus. The police also need viruses as evidence. Fortunately,

this option can be switched off.

Sweep's command line arguments are based on the shortcut letters used to select menu options within the interactive shell. It's not exactly user-friendly but the letters are shown in the manual. Usefully, it can return DOS error numbers so that appropriate action can be taken by a batch file if Sweep finds a virus or compressed file. It can't examine the contents of .ZIPs but does know about some other compressed formats. There is an optional parameter to warn when ZIPs are encountered.

Options include "shredding", overwriting and deleting files, or just deleting them. It offers two types of scanning: "Full Sweep" steps through every byte in a file, while "Quick Sweep" (like most anti-virus packages) looks at particular points in files where viruses are expected.

Sweep includes basic information on all the viruses in its data file. There's no description of effects but there is information such as dates that triggers a virus, methods of infection, and file types affected.

A useful bonus is the inclusion of Sophos' 382-page 1995/6 data security

### PCW Details

#### McAfee for Windows and DOS

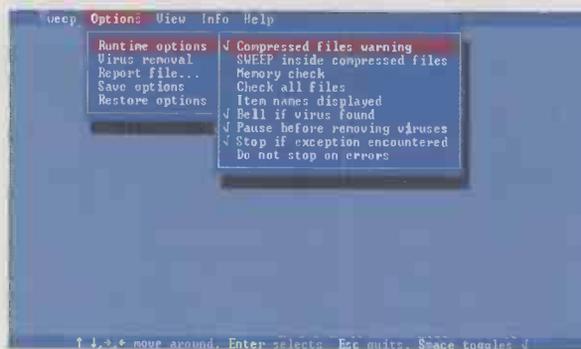
**Price** £89 (including eight updates per annum, by post). £49 for a registered copy (download the updates yourself). Free downloading and evaluation, up to 30 days.

**Contact** IPE Corporation (formerly International Data Security) 0171 436 2244. FTP: ftp.mcafee.com/pub/. Bulletin board: 0171 916 1025.

**Good Points** Everything that should be there is included.

**Bad Points** Confusing for those not familiar with anti-virus terminology. Very limited onscreen virus information.

**Conclusion** Certainly a respectable, if not the best, anti-virus package.



reference guide. It's an excellent guide to the world of viruses — who creates them and why. There's useful stuff like data security law and relevant organisations. There's a summary of Internet security issues, and half of the book is dedicated to a technical summary of Sophos products.

The box sensibly includes a dozen prominent virus warning stickers for infected floppies. Additionally, you get 45 datable stickers for disks that pass the test: if they're infected later, the stickers might be the only clue as to when things went wrong.

Online help is pretty basic but the manual is clear and detailed: many of the program's features can't be used without it.

Sweep is perfectly adequate as a pocket virus detector for technical support staff, or to run on a standalone, shared virus-checking PC in an office.

### PCW Details

#### Sophos Sweep

**Price** £295 (including 12 monthly upgrades) or £145 (including quarterly upgrades). Subsequent years are the same price. Virus data upgrades can be downloaded free from their bulletin board or FTP site.

**Contact** Sophos 01235 559933

**Good Points** Good documentation. It does the job it claims to do.

**Bad Points** DOS only and it can't look inside compressed files.

**Conclusion** Why not buy something else that offers twice as much for the price?

Type this in at 1:00...

..Print this out at 1:03.

Order system

Get price quotes.

Is money in the budget?

(Yes)

Fill out Purchase Requisition Form #P\*27\*.

(No)

Fill out Purchase Requisition Form #P\*95\*.

Purchase amount:

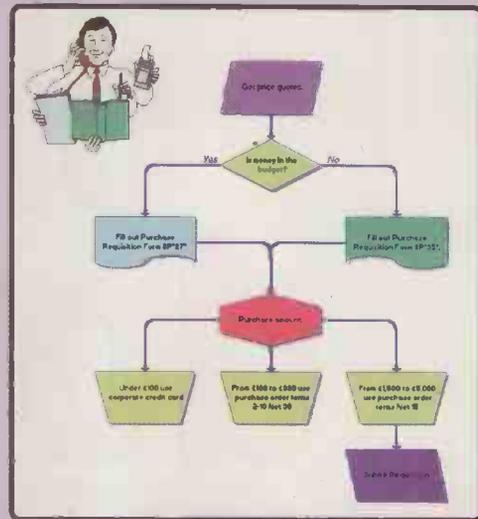
(Under £100 use corporate credit card)

(From £100 to £999 use

purchase order terms 2-10 Net 30)

(From £1,500 to £5,000 use purchase order terms Net 15)

Submit Requisition.



# If you're not flowcharting with allCLEAR™ you're wasting your time.



Are you responsible for documenting your company's policies and procedures?

Are you preparing your company to meet

ISO9000 or other standards? If you are,

you need an intelligent flowcharter, not drawing software in disguise.

We've got a simple solution that will cut your flow charting time by as much as 90 percent. **Introducing allCLEAR — the only intelligent flowcharter that's truly automatic.**

With allCLEAR create presentation-quality flow-charts, process flows, deployment charts, fishbone diagrams and others in a fraction of the time you're spending now, simply by describing your process in plain English. Or, if it's graphics you prefer, use the intelligent drag and drop templates.

allCLEAR allows you to easily customise your diagrams. Choose from over 180 shapes, multiple diagram and line styles. Select fonts, control colors and shading. Place text or images any where you like.

**"It would take me hours to redesign my procedure if I were limited to graphic tools only"**

**Rob Piersielak, Xerox Corp.**

Even revisions are a snap with allCLEAR. Simply edit your text or drop in a few boxes and allCLEAR automatically re-draws, re-routes, and re-sizes. No drawing-based flowcharter will allow you to make

changes as quickly.

Make allCLEAR an essential part of your 'working together' strategy with full Lotus Notes support and the unique CLEAR Viewer which lets others in your company view and 'walk-through' your charts.

allCLEAR retails for £249, but if you already own a flowcharting or drawing program you can upgrade to allCLEAR for just £99.95\*.



**Don't waste another minute. Call now for your free Info Pack 01923 246 427**

**Please send me:**

- Further information on allCLEAR
- allCLEAR Trade In @ £99.95 + VAT = £117.45\*

Please add a £10 delivery charge (UK only).

I enclose a total of £.....

Access  Visa  Expiry date.....

Card no.....

Cheques payable to FastTrak Software Publishing.

\*PROOF OF PURCHASE REQUIRED - DISK 1, RECEIPT,

OR FRONT COVER OF THE MANUAL.

Name.....

Company.....

Address.....

Postcode.....

Tel. no.....

Please return to:

FastTrak Software Publishing

FREEPOST 479, WD1 8WD

Fax: 01923 228796 PCW 12/95

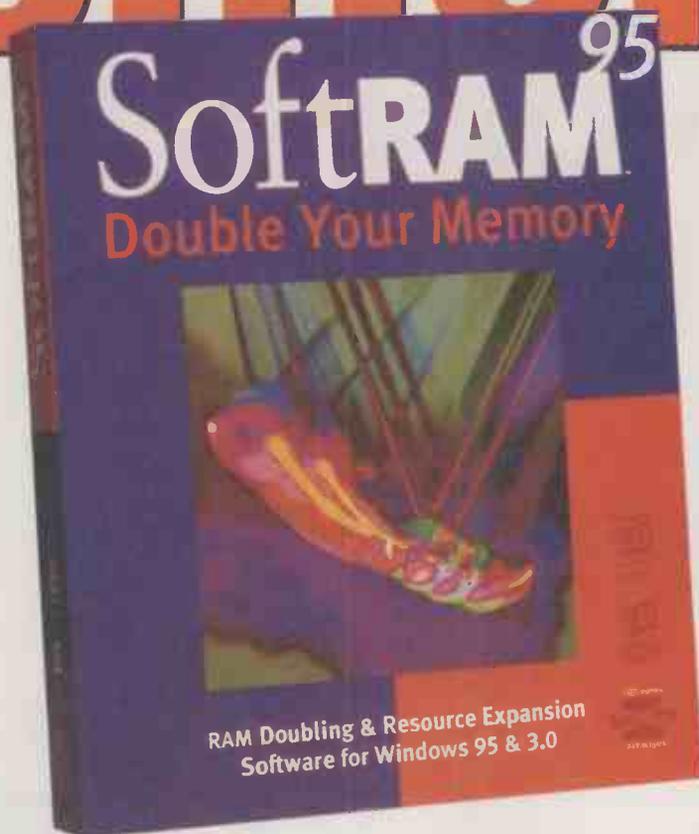


# double click. double memory.



- ✓ Doubles RAM in Windows 95
- ✓ Doubles RAM in Windows 3.x
- ✓ Increases System Resources in Windows 3.x\*
- ✓ From Only £49
- ✓ Money Back Guarantee

\*Handled automatically in Windows 95



Compatible with Windows 3.11

**D**oubling RAM doesn't have to be hard. Install SoftRAM 95 and instantly open up Windows 95 and Windows 3.x and higher. Run multimedia and RAM hungry applications. Open more applications simultaneously. Say good-bye to "Out-of-Memory" messages. 4MB becomes at least 8MB. 8MB becomes at least 16MB. Get the idea? (In fact, you can get up to 5 times more memory.) SoftRAM 95 works with all 386 and higher desktops and laptops. *PC Novice* calls SoftRAM the "real RAM doubler for Windows". Executive Summary: Don't Run Windows Without It.



Roderick Manhattan Group Ltd.

All trademarks acknowledged. E & OE.

SoftRAM is available direct from Prosoft (0181 893 7080) and all leading resellers including:



01675 466 467



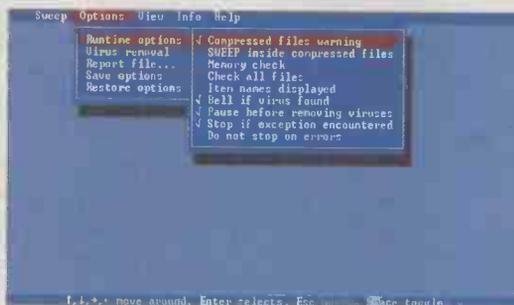
Personal  
Computer  
World

## Norton Anti-Virus for Windows 95 and Norton Anti-Virus for Windows and DOS

Both DOS/Windows 3.1 and Windows 95 versions are very similar. The 95 product is a true 32-bit application that knows about 32-bit file access. Things have only changed in cases where the standard Win95 user interface rules affect the style. For instance, option pages are now tabbed which is a marginal improvement over the Windows 3.x version.

The memory-resident Auto Protect program pops up an alert when a file infected with a known virus is run or loaded. It does so irrespective of whether the GUI is loaded. As well as looking for known viruses, the Windows 95 TSR also uses what Symantec calls "virus sensor technology". It's designed to intercept unknown viruses by looking for virus-like behaviour, such as an attempted format of your hard disk or suspicious writes to program files. It also performs a system area check of any floppies left in the drive when Windows 3.x or 95 is shut down. "Virus sensor" can be switched off, but if left on it's unlikely to cause false alarms. To prevent the TSR loading at startup you can specify a hotkey to be held down during bootup.

All versions of Norton Anti-Virus (NAV) have the usual three lines of defence. The scanner and checksummer (which Symantec calls "inoculation") are well integrated and the scanner, which examines files for known viruses, is



reliable. The Win95 version is marginally quicker than McAfee's WinScan 95.

The main screen provides four large buttons: the first, "options", leads to a multipage options screen. All parts of the program can be controlled from here including which buttons are displayed within virus dialogues. There's also the (obligatory) ability to insert a "Please call your friendly corporate help desk on extension 12345" message and to sound an audible alarm. Almost every control you can imagine is here, which makes for more decisions. Fortunately, the online help is plentiful and well written. The Win95 version supports right mouse clicks to call up relevant context-sensitive help.

Both scanning for specific viruses and "inoculation" can be performed in a single operation. There's the usual animated icon (the Win95 version is prettier) and both display a handy percentage bar to tell you how long you've got left to make the tea. Neither version scans

compressed files within compressed files but they do warn of this.

"Inoculation" by default sensibly protects only boot records and system files. Starting up Navboot, the TSR, generates a warning if system files change. Switching between DOS or a Windows GUI bootup can sometimes trigger a false alarm but it is difficult to see how Symantec could prevent this without compromising effectiveness.

There's no need to sit around watching NAV: both versions include a stand-alone program scheduler. It will run any program once a week at a given time of day. For instance, it installs setup to scan for viruses every Friday at 5pm. If you have a copy of the Microsoft Windows 95 Plus Pack you could use the system agent for the same purpose. The Win95 version minimises to a mini-icon at the righthand end of the taskbar.

Installation is straightforward: it offers the usual custom or full install options, and creates a rescue disk if desired. Rescue disks can be created at any time using the standalone program. Setup additionally carries out the usual scan of memory and disks for viruses — if it finds one, NAV insists that the user boots up from an uninfected boot disk.

Sensibly, the Windows 95 version doesn't require a Windows 95 boot disk — any old DOS boot disk will do the trick. The virus can then be removed using the standard emergency rescue disk supplied, on which there's a DOS version of the full scanner/checksummer as well as repair tools. Despite being a 16-bit DOS, the Win95 version knows about Win95's file system.

All flavours of NAV are sophisticated products, bristling with options. They might confuse a novice, but the clearly written manual and plentiful online help should enable anyone to figure it out.

### Editor's Choice

The perfect anti-virus package should be able to detect and remove viruses effectively and include a full range of virus detection methods. All of its features should be accessible from Windows and DOS, via both a command line (for batch files) and a more friendly user interface. It should be easy to use and well documented.

Both Dr Solomon's and Norton's products qualify on all these counts. Dr Solomon's has the better documentation: almost everything you could ever want to know about viruses is included and it's more than just a user manual. Nevertheless, Symantec's Norton documentation is certainly a clear and comprehensive guide to the software.

Norton wins on the options it offers: such as which controls are displayed when a virus is detected, or its ability to make a copy of infected files with a .VIR extension before the virus is removed.

If batch file automation is important, then Dr Solomon's has the edge. Three useful

utilities considerably extend the power of any batch files while the slightly larger range of DOS error conditions generated provide marginally more control. Both programs return more than sufficiently detailed error numbers, though.

Dr Solomon's DOS TSR wins over Norton's: while both prevented execution of the test viruses, Doc Solly's prevented infected files being copied as well. However, like all packages tested, its TSR will only spot a stealth virus when you try to execute a program already infected with one.

By the time you read this most anti-virus manufacturers, including S&S, will have produced a Windows 95 version of their software. At present, though, there is little choice — Norton Anti-Virus for Windows 95 offers all the benefits of its sibling. The only noticeable change is that the Windows 95 user interface style makes the interface appear a little less cluttered.

### PCW Details

#### Norton for Windows95/3.x/DOS

**Price** £149 (either version). £99 for 12 monthly virus updates, or free from Symantec's Dutch bulletin board and CompuServe.

**Contact** Symantec 01628 592222

**Good Points** More options than you would think possible. Very good at repairing damage. Good documentation both onscreen and paper.

**Bad Points** Lots of options could mean too many choices for the inexperienced.

**Conclusion** An excellent product.

## Think you may have a virus?

In any organisation it is important to have a pre-planned strategy rather than managing each crisis as it arises. This should be part of a greater disaster recovery plan and include nominated trained staff.

1) DON'T PANIC. The cost to a business of stopping work on a large number of machines can be worse than the effects of the virus. If in doubt, and if the business cost is not large, you can keep the machine turned off until the virus has been identified. If it seems to be doing damage anyway, you may have no alternative but to shut down. Many viruses appear to wipe all the data on a hard disk, but in most cases it can be recovered with minimal effort.

2) To prevent the virus spreading, tape over the floppy drive slots of infected machines and disconnect them from the network.

3) Inform the users of the problem, because the term virus is so emotive. Rumours can spread through a company, causing people at all levels to take inappropriate action. Even worse, rumours spreading outside an organisation can cause serious damage. In rare cases, they have even affected share prices.

4) Many employers state that bringing games to work or downloading software is a "sacking offence". This attitude is self-defeating. Few employees will be likely to come forward with infected disks if they are suspected of being the culprit.

5) It is vital that an infected machine is booted from an uninfected floppy. This is because some viruses, such as "Fish", are very effective at hiding themselves in

memory. They may do this as soon as the infected machine is switched on since they infect the boot sector or, as in Fish's case, COMMAND.COM.

6) Use anti-virus software to identify the strain you are infected with. If you have more than one product, use them all. They may produce different answers, usually because viruses are given different names by different software houses.

7) Most packages come with at least some information on each virus. If the virus is known to carry a destructive payload likely to trigger off other machines, your first priority must be to get there and stop it, particularly if it is set to trigger on a certain date. As a temporary measure, taping up the floppy drive and changing the PC's clock date can allow the user to keep working. Make sure the clock won't be changed back to the correct date when it is logged on to a network server.

8) Some viruses are easier to remove than others, so for organisations it makes sense to maintain a range of software. It will increase the chance of successfully identifying a virus and cleaning it up. It is sensible to back up infected files — or indeed the entire hard disk if the boot sector is infected. If a virus is hard to remove using the built in software, an anti-virus vendors helpline may be able to talk you through low-level editing of damaged data using a sector editor. If you lack special software, you can always eliminate boot sector viruses with this technique. First boot from an uninfected disk that contains FDISK and type FDISK /MBR. Most anti-virus packages can do the same.

9) Unless the virus has been intercepted the moment it has arrived, the next, and rather

tedious step, is to scan every floppy disk that could have been in contact with an infected machine. It's a good idea to attach a date label on all checked and clean floppies, so that if they are subsequently infected it will be easier to track down the source.

10) When you have all the information about the virus and know how to remove it, contact all at-risk customers and suppliers with the bad news.

11) Before cleaning up the infection, take a copy of the virus — not forgetting to clearly label the infected floppy. If the strain behaves differently to how you expected, it can be analysed. If it's a new strain, it's obviously important to send a copy to the manufacturer of your anti-virus software

12) When the fire-fighting is over, a report complete with a sample of the virus should be made to The Computer Crimes Unit at New Scotland Yard. Call them on 0171 230 1212 and ask for form VAF1. This includes detailed evidence-gathering instructions including full written notes of your actions during clean-up.

If the police are to successfully prosecute virus writers and distributors, they must have evidence that the virus has infected a machine without its owner's permission. Recently 26-year-old Christopher Pile was charged, and pleaded guilty under section 3 of the Computer Misuse Act for the alleged distribution and creation of "Queeg" and "Pathogen". His arrest followed a joint operation by the Devon and Cornwall Police in conjunction with the Computer Crimes Unit. He is expected to have appeared in court for sentencing by the time you read this.

## Where do viruses come from?

It has often been reported that a particularly large number of viruses originate in the former USSR, written by unemployed techies hostile to the West. Dmitry Gryaznov, S&S International's Russian virus expert, says this is myth. He claims around a quarter of all viruses originate in Eastern Europe; no more than would be expected, given the number of PCs.

There is, indeed, no single large source of viruses. Most countries (the UK and Russia included) have laws that make the deliberate unauthorised alteration of data a criminal offence. The act of writing one and distributing it is not *in itself* illegal if the recipients are told they are receiving a virus. *Accidentally* infecting a machine is also not illegal. Only *deliberately* releasing

a virus into the wild, by intentionally uploading an infected file to a bulletin board or infecting a PC, is against the law. None of these laws have actually had much impact on the numbers of viruses written, but they do give police the authority to stop the deliberate distribution of viruses.

Although there are around 7,000 different viruses, the vast majority are relatively minor variations on previously created types. This is because it is considerably easier for a virus writer to modify a virus they know to be successful than write one from scratch. Many of these strains have never been seen "in the wild", so to speak.

One reason for this is that the underground bulletin boards created to exchange viruses usually require a virus to be uploaded before access is granted. A minor

modification to an existing strain is often enough. Many virus writers do this just so they can boast that they have written a virus. Some send them direct to anti-virus software manufacturers to gain some recognition of their feat. The virus is never even released into the wild. Manufacturers nonetheless are forced to waste many hours disassembling them and updating detection data files.

The ultimate answer to almost all computer risks is backup. As hard disks get bigger, a tape drive becomes a must. Owners with just a floppy drive can only hope to back data up on a regular basis. The best type of tape drive is one that can fit the entire contents of the PC onto a single tape. The job is much less likely to be done regularly if you have to hang about changing tapes.

# Make your accounting faster & easier with new QuickBooks - or your money back!

**M**aking your small business a success is a tough challenge nowadays. Although no-one can make the challenges easier, new QuickBooks can make it easier for you to meet them. By eliminating your bookkeeping hassle and giving you the information that's crucial to your business, QuickBooks is the software breakthrough you've been waiting for.

*"QuickBooks should be top of every small business shopping list."* PC USER, AUGUST 1994

**✓ QuickBooks ends the hassle by doing the accounting for you.**

With QuickBooks, you focus on the tasks key to your business: creating invoices, writing cheques and paying bills, receiving payments and making deposits. In the meantime, QuickBooks is unique in doing the accounting automatically for you.

*"An excellent package. Does everything it is claimed at a fraction of the price of the competition."*

PERSONAL COMPUTER MAGAZINE, JULY 1994

**✓ QuickBooks lets you get started immediately.**

Unlike traditional accounting software, QuickBooks doesn't force you to spend hours setting up all your accounts, balances and customer details before you can begin. You simply add all the other critical details as you need them. It's so simple, you'll be creating your first invoices in less than five minutes.

**✓ QuickBooks saves you time.**

QuickBooks eliminates 95% of your data entry by memorising the details of your customers, vendors, products and services. Next time you begin to type these details QuickBooks automatically fills them in for you.

*"... incredibly intuitive, full of time-saving features and looks like a 90's accounts system should."* COMPUTER BUYER, AUGUST 1994

**✓ QuickBooks doesn't force you to learn accounting jargon.**

With QuickBooks there's no new jargon or complicated mathematics - just the plain English you already understand.

**✓ QuickBooks forgives your mistakes.**

Because QuickBooks is designed for business people, not accountancy experts, we've made sure that it's easy to correct the mistakes we all

inevitably make. There's no need to "journal and reverse" transactions, you simply amend any mistakes there and then, just as if you were using a word processor.

**✓ QuickBooks puts you in control of key business information.**

With the routine bookkeeping done automatically, QuickBooks gives you critical up-to-the-minute business information. Its vast range of highly customisable reports and graphs give you the information you need to be more in control of your business.

*"For the business that needs to track more than just cash flow, budgets and VAT QuickBooks is the best solution."*

PC MAGAZINE, MAY 1995 SMALL BUSINESS ACCOUNTING SOFTWARE USABILITY TEST

**✓ QuickBooks makes VAT automatic.**

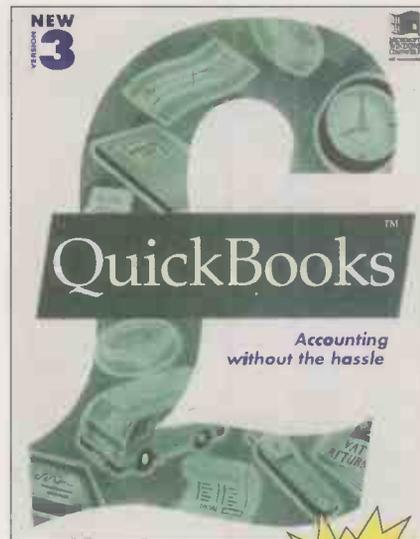
QuickBooks calculates and tracks complete VAT information automatically for each invoice and bill, using customisable VAT rates. QuickBooks updates your VAT position with each transaction, and the VAT Report gives you all the information you need for your VAT Returns.

**✓ QuickBooks gives you FREE, unlimited technical support.**

QuickBooks includes a comprehensive User Manual, a simple Getting Started Guide, a built-in graphic tutorial and complete on-line Help throughout - but there's even a FREE telephone helpline if you still have a problem.

**✓ QuickBooks is backed by a 60-day, money-back guarantee.**

We're so confident that QuickBooks will take the hassle out of your accounting that we offer a 60-day money back guarantee.



**£99**  
exclusive

**QUICKBOOKS IS AVAILABLE  
FROM ALL LEADING  
SOFTWARE OUTLETS, OR BY  
CALLING US FREE ON**

**0800 585058**

**YES! I WANT TO TRY QUICKBOOKS FOR 60 DAYS RISK-FREE.**  
TOTAL £128.08 INC £10 UK P&P & £19.08 VAT

(If ordering from outside the UK, please call +44 181 990 5500 to confirm shipping charges)

**TO ORDER:**

By phone: Call us now on 0800 585058.

By Fax: Fill in this coupon and fax it to us on +44 181 759 2077.

By Post: Fill in this coupon and post it to Intuit Limited, Manor Court, Harmondsworth, West Drayton, Middlesex UB7 0AQ.

Name

Statement address\*

Postcode

Phone no

PLEASE CHARGE £128.08 TO MY:

Visa  Access  American Express  Delta

Card no

Card Expiry Date

Card Holder Name (if different)

\*Please indicate elsewhere if delivery address differs from billing address. Please allow 21 days for delivery. 98% of deliveries occur within 6 days of placing an order.

## NEW IN QUICKBOOKS 3

**New! Purchase Orders.**

QuickBooks now creates and tracks purchase orders for your business.

**New! Customisable invoice formats.**

QuickBooks uniquely enables you to modify the layout of your invoices. Creating your own invoice formats is as easy as adding, renaming and deleting boxes and columns.

**New! Automatically calculates finance charges.**

QuickBooks now gives the option of automatically adding finance charges at your specified rate to overdue invoices.

**New! Audit Trail.**

QuickBooks allows you to edit or delete any transaction anytime. And now you can choose to have an audit trail of the changes you make. It's easy for you to use, and meets the needs of your accountant too.

**New! Fully integrated Stock Control.**

QuickBooks can now track and report on the stock your business has on hand, or on order. It's incredibly flexible, designed to cope with everyday eventualities, such as incomplete deliveries. And now QuickBooks uses stock information to report on the cost of the sales you make.

Byte • Currys • Dixons • PC World • Game • Micro Anvika • Tempo • Software Warehouse  
Windowline • John Lewis • Makro • Escom • Technomatic • Office 1 • Staples • Watford Electronics

QBPCW 12/95

## Types of virus

**Non-TSR file-virus**

This is the simplest form of virus to write — and the least effective, so you are unlikely to be too troubled by them. When an infected program is first run, the virus code carries out its task — checking that an executable file is not already infected, then attaching a copy to it. It then runs the original program to which it is attached. In contrast, TSR viruses load themselves into memory when they are executed and are able to infect any executable program they can reach from that point.

**Boot sector virus**

This is the other major type of virus. Most of the boot sector consists of a simple, small program that is used to start DOS, or whatever operating system is installed. Boot sector viruses replace this with virus code and typically move the boot sector to another part of the disk. When the PC boots, the virus code is executed first. Then the virus runs the real boot sector. A very slow boot from an infected floppy with an excess of floppy disk activity is a common symptom of an infected machine.

**Multipartite viruses**

These combine both techniques. They can infect both boot sectors and files. The file version of "Tequila", for example, infects the Master Boot Record. Once the PC has been booted from an

infected MBR, the virus goes memory resident and infects all accessed .EXE files.

**Companion viruses**

Companion viruses create a .COM companion to an .EXE file. Because DOS executes .COM files before .EXEs, the virus is run before the .EXE file of the same name. The virus then runs the original .EXE.

**Polymorphic viruses**

These aim to foil anti-virus packages that search for a specific strain by looking for a known sequence of bytes. No two copies of a true polymorphic virus are alike. When polymorphic viruses run they first decrypt themselves and then behave like any other virus. Programs such as the "Nuke Encryption Device" (NED) and the "Trident Polymorphic Engine" have been written that turn a standard virus into a polymorphic virus. Fortunately, once measures have been taken by an anti-virus company to defeat each "engine", all viruses processed by it are detectable.

**Stealth**

Stealth covers a variety of techniques that viruses use to disguise their presence — from anything as simple as hiding the increase in files size of executables to full-blown detection of the tools used to detect the virus and the taking of appropriate action to fool them.

**Trojans**

Trojans are not viruses at all. They are programs that hide a malevolent code within a seemingly innocuous program, but they do not replicate. For this reason the chances of being caught out accidentally by trojans are low.

**Macro viruses**

Macro viruses have been predicted for a while. The first to appear was recently first seen when it was sent out accidentally by Microsoft on a CD-ROM to OEMs. They called it a "Prank Macro". It is the first virus that will run on both PCs and Macs. It replicates using an auto-executing Word Basic macro embedded in a document. When the document is loaded, it copies the macro to Word's settings file NORMAL.DOT, where it cunningly replaces the File Save command with a routine that also saves a copy of the macro in each document. The only symptom is a dialogue box containing the letter "I". It would not be difficult, though, to add a malicious payload. Microsoft have produced a free program that will scan a disk for infected documents and flag auto executing macros. Most anti-virus companies have added the signature to their data files but because Word documents can have any extension, scanners now have to examine every file, not just executables.

## ANTI-VIRUS SOFTWARE

	Dr Solomon's AV for DOS/Windows S & S International 01296 318800	Norton AV for DOS/Windows Symantec 01628 592222	Norton AV for Win95 Symantec 01628 592222	McAfee V.1.0 for Win95 IPE Corp 0171 436 2244	McAfee for DOS/Windows IPE Corp 0171 436 2244	Microsoft AV (supplied with DOS 6.x) Microsoft Connection 0345 002000	F-Prot Shareware edition Frisk software (Iceland) 00 354 5617 273	Sophos Sweep Sophos 01235 559933
<b>Contact</b>								
<b>Detection Technology</b>								
Checksummer (integrity) checker	Y	Y	Y	Y	Y	Y	N	N
Scans for known viruses	Y	Y	Y	Y	Y	Y	Y	Y
DOS TSR	Y	Y	Y	Y	Y	Y	Y	Y
Windows TSR dialogue box generator	N/A (1)	Y	N/A (1)	Y	Y	Y	N	N
Windows VXD -Virtual device driver	Y	N	Y		N(3)	N	N	N
Heuristic scanner	Y - Scanner	Y (2)	Y(2)	N	N	N	Y	Y
Checks own integrity	Y	Y	Y	Y	Y	Y	Y	
<b>Features</b>								
Scheduler	Y	Y	Y	Y	Y	N	N	N
Virus removal/repair	Y	Y	Y	Y	Y	Y	Y	Y
Virus alerts can be customised	Y	Y	Y	N(3)	Y	N	Y - TSR ONLY	Y
Onscreen virus information	Y	Y	Y	N(3)	Y	Y	Y	Y
Runs from floppy	Y	Y	Y	Y	Y	Y	Y	Y
Scanner can check archive files eg .ZIPS	Y	Y	Y	Y	Y	Y	N	(4)
<b>Emergency recovery disk</b>						N	N	N
Records copy of FAT	Y	Y	Y	Y	Y	N	N	N
Records copy of boot sector	Y	Y	Y	Y	Y	N	N	N
Records copy of CMOS RAM	Y	Y	Y	Y	Y	N	N	N
Lab results								
<b>Time to scan for known viruses (Secs)</b>								
DOS	80	77	N/C	N/C	65	165	N/A	N/A
Windows (5)	100	75	N/C	N/C	66	136	80	126
<b>DOS TSR Virus monitor</b>								
Fish	CE	E	E	E	E	CE	E	N/A
Tequila	CE	E	E	E	E	CE	E	N/A
Smeg (a stealth virus)	E	E	E	E	E	-	-	N/A
Jerusalem	CE	E	E	E	E	CE	E	N/A
Stoned	CE	E(6)	E	E	E	CE	N	N/A

(1)=VXD used instead. (2)=TSR and SCANNER. (3)=(Included in 1.1). (4)=Only dynamically compressed files not zips. C=Stopped a copy. E=Stopped execution (5)=Expect a greater difference between DOS and Windows on machines with lower performance graphics cards under Windows. (6)= also intercepts warm boot.

Lab Tests (scanners looking for known viruses)

All products tested found 4K (frodo), Anticad 5, Cascade, Form, Green Caterpillar, Joshi, Keypress, Maltese Amoeba, Sampo, Smeg, Spanish Telecom, Stoned, Tenbyte, except for MS AV which found only 4K (frodo), Cascade, Form, Joshi, Stoned and Tenbyte

# "People always ask me why I never worry about money"

**"It's easy," I say, "My PC looks after it!"**

It used to be such a hassle, working out how I could afford to buy myself the system additions I needed, or keep up with the kids' demands for the latest games and software. I just hated being surprised by unexpected bills or finding out that I'd gone overdrawn.

Then I discovered Quicken – it's the world's leading personal finance software, and just great if you want a quick and easy way to really get to grips with your finances once and for all.

If you're fed up with finding out you're overdrawn, or wonder "where does my money go to?" this is *definitely* what you need.

With Quicken on my PC, **organising my finances is fast, accurate and simple.** And, with all my details in one place, Quicken shows me the 'big picture' of all my financial affairs which **really puts me in control of my money.**

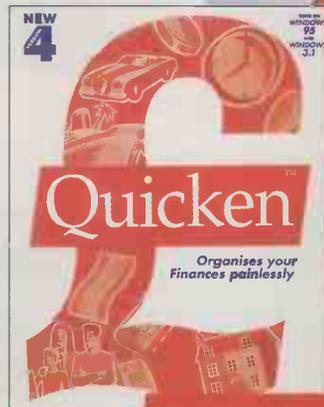
I know exactly what I have available to spend, what all my bills are, and exactly when I have to pay them. **It's like having a bank statement you never have to wait for (and never get a nasty surprise from).**

I found Quicken an **absolute doddle to use**, simple to start and easy to learn. And now there's even a CD version that uses a "Talking Tutor" – it's like having your own

personal coach on screen to show you how to get the most from Quicken. It literally took only minutes to get me started. The screen displays are **so simple** it's just like using an ordinary calendar, cheque book and bank statement. Once you're up and running you'll be amazed at what you can do with your money.

You simply enter your regular bills and income, then just add your spending as you go. Basically, I just tell Quicken what I plan to spend and it **automatically works out my monthly balances for me.** More than that, it also learns and adds my standing orders *and* reminds me when bills need to be paid.

Entering my details was easy – and **so fast to keep up to date.** It cleverly remembers my regular spending and saves me time by completing my entries for me as soon as I start to type them. Something else I really love is that I **no longer have to sit down for hours with a pile of papers and a pen** to work out my



**£39.95**  
inclusive

finances and pay the bills. In fact, all I do now is check my bank statement with Quicken to make sure that the bank have got it right. **I even let Quicken print my cheques for me**, it types the addresses for me, and I can be sure that my cheques match my records because Quicken does it all for me.

The more I use Quicken, the more it helps me. When I need more information – on my mortgage or investments for instance – a couple of clicks on the mouse lets me **clearly see what's going on.**

Now I never wonder where my money goes because **Quicken analyses my spending for me.** And it's really easy to do. At the touch of a button Quicken produces full colour graphs and charts of my finances, *and* I can customise these to give me the exact details or summaries I need. I must warn you though, it will give you a surprise or two when you see what things add up to – like running your car, or dining out. **It really teaches me where I'm wasting money**

and shows me how to sensibly cut corners to help me budget for the things I really want. It knows how much I spend every month and tells me what my account balances are likely to be next month or even next year. But best of all, **Quicken has taken all the uncertainty and stress out of my decision making.**

I now know what I can afford in advance and all my plans are realistic.

I'm so confident with Quicken now that I also use it to run my business affairs. Business reports, expense analysis – even my VAT reports and returns – its all so easy with Quicken. **No more spreadsheets and boxes of receipts!**

I've never needed any help with Quicken but it's nice to know that it comes with **unlimited free technical support**, and a **60 day money back guarantee** which means that unless you are 100% satisfied you can just return it for a full refund.

**Don't miss your opportunity to see how the world's best-selling personal finance software can take the worry out of managing your finances.**

Call us free on  
**0800 585058**  
& quote Ref QNPCW

## How to order:

- **By phone:** Call us on 0800 585058 today quoting your credit card details. (if ordering from outside the UK please call +44 181 990 5500)
- **By fax:** Fill in this coupon with your credit card details fax it to us on 0181 759 2077.
- **By Post:** Return this coupon with your cheque or credit card details to: Intuit Ltd, Manor Court, High Street, Harmondsworth, West Drayton, Middlesex. UB7 0AQ.

Name \_\_\_\_\_

Statement Address: \_\_\_\_\_

Postcode: \_\_\_\_\_

Telephone: \_\_\_\_\_

\* Please give details on a separate sheet (and attach) if delivery address differs from billing address.

Please send me Quicken 4 on CD.  Please send me Quicken 4 on 3.5" Disk.

Please charge £39.95 (inc. UK P&P & VAT) to my:

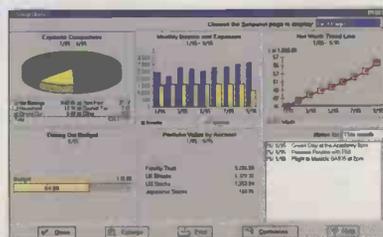
Visa  Access  American Express  Delta

Card No.: \_\_\_\_\_ Expiry Date: \_\_\_\_\_

Card Holder Name: (if different)

Tick this box if you do not wish to receive future mailings from Intuit  
 Tick this box if you do not wish to receive future mailings from third parties.

Date	Chq No	Payee	Category	Payment	Deposit	Balance
08/02/95	000101	YORK CITY COUNCIL	RD INSTALLMENT COUNCIL TAX			2,076.78
10/02/95	1002	NATIONAL POWER PLC	SHARE OFFER - SHARES	30.00		1,326.78
14/02/95	Switch	SHELL SERVICES	PETROL	11.50		1,255.28
28/02/95	Chq No	Expense			Personal	



# "Discover information with no on-line charges!"

"Keep a finger on the pulse of world events...." - Computer Buyer

## FREE! THE 'PROFIT' GAME! 25,000 copies free!

Now, with 'Optimum Profit', you can play the 'investment' game! Includes real price histories and graphical analysis. Discover whether you could earn millions! Can you beat the city 'wiz kids'? The game and simulation that lets you answer that burning question, "Can I really make money playing the markets?" For your free copy, send a blank unlabelled high density disk, and a stamped addressed mailer to: Optimum 'Profit' Offer, Sunny Gardens Parade, Great North Way, London NW4 1JA (While stocks last)

## "Teletext at the push of a button..." - Daily Telegraph

Discover the 'teletext' solution! Simply connect a tv antenna and benefit from up-to-date World/Local news and Newsflashes, Indices, Share Prices (incl. Teletext 2000 service), Finance, Currencies, City News, Weather, Roads/Traffic, Entertainment, TV and radio, Sports, Racing, Holidays/Travel, Computing and much more... Receive a constant stream of up-to-the-minute data / information, free of on-line costs, 24 hours a day.

## OPT-III Software

### OPT-III Dos Software (included)

- Save pages to disk as ASCII or raw
- Automatic share price retrieval
- Automated page saving - with timed option
- Automated page printing - with timed option
- 'Carousel' feature with dynamic update
- 'Fastext' 'intelligent' page facility
- Review facility of last 16 pages
- 'Set Clock' real-time-clock PC utility
- Device Driver for custom programming

### OPT-III Teletext for Windows Software - New low price! £49

- Multiple teletext windows with 'Fastext'
- Multi-channel 'simultaneous' reception
- Automatic 'keyword' search with actions
- Automated share price retrieval
- Automated page saving and printing
- Save pages as ASCII, BMP or 'Raw'
- 'D.D.E.' 'live' links to spreadsheets etc
- Sample DDE file/graph for Excel for Win
- Sample DDE file for Lotus 1-2-3 for Win
- Sample DDE file for Quattro Pro for Win
- 'Carousel' feature with dynamic update
- Review facility of up to 64 last pages
- Free Windows Developers Toolkit now available on request - phone for details.

## "... the OPT-III works beautifully." - What PC

- **OPT-III PC Card @ £169** - a precision, state-of-the-art proven design - a half-length card with integral UHF tuner and four acquisition circuits, that offers an ideal combination of high performance, stability and reliability.
- **OPT-III/S External Teletext Receiver @ £295** - connecting via a standard RS-232 connection, is ideal for notebooks, PS/2's as well as Macs, Unix boxes etc. Its simplicity and easy data access is ideal for developers.
- **"... offers intelligent management of an excellent service" - Pract. PC**
- **OPT-III Dos Software (included)** - features 'Fastext' page facility, 16 page review. Automatic printing and saving of pages (ASCII or 'raw'). Automatic saving of share prices as ASCII data, (includes 'Teletext 2000' - all 2000+ overnight closing share prices!) - easily import this ascii data into your spreadsheet for subsequent analysis/graphing. 'Live' dynamic 'Carousel'. 'SetClock' clock feature. Device driver for custom programming etc.
- **OPT-III For Windows @ £49** - with share prices save, powerful 'keyword search' - scan specified teletext pages for user-defined information of interest. Automatic page print. Automatic page save (ascii .bmp or 'raw'). Multiple windows / channels, 'live' DDE spreadsheet links for customised analysis/graphing and much more....

The image shows several overlapping windows from the OPT-III software. One window is a Microsoft Excel spreadsheet titled 'No.3 PORTFOLIO' with columns for 'AC', 'AD', and 'NEWSTEXT.XLS'. Another window shows 'Prices' for various shares like 'London', 'HalPower', and 'New Lines'. A third window displays a 'Sport Index' with categories like 'GOLF', 'Medicine', and 'Boxing'. A fourth window shows a 'Teletext on 3' interface with a 'BUDGET BOON SEES SHARES SURGE £12bn 303' headline. A fifth window shows a 'Prices' window with columns for 'Shares A-E', 'Shares F-L', 'Shares M-R', and 'Shares S-Z'.



## OPT-III Hardware

- |   |  |
|---|--|
| <b>OPT-III Teletext Internal PC Card</b> £169   | <b>OPT-III/S External Teletext Receiver</b> £295   |
| <b>New low price!</b>   | Details as OPT Card, with:   |
| Half-length PC card <input checked="" type="checkbox"/>   | Standard RS-232 interface <input checked="" type="checkbox"/>  |
| Precision UHF tuner <input checked="" type="checkbox"/>   | Attractive compact unit <input checked="" type="checkbox"/>  |
| High Stability PLL tuning <input checked="" type="checkbox"/>   | High performance CPU <input checked="" type="checkbox"/>   |
| Precision CITA/C circuitry <input checked="" type="checkbox"/>  | Non-Volatile RAM for tuning <input checked="" type="checkbox"/>  |
| SAWF filter <input checked="" type="checkbox"/>   | 'Viewdata' mode <input checked="" type="checkbox"/>  |
| Four acquisition circuits <input checked="" type="checkbox"/>   | 'Dumb Terminal' mode <input checked="" type="checkbox"/>   |
| Easy plug-in installation - no Unique hardware feature - no 'com' ports or IRQ's required <input checked="" type="checkbox"/> | Added flexibility - Suitable for work and home PCs, notebooks, Macs, Unix boxes etc. <input checked="" type="checkbox"/> |

The image shows three different software interfaces. The top one is 'Teleshares-2' with a 'SHARES - LEADERS' table and a 'DM-SPOT' chart. The middle one is 'Shares' with a 'Financial' window and a 'PIZZA HUT PLAN TO CREATE 2,000 JOBS 534' headline. The bottom one is 'Invest' with a 'FTSE-100' chart and a 'Club Update' window.

## 'Teleshares-2', 'Shares' and 'Invest' For Windows

"Update offers powerful charting functions that rival even the ones the professional investors use..." - The Daily Telegraph

- Update Software's products, together with our teletext receivers, makes available to you the same analytical investment techniques used, and considered to be an absolute necessity, by city traders. Perhaps Update's greatest attraction is a superb blend of power with ease of use - ideal for both the experienced trader as well as the private investor.
- **'Update Teleshares-2' - NEW! @ £59** - captures, stores, graphs and displays share prices, indices, currencies etc from Teletext. Includes new graphing utility as well as a range of price displays, 'leaders and laggards' etc. Includes export to Excel, ASCII import/export, 'DDE' export etc. Also adds full 'Teletext 2000' capability to Update's 'Shares' and 'Invest'.
  - **'Update Shares' V3 @ £195** - a powerful share tracking and analysis tool - captures, sorts, stores and graphs the 'Teletext 400' shares. Powerful viewing, graphing and analysis tools with trends, overlays, averages, targets etc. (Can be used with Teleshares.)
  - **'Update Invest' V3 @ £495** is targeted at the serious investor and adds even more to the functionality of 'Update Shares', yet still maintaining its ease of use. Includes currencies, 'leaders and laggards', short term indicators and much more.... (Can be used with 'Teleshares'.)
- "Excellent package for the small investor or company that needs to keep an eye on the markets..... Superb!"** Personal Computer Magazine
- \* Please call for full details of Update's range of products.

**SPECIAL OFFER!!**  
 We are including free with Teleshares-2:  
 - Free historical data set containing one full years closing prices of all fully listed UK shares.  
 We are including free with 'Shares' and 'Invest':  
 - Free historical data set containing a full 10 years of the Top 100 Shares  
 - Free historical data set containing 3 years of the remaining shares on teletext.  
 - Superb 'Charting Manual' for the new investor.  
 - 1 years free membership of the 'Club Update' User Group (Above offer while stocks last)

## YES! I WISH TO STAY AHEAD! - PLEASE RUSH ME:

FREE! - A fully illustrated information 'Datapak' covering the full Optimum teletext range of products.

<input type="checkbox"/> OPT-III Internal Teletext PC Card (inc DOS software) £169	<input type="checkbox"/> OPT-III Teletext For Windows Software £49
<input type="checkbox"/> OPT-III/S External Teletext Receiver (uses RS232 - inc DOS software) £295	including keyword search, DDE links, share price retrieval, automatic page grabbing, saving and printing etc etc.
<input type="checkbox"/> PC cable for OPT-III/S <input type="checkbox"/> 9-way <input type="checkbox"/> 25-way £15	<input type="checkbox"/> Update 'Teleshares-2' For Windows - Teletext 2000 etc retrieval £59
<input type="checkbox"/> 'Export' VHF/UHF PAL - add £50 to above receiver prices - made to order - call for details	<input type="checkbox"/> Update 'Shares' V3 For Win - Teletext 400 Shares/Graphing System £195
<input type="checkbox"/> Win/tv 'Celebrity' - TV Card / 24 bit Video Capture (inc. limited teletext) £CALL	<input type="checkbox"/> Update 'Invest' V3 For Win - Teletext 400 Shares/Graphing Prof. System £495

**TOTAL AMOUNT: £** \_\_\_\_\_ including £5 carriage, then 17.5% VAT. I enclose a cheque / please debit my credit card as below.  
 (We do welcome posted / faxed official orders from 'quoted' PLC's, Govt, Local Authority and Major Organisations) ALL PRICES EXCLUDE VAT

Card No: \_\_\_\_\_ Expiry: / 9

Cardholders Name: \_\_\_\_\_ Telephone No: \_\_\_\_\_

Cardholders Address: \_\_\_\_\_

Post Code: \_\_\_\_\_

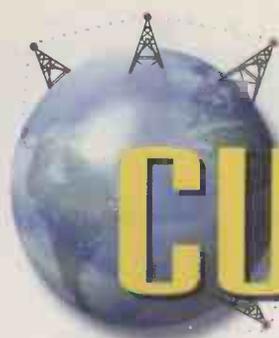
**Order Now!**  
 At last! Up-to-date information - with no 'on-line' charges!

**Datapak Request**  
 Phone: 0181-203 0220  
 Fax: 0181-203 7004  
 Email: teletext@opt.com

**Fax-On-Demand**  
 Or why not call our 24 hour automated fax-on-demand system: 0181-203 5500. Call from any touch-tone phone, 24 hours a day, enter your fax number, and we do the rest.

**World-Wide-Web**  
 Access our Internet Web, <http://www.opt.com/opt/> and get immediate data on our full teletext product range. Includes sample output, screen shots, full specifications, developers info, and much more....

**OPTIMUM TECHNOLOGY LTD**  
 FREEPOST, Sunny Gardens Parade, Great North Way, London NW4 4YP  
 Sales Desk: 0181-203 0220 Sales Fax: 0181-203 7004  
 24 hour Fax-on-Demand: 0181-203 5500  
 EMAIL: teletext@opt.com INTERNET WEB URL: <http://www.opt.com/opt/>



# CUTTING EDGE

On the



**W**elcome to Cutting Edge, the section in *Personal Computer World* that combines our regular reviews of games, books and CD-ROMs with features bringing you the latest news about computing, and consumer technologies and online services.

We now have the most comprehensive coverage of these topics available in a general computing magazine. Stay with us and we'll take the pain out of keeping on the cutting edge.

## PCW Online

- 2 3 1 **Focus** — Wendy M Grossman on products that prevent children gaining access to undesirable areas of the internet.
- 2 3 6 **net.answers** — General points and problems about the Internet, cleared up by Nigel Whitfield. A great place for beginners to start.
- 2 4 0 **net.news** — Netscape reacts swiftly to plug a gap in the security of its web browser, and cable phone customers get a mixed deal. News round-up by Joanne Evans & Clive Akass.
- 2 4 7 **net.newbies** — A shortened and simplified explanation of how to get online.

**comms** — The Comms column has moved to a new, regular site in Hands On.

## PCW Futures

- 2 4 9 **Innovations** — The floppy disk finds a new lease of life. Tim Frost reports.
- 2 5 1 **Horizons** — Ben Tisdall on the new "wavelets" compression technology.
- 2 5 2 **Bluesky** — Nick Beard on fault-tolerant software.
- 2 5 3 **Retro Computing** — The BBC Micro was "a machine for everyone". Simon Rockman reminisces.

## PCW Media

- 2 5 4 **Books** — Joanne Evans looks at books which take a slightly different view of the internet.
- 2 5 6 **CD-ROMs** — Our disks have a spaced-out flavour this month, featuring Apollo 13, Space Age Encyclopedia and Grolier Science Fiction.

## PCW Fun

- 2 6 1 **Kids' Stuff** — Paul Begg has an eye on CDs for Christmas, including *The Fish Who Could Wish* and the excellent *Circus!*.
- 2 6 6 **Competition** — A Hi-Grade Notino notebook and a Nokia Trinitron monitor are up for grabs this month.
- 2 6 7 **Screenplay** — Pass some time with *Pitfall - The Mayan Adventure*, *Fury<sup>3</sup>*, and *Pinball Space Cadet*.
- 2 7 0 **Leisure Lines** — Puzzles with JJ Clessa.



CD-ROMs:  
Look! It's Larry

### Kids' Stuff: Fun with The Fish Who Could Wish



### Screenplay: Jungle fever in Pitfall - The Mayan Adventure



# Sportster®

## GIVES YOU MORE

Now the world's No.1 modem from U.S. Robotics includes everything you need to get on-line. As an exclusive offer, the *Sportster 28,800 Internet Special* gives you one month's free Internet access via PIPEX Dial Trial software, with a further two month's free access upon subscribing to the full service. The PIPEX Dial Trial product offers easy local call access to over 80% of the UK, and includes auto-dialling and a web-browser. The *Sportster 28,800* will also come with all necessary cables and

connectors, 1 month's free trial to CompuServe and access to the ACC long distance-low cost call service,

enabling you to save up to 25% on all long distance calls.

The *Sportster 28,800* modem from U.S. Robotics, gives you full fax and data facilities at just **£199\***RRP.

All *Sportster* modems are bundled with free data and fax software, a 5 year warranty and free lifetime technical support.

For further information please call the U.S. Robotics sales team on freephone:

**0 8 0 0 2 2 5 2 5 2**

FIVE YEAR  
**5**  
WARRANTY

\* Price excludes VAT

AVAILABLE  
END WORLDWIDE  
ACROSS EUROPE



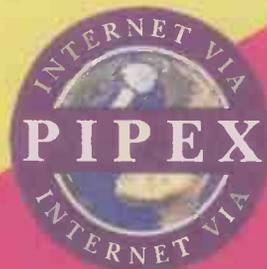
**U.S. Robotics®**

The Intelligent Choice in Information Access

U.S. ROBOTICS LIMITED, 650 WHARFDALE ROAD, WINNERSH  
WOKINGHAM, BERKSHIRE RG41 5TP TEL: 01734 228200 FAX: 01734 695555

#### INCLUDES

- FREE INTERNET TRIAL WITH PIPEX
- SERIAL CABLE
- SERIAL CABLE CONVERTER
- ACC LONG DISTANCE CALL SERVICE
- 1 MONTH COMPUERVE FREE TRIAL OFFER



FINANCE  
AND BUSINESS

ENTertainment

WEATHER

Arts

SPORTSTER  
Internet  
SPECIAL

SPORTSTER  
28,800 **£199\***





# Guardian angels

**With pornography and violence freely available on the Internet, people are increasingly worried that their children may be learning too much. Wendy M Grossman reports on new software designed to give parents peace of mind.**

All the tabloid coverage of sex, drugs, and bombs 'n' guns in cyberspace has convinced many parents that it's not safe to let their kids cross the information superhighway. Every generation of parents has its bugaboos, whether it's TV, comic books, or pocket calculators. But there are legitimate reasons to be worried about what kids might stumble across in newsgroups like alt.sex.stories, or on Web sites.

Many freedom of speech campaigners argue that the best method for handling this

situation is parental involvement. Don't, the argument goes, try to block off kids' desire to explore; teach them how to deal with what they see and place it in a wider context. But that presumes that the adults themselves are not shocked by what they see, and that's a questionable assumption.

A new generation of products is springing up to try to set limits on what kids can see in cyberspace. The good side of this is that it is the parents who choose whether or not to use them; a much better solution

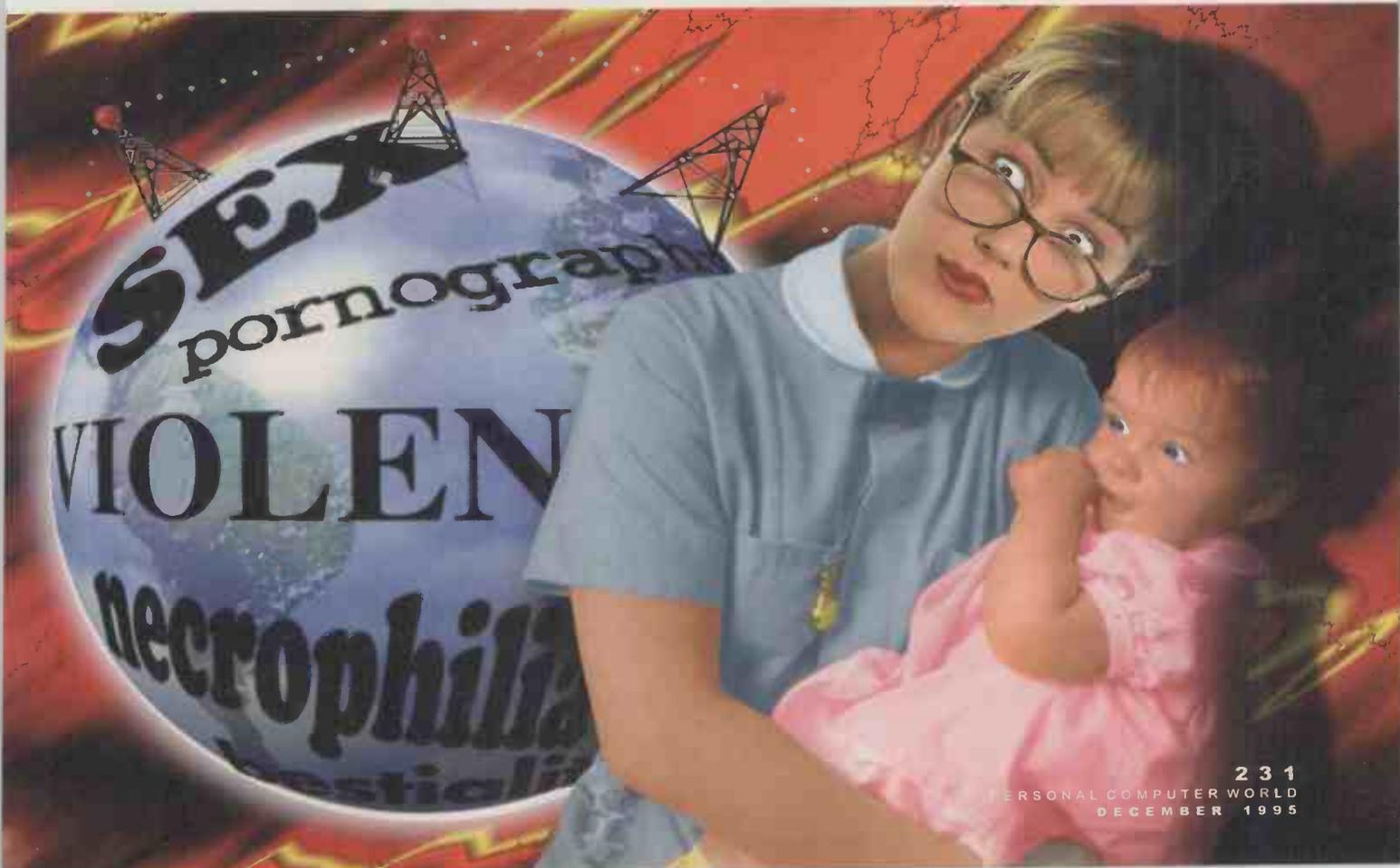
PCW illustration by Stephen Caplin

than government-mandated censorship. The down side is that technology rarely delivers what it promises, and parents may assume these applications are more effective than they actually are. The Internet changes minute by minute, and it's difficult to see how a single software product can keep up.

The alternative to these products is to choose an Internet service provider that attempts to cut out objectionable material for you: the BBC Networking Club, UK Online, or Research Machines. All three of these cut

their Usenet feeds to eliminate hierarchies like alt.sex.\* and alt.binaries.pictures.erotica.\*; additionally, Research Machines blocks Web sites that contain material it deems unsuitable for its primarily educational and family users. However, this option effectively fences in the adults as much as the kids.

Expect to see many more products joining the four we review here in the coming months. Compuserve, for example, has already announced such a product for use with its IP service, and Netscape is



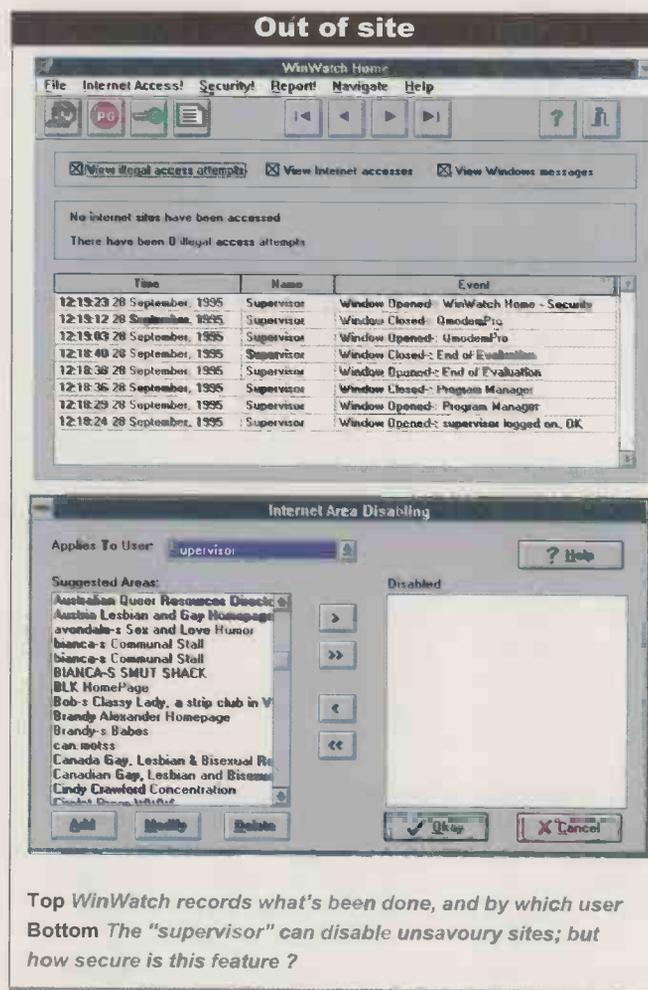
planning to include Web site-blocking in a future release. The real hope for the future, though, may lie in the Safe Surf Initiative, which is asking Web sites to label themselves as safe for kids to play in; this standard labelling can then be used as a filter for Web browsers.

### CYBERSitter

Solid Oak's CYBERSitter comes on one disk and installs fairly quickly; a 30-day trial version of the program is available from the UK distributor. The accompanying slim A5 manual explains the basics of the Internet and what CYBERSitter does. You can set the program to block material or simply log information about what material is being accessed — with a note that this might be suitable for covert monitoring in an office situation. You can set it to monitor or block access to files stored on your own hard disk as well. As the manual helpfully points out, this means you can stop your child from fiddling with the File Manager. Alternatively, you can set CYBERSitter to produce a log that shows he or she is playing games instead of doing homework.

The new 1.2 version adds Internet blocking. This is a little tricky to configure: you have to enter your email address and the name of your mail server, then click on the now enabled Filter button to download the database of "bad" sites. You can then choose to block or monitor access to these. You can't, unfortunately, add entries of your own to the database, although you can send these in to the company with a request that they be added.

Because there's no way for the computer to distinguish between a pornographic picture and a weather map, you block whole file types — .GIF, .JPG, or .ZIP, for example — or access to specific files. Blocking access to CompuServe's completely unprotected WinCIM or blocking



the download of video files (which tend to be very large) would mean that your child couldn't run up huge bills when you weren't looking, and it would also ensure that your own personal files remained untouched. This blunt instrument approach is awkward but effective. The new version can also be easily configured to stop your child from sending out personal details like address and phone numbers.

CYBERSitter attempts to hide its tracks: when you access a blocked file you just get a standard Windows error message saying the file, or some portion of it, is missing. It can also be set to hide its program group or require a password so that the program settings can't be tampered with. However, the whole thing is easily defeated from DOS, since any moderately sophisticated user (read: child)

can figure out how to comment out the relevant lines in system files and reboot. Even if you block editing of those files, there's always the emergency boot disk approach.

**CYBERSitter: £29.95 plus VAT, postage and packing, from POW! Distribution 01202 716726 or <http://www.pow-dist.co.uk>**

### SurfWatch

SurfWatch is completely Net-orientated: you even have to log on and establish a live connection to your service provider before you can start the software's installation routine. We used a connection to Demon for testing purposes as Demon's reputation is founded in part on the promise that it will censor nothing.

It's a little weird to install software while feeling the phone bills tick up, but the routine was very quick. At the end, you're

asked if you want to update the Surf Watch database; we clicked yes, but were unable to find a serial number the program would accept. Somewhere in the updating procedure you're given the chance to subscribe to monthly updates. In this, SurfWatch is (correctly) like a virus scanner: so much new stuff is coming out all the time that without updates the software quickly starts to have large holes in it.

SurfWatch certainly did what it was supposed to do: it blocked our way to a well-known US site that features material on drugs, sex, and conspiracy theories, and it wouldn't let us follow most of the links we found by searching the Web. It was perfectly happy to let us in to look at "Flirty" fashions, however, including the leather outfits. It did block our favourite page of links of banned material.

Someone at SurfWatch clearly spends a lot of time looking into all this stuff. Whoever it is doesn't seem to think information about hacking is dangerous: there's no problem getting into the Web sites for either *2600* or *Phrack* — two hacker magazines.

SurfWatch wants you to know it's there. When you try to log on to a blocked site, it puts up the message "Blocked by SurfWatch." You can turn it off by entering a password and clicking on a radio button. You can't, however, remove it through the Task Manager. And you can't yet configure it by adding sites of your own; although the company says the next version will allow you to do this. The program gives no help with files or Web pages that have been downloaded and saved on your hard disk.

The program does have its limitations, however. Although it successfully blocked us out of newsgroups accessed via public newsreaders, it allowed us access to one of the banned groups through a Telnet session

# THE ULTIMATE IN PERSONAL INTERNET ACCESS.



## MAKE IT PIPEX DIAL

PIPEX Dial is precisely what you've been waiting for: a perfect combination of essential Internet applications and fast Internet access, seamlessly integrated into one package by Europe's acknowledged TCP/IP experts, Unipalm PIPEX: the company who brought the Internet to the UK and into Europe, and provider to organisations like Barclaycard, Sainsbury's and H M Treasury.



### Easy to use

Point-and-click all the way, using familiar Microsoft Windows applications

### Fast and cost-effective

Local call Internet access around the UK at 28.8kbps / V.34 throughout (via intelligent PIPEX vPOP dialup network)

### Quality software

Fully licensed and supported, including Web and News browser Netscape Navigator, multimedia email package, Telnet and FTP (File Transfer)

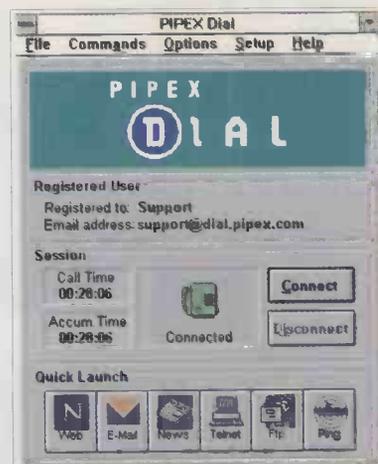
### Total support

Benefit from Europe's premier commercial Internet network, support and free on-line

software upgrades.

### Flexible payment

Choose a discount on a year in advance, or spread the cost by monthly Direct Debit.



**0500 4-PIPEX  
(0500 47 47 39)**

 **Unipalm PIPEX**

All trademarks acknowledged. For information on total Internet business solutions from Unipalm PIPEX, please call 0500 64 65 66. URL: <http://www.unipalm.pipex.com>



Fancy a spot of Net surfing? Sure – but isn't it a bit tricky? Well no, actually, because right now CompuServe is offering free membership and the simplest way to get on the Internet. Thanks to some rather brilliant and completely free software called NetLauncher™, you just pop a disk into your PC and you're ready to dive in.

With the help of one of the best Web browsers around, you'll be exploring the wonders of the World Wide Web in next to no time – pages of fascinating hypertext-linked information – including pictures from the Hubble space telescope, electronic magazines and virtual museums.

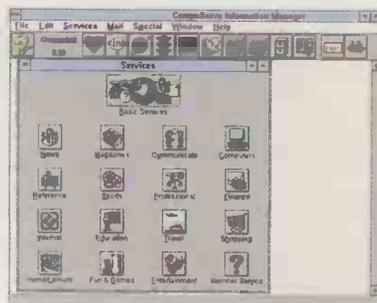
Whether you're new to the Internet or not, CompuServe gives you all the software you need to take a trip around cyberspace, and your first 10 hours are absolutely free. If you ever feel out of your depth, there's full



SPRY Mosaic: one-step access to the World Wide Web

*free.net.surfing@compuserve*

Customer Service Support (Freephone or online), as well as CompuServe's very own New User Forum and Internet Resources Forum. As if all that wasn't enough, your CompuServe membership also gives you access to over 3,000 CompuServe services. So get on the line and get online.



User-friendly CompuServe Information Manager

**FREE** CompuServe Information Manager software for Windows, DOS or OS/2. **FREE** NetLauncher™ software for Windows – including SPRY Mosaic Web browser. **FREE** CompuServe membership for first month including 10 hours **FREE** access to CompuServe and the Internet, **FREE** personal Internet address, **FREE** subscription to the CompuServe Magazine. Successive months membership (£6.20\*) includes 5 hours **FREE** online time.

**CompuServe®**

**CALL FREE: 0800 289378**

CompuServe UK, 1 Redcliff Street, PO BOX 676, Bristol BS99 1YN. Open 9am to 9pm weekdays, 10am to 5pm Saturdays.

\*CompuServe is a global information service and all prices are set in \$US, however you will be charged in your local currency based on the prevailing exchange rate.



CUTTING EDGE



to a commercial online service with an internal newsreader. Once again, it's fairly easy to defeat the program from a simple DOS edit of system files. Until Microsoft gets around to putting real security into DOS and/or Windows, that limitation is always going to be there.

**SurfWatch: £59 including a year's updates, from Research Machines 01235 826868**

### Net Nanny

Net Nanny is completely dependent on words and phrases. The package consists of two versions on one disk; for DOS and Windows. You have to install the DOS version (which creates a hidden directory on your hard disk) that holds three hidden files. You only install the Windows program if you actually use Windows.

Either way, you run the Net Nanny administration program from the installation disk and configure the included dictionary with the words you want to block. For instance; phone number and address details, names of potentially undesirable contacts, or simply words you think might trigger objectionable material. This gives you all the latitude you may desire — and probably parents should be worrying more about amateur bomb-making recipes than about sexually explicit images, since pictures don't destroy houses.

Net Nanny requires you to specify the number of hits — that is, the number of times the banned word appears on the screen — and whether you want the program to simply log hits surreptitiously, or shut the system down. An adult will find this irritating: Net Nanny shut down Word for Windows after we'd written the word "sex" five times, and refused to let us run the program again until we'd exited and rebooted.

You can run the Windows Net Nanny administration program and disable Net Nanny

temporarily or remove it altogether. So controlling the computer is a matter of controlling access to the floppy disk and its copies. Of course, you can still disable the program by editing the system files.

You could use this method to block specific Web sites if you set a very low number of hits to trigger shutdown. But even so, the program isn't that well suited to blocking access to Web sites or newsgroups. You are dependent on geeks bearing .GIFs to be helpful about assigning explicit file names, and on your own willingness to research sites to block — Net Nanny's Web site does keep a starter dictionary of sites available for users to download. But overall, it's not a sufficiently flexible approach for today's Internet, especially since Net users are the sort of people who would change the spelling of "sex" to "sexs" if they thought it would defeat such a program (and it would, unless you knew about it). The press material promises some useful-sounding features — like blocking the use of unauthorised disks — that the documentation doesn't explain how to implement. Without prompting, for example, how many parents would think to put "format" in the program's dictionary?

**Net Nanny, from Net Nanny Ltd: \$49.95 from (1) (604) 662 8522 or <http://www.netnanny.com/netnanny/>**

### WinWatch

WinWatch is the sole British product in this group, and it's produced by Crawley-based HWA. They won't thank us for saying this, but if you want a relatively recent list of unsavoury

Internet sites and newsgroups, this is the one to buy: log into the package as the Supervisor, and you're treated to a complete list of all the sites and services included. Click on the "Modify" button, and you can read the addresses, too. Unfortunately, you can't simply export the database.

We had some trouble getting WinWatch up and running, apparently entirely due to our system's refusal to let it install the ODBC Microsoft Access driver. Once that was installed separately, the product worked as it was supposed to.

Unlike the other programs reviewed here, WinWatch asks you to log on when you start Windows. This has its uses, since it means that you can keep permanent settings for each member of the family: your 15-year-old might be granted access to material that you don't want your 11-year-old to see. However, there's no way to tell at a glance (unless you open up the report module using the Supervisor's ID) which user is currently logged on, and there's no protection against one child starting the system and leaving it running for another to use.

Like CYBERSitter, WinWatch has opted for the subtle approach. Net sites aren't blocked, they're just unavailable for one of a number of reasons (internal transfer error, file not found on this server, and so on). You can add your own sites — Usenet newsgroup, Web pages, and other types of Internet sites. You update the database by downloading a new version from the company's Web page.

WinWatch also monitors all windows within Windows: open WinCIM, for example, and log onto CompuServe using the Send and Receive All Mail command from the Mail menu, and WinWatch records that this has been done and by which user. Reading through this log is a very good way to shame yourself — er, your children — into

doing some work. The program can be configured to block access to local files, as well as to stop the transmission of personal details and specified words and phrases.

We found this program a bit difficult to configure and use. Expect to have to take a little time to learn your way around it. If you're just buying it for the database, expect to have to copy and paste the addresses one at a time: the database itself is encrypted.

**WinWatch: £40 plus VAT from Crown Computer Products 01704 895815. Database updates available from <http://www.pcnl.co.uk/WinWatch>**

### Editor's Choice

Any of the bright kids we knew in school would be able to defeat any of these programs very quickly. DOS's basic lack of security, coupled with kids' natural tendency to break rules, means that parents should not expect to be able to install a single program and walk away leaving their kids' computer use unmonitored.

All these programs require a certain amount of technical knowledge and commitment to get them up and running: which unfortunately means that most kids will understand how to work them better than most parents. So none of them is entirely satisfactory: CYBERSitter doesn't allow you to add sites, WinWatch's logon procedure is flawed, SurfWatch won't block or monitor local file access, and NetNanny gives kids a great new excuse for why they can't do their homework ("But, Mum... the computer shut down on me.")

As we have to pick one, we would suggest either CYBERSitter or WinWatch. But both need some improvement, and parents should still expect to have to spend some quality "net-time" with their kids.

# net.answers

CUTTING EDGE



**Q. Our office is connected to the internet and I'm worried about hackers gaining access to the systems. How can I protect them?**

**A.** Firstly, remember that hacking isn't that common: no-one will bother unless they think you have something worth looking at on your system.

There's no simple answer to the question of protection; it depends very much on how your computers are connected and what software they're running. For instance, if you have FTP (File Transfer Protocol) server software that allows other people in your office to get files from your PC, it could potentially be accessed by anyone on the internet.

Unless you really need to, you shouldn't run any such servers on PC systems because they're a security risk. If you do run a server, check to make sure there are real passwords to control access.

You should also see whether the computer, or router, that connects you to the internet can filter out certain types of information, such as incoming file transfer requests. If you're not providing any publicly accessible services, then it's a good idea to make sure that people from outside can't get into your systems.

A popular solution is to use a "firewall" — a computer connected to the internet with special programs to screen out connections to and from some

## Nigel Whitfield guides you through the Internet.

addresses. It acts as an intermediary between your network and the rest of the internet, so that anything going in or out has to pass through this firewall.

Some firewalls additionally act as proxy systems so that you don't have to have a registered network to provide access to everyone in the office. Instead, requests for information are passed to the firewall and the results are sent back to the original computer (just like a proxy web server). In fact, unless you have a very good reason not to, it's probably a good idea to make sure all your computers are hidden behind a firewall server in this way, since you'll help to conserve internet addresses as well.

But where do you get a firewall? One solution is to have a computer running Unix as your firewall system, which can be used to provide many other additional facilities such as a web server, or ftp site. There are various types of firewall software on the internet, which can be installed on your server to protect it from attack.

One popular package is called `tcp_wrappers`. This checks for connections to your computer and identifies which machine they're coming from. It compares the address to a list of systems that are

● SpikeMail is one of the simplest and easiest ways of connecting your Windows for Workgroups mail system to the Internet

allowed access (just like using the Caller Display service on your telephone to decide whether or not you'll pick it up) and refuses access to people who aren't listed. It can even be configured to query the remote system to see who is using it — this could provide the information you need to track down anyone attempting to break into your computer. There's also a firewall kit, available from TIS, which provides similar facilities.

For more information on firewalls you can join the firewalls mailing list by sending a message to: `majordomo@greatcircle.com`, containing the line: `subscribe firewalls`.

Information about `tcp_wrappers` is available from `ftp.win.tue.nl` in the `/pub/security` directory, and the TIS firewall kit is at `ftp.tis.com` in `/pub/firewalls`.

### Q. How can we connect the mail in Windows for Workgroups to the internet?

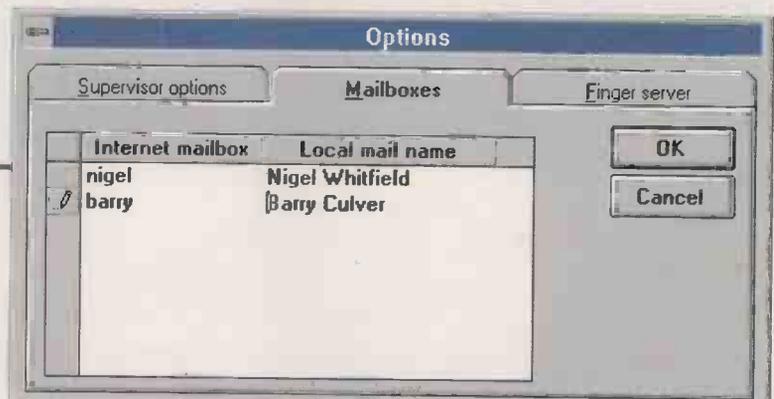
**A.** The simplest way to connect your Microsoft Mail system to the internet is to buy the Microsoft SMTP gateway, which enables the system to talk to

internet mail servers.

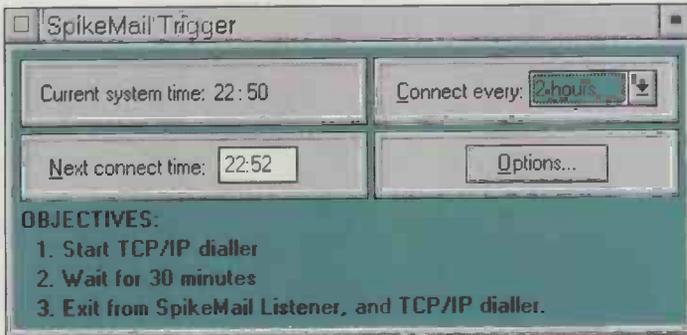
Unfortunately this gateway is one of the most expensive ways to connect your system to the internet, but there are some affordable alternatives: SpikeMail, and Internet Personal for MS Mail.

Both products provide you with similar facilities — most importantly, the ability to send and receive messages using the ordinary Microsoft Mail program supplied with Windows for Workgroups. They'll even handle attachments, so that if someone on the internet sends you a file using the MIME encoding system, it will appear as an icon in your MS Mail. The same process works in reverse too, so you can send files to people around the world just as easily as around your network.

Where the two products differ slightly is in the way that messages are addressed to people on the internet. SpikeMail isn't quite as intuitive, and you won't be able to use your address book. All your messages have to be sent to a special user called "internet", with the real address in the Subject field. Internet Personal allows you to put the address in the "To" field, as long as you put square brackets around it. It can also collect mail from a POP mailbox for you, whereas SpikeMail can only receive via SMTP.



CUTTING EDGE



● Spike includes an automatic trigger to regularly dial up and collect your mail

and read it for a while, to get a feel for it before proposing your own group.

Remember,

though, that some sites simply don't take commercially-orientated groups like the biz ones, so you may find that many people cannot take part in discussions.

As long as you're not posting blatantly commercial messages such as "our product is better than X", you should suggest that people raise their queries in any of the most appropriate mainstream newsgroups. But remember to check the charter of that group first, before using it as a support forum.

While a newsgroup may seem like a good idea, you'll probably find that a lot of your customers simply don't want to bother with it: according to one internet provider, over 80 percent of its customers never access newsgroups.

The best solution for many people is to set up a mailing list, so that customers can send a message to a single address and have it redistributed automatically to others on the list. As well as being quick, a mailing list has the advantage that you can create it easily and then decide who can join.

If you decide that you want to set up a mailing list for your customers, check with your internet provider to see if it's able to run the list for you — some will, for a charge. If not, then you'll either have to find someone who will run it for you, or install a program on your own computer.

**Q. We'd like a space on the internet for customers to talk about our products. How do we get one?**

A. Historically, people have frowned on use of the internet for purely commercial purposes, and unless yours is a very large company with a well-known product, the chances of being able to have a newsgroup created to discuss your product are minimal, especially if you want a group in one of the main discussion hierarchies.

If you really want a space where people will talk only about your products and not the competition's, then you might be able to make a case for a newsgroup in the "biz" hierarchy, which was created specifically for that type of discussion. The best way to go about it is to join the newsgroup biz.config

**Q. What's the difference between SLIP and PPP? Will one give me better performance than the other?**

A. SLIP and PPP are methods of connecting two computers together via a point-to-point link (like a modem connection, or a serial cable) rather than the network connections used within a building. SLIP stands for Serial Line Internet Protocol and PPP for Point to Point Protocol.

SLIP is the older of the two and was designed specifically to connect two known systems, providing there was an internet connection between them — for example, a dial-up link between your PC and an internet service provider. When you use SLIP, you'll need to know the internet address at each

## TRAVEL ABROAD WITH A FAX/MODEM?

### THE PROBLEM

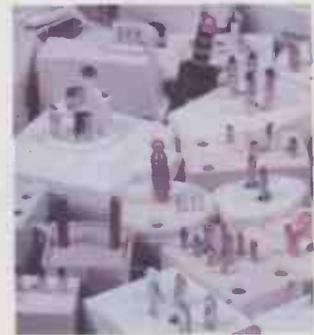


If you're an executive who regularly travels abroad with a notebook PC you will recognise the problem. **TeleAdapt** are the experts in the field of modem connectivity to any form of telephone network, allowing data and fax communication from any location around the world.

- Foreign hotels - *TeleDaptors™*
- Digital Phones - *TeleSwitch™*
- Pay Phones - *TeleFast™*
- Hard Wiring - *Executive TeleKit™*
- Modem Cellular Interfaces - *Solutions for analogue & GSM networks*

Why not give our specialist team a call & they will be pleased to assist you with a solution to **any** communication problem.

### THE SOLUTION



*TeleDaptors™*

UK: TeleAdapt Ltd • Leeway House  
Leeway Close • Hatch End  
Middlesex • HA5 4SE  
Tel: +44 (0) 181 421 4444  
Fax: +44 (0) 181 421 5308  
CompuServe: 100111, 2713  
Internet: teleadapt@delphi.com

USA: Tel: +1 408 370 5105  
Fax: +1 408 370 5110  
CompuServe: 72623, 706  
AUS: Tel: +61 (0) 2 966 1744  
Fax: +61 (0) 2 966 1077  
CompuServe: 100116, 637



# MODEM Marketplace

**DON'T GET CAUGHT IN THE TALK TO THE EXPERTS 'NET!'**



## Prologue V.34 EX

READY TO GO WITH

- INTERNET ACCESS
- BT HELPLINE SUPPORT  
Extended hours, 6 days a week
- FREE SERIAL CABLE
- 5 YEAR WARRANTY

FAX & DATA SOFTWARE

**FOR FEATURES, PERFORMANCE AND DOWNRIGHT STUNNING VALUE, THIS V.34 MODEM LEAVES THE REST TRAILING!**

**STYLISH, SLIMLINE CASE**  
Looks great anywhere & is easily portable

**PHONE SOCKET**  
Pass through socket for convenient line sharing

**SECURE ACCESS**  
With password protection & dial-back security

**V.34 + INTERNET ONLY**

**£175**  
+ VAT



**BLISTERING 28.8K DATA**  
True V.34 (plus V.Fast Class) for up to 115.2K

**Plus**

**CALL-BACK REQUEST:** As a host modem, (e.g. in office) dials back outside user, saving on home/travelling phone charges.  
**PHONELINK 'FAST CONNECT' COMPATIBLE:** For connection to on-line services such as Tel-Me.  
**REMOTE CONFIGURATION:** With password protection **ENHANCED AT COMMAND SET:** Fully Hayes Compatible  
**FULL DATA COMPRESSION AND ERROR CORRECTION:** MNP5, V.42bis & LAPM, MNP2-4, MNP10

**The Service**

**01784 421123**

Whether you're a novice or a seasoned 'net surfer', an individual or a company, a call to Express Technology is a must:

- ✓ For the latest news on products & prices.
- ✓ For the help you need to make the right choice.
- ✓ For full after sales support.

After all, modems are our business so we know what we are talking about!

**The Choice**

With quality, performance and value as our benchmark, we are constantly evaluating modems from around the world to offer you:

- ✓ Modems for all requirements and budgets.
- ✓ Proven award winners - including our own Express range.
- ✓ The best prices, backed by the Express price promise - LIKE FOR LIKE, WE'LL MATCH ANY GENUINE 'IN STOCK' PRICE
- ✓ **ALL MODEMS BABY APPROVED**

**GO INTERNET**

With our **Free CompuServe Membership** includes Full internet access Free usage credits

**Corporate & Volume Enquiries Welcome!**

CEM... Educational... Industrial Installations... Tenders... etc... Our blue chip customer base speaks for itself - call for the full story and sample prices. 30 day trade accounts available.

**Easy Ordering**

Call Mon - Fri, 9 - 5.30.  
We accept cheques and most major credit cards and orders are couriered within 48 hours

(Subject to availability). UK mainland £9 (smaller items £5). Prices & specifications subject to change (ESED). Full terms & conditions available on request. **ALL PRICES SHOWN EX VAT.**

**EXPRESS TECHNOLOGY**  
THE COMMUNICATIONS COMPANY

Ashford Road, Ashford, Middx TW15 1XE  
Tel: 01784 421123  
Fax: 01784 421910  
E-Mail: sales@extech.demon.co.uk

## The BT Modem & ISDN Range

**TECHNOLOGY YOU CAN TRUST FROM BT - WORLD LEADERS IN COMMUNICATION SOLUTIONS**

Dealer calls welcome	Express Prices (ex VAT)
Prologue V.34 EX	£175
Prologue PCMCIA V.34	£229
Prologue PCMCIA V.32bis	£165
Prologue 1414 'Pocket'	£125
Ignition ISDN	£499

ORDER ON 01784 421123



**Ignition ISDN Terminal Adaptor**  
only **£499**  
Guaranteed Free

'Plug & play' access offering advanced features at an outstanding price

**Highlights** - 64k bps ISDN 2 with V.24 DTE interface • Dual analogue port, for phone & fax connections • V.42bis data compression, for up to 64k bps sync and 115.2k async • Latest V.120 rate adaption plus V110 support • AT command set • Hyper Access Lite file transfer software & configuration software • ISDN information bulletin board.



**Prologue PCMCIA**  
Now From **£165**  
14.4K model  
Express Special

Highly featured and superb value

- Dual standard 28.800(V.34 & V.FC) and 14.400 (V.32bis) models
  - No bulky 'boxes-in-the-cable' - Built-in DAA line interface.
  - PCMCIA Type II - For all leading laptops etc.
  - Phonelink 'Fast Connect' compatible.
  - **FIFO 16550 high speed buffer** - For up to 115.200bps (V.34)/57.600bps (V.32bis).
  - **Flash EPROM** - for downloadable firmware upgrades & revisions.
  - **Advanced auto - line speed selection**
  - **Supports PCMCIA 'Hot Swapping'**
  - **Auto - sleep powerdown** - Conserves power
  - **Remote configuration** - Password protected
  - **High level security** - Dial back & password protection
- Plus** - Hayes AT & V.25bis command sets & Hayes Autosync • Direct enabler software • V.42bis/ MNP 5 data compression • V.42/MNP 2 - 4/ LAPM /MNP10 error correction • Windows & DOS, Fax & Comms software

## Prologue 1414 Pocket

Portable modem power, for on-the-desk or on-the-move

- Stylish 14.400 pocket design.
- Easy to install & use.
- Mains & low consumption battery operation.
- Phonelink 'Fast Connect' compatible.
- Extended Hayes AT command set.
- V.42bis/MNP 5 data compression.
- V.42/MNP 2 - 4 error correction.
- Windows & DOS Fax & Comms software.



only **£125**  
Express Special

**ZOOM**



## ZOOM UP TO V.34

Sensational UK approved modem prices from the No.1 in the US

All Prices ex VAT	14.400 V.32 bis	28.800 V.34
Zoom IE Internal	£89	£149
Zoom XE External	£99	£169
Zoom Macintosh	£99	£179
Modem serial cable for PC & Mac	- £9	

## Intertex

Packed with innovative features, this is Swedish technology and design at its best!

**V.34 'VOICE' MODEM - AWARDED PC MAGAZINE EDITORS CHOICE**  
Turn your PC into a powerful fax & call management resource with Voice Mail, Fax-on-Demand, receptionist services, etc.

**EXTERNAL & INTERNAL MODEMS**  
All with Fax/Phone Switch built-in!

All Prices ex VAT	14.400 V.32 bis	28.800 V.34
Intertex Voice External	£249	£399
Intertex External	£199	£299
Intertex Internal	£219	£319

Call for latest prices & full specifications  
**CALL FOR DEALER PRICES**



## FAX SWITCHES FAX FRIEND

An economic fax switch, for anyone with only one phone line - allows phone to share the line with answering machine & fax/fax modem.

Fax Friend **£49** + VAT  
Buy with modem **£44** + VAT

**ORDER 01784 421123 DIRECT**

## Plus

New

### PCMCIA DESKTOP INTERFACE

- Share PCMCIA modems etc between laptop & Desktop
  - Quick & Easy data transfer • Twin slots - 3.5" bay + 16bit card
- £119** + VAT, **£99** when purchased with modem

### FAX SCANNERS

Scan Documents into PC from any Fax Machine, via your modem.  
**£28** + VAT

### Serial Accelerator card

(for external Modem high speed comms)  
2 x 16550 UART Serial + 1 x Parallel -  
**£39** or with Modem - **£29**





CUTTING EDGE



# net.news

**Nigel Whitfield and Clive Akass do a spot of traffic-watching on the information superhighway.**

## Netscape fixes cracked security

Netscape Communications has acted swiftly to plug a gap in the security of its popular web browser. In late September, two students from Berkeley University, California, posted accounts to the internet explaining how they'd cracked some of the security enhancements provided by Netscape. The problem was confirmed by Netscape's engineers.



In a statement, the company stressed that no customer information protected by their security systems has been stolen, but acknowledged that it was possible to decrypt the messages sent by the browser — potentially including credit card information — with just a few hours of calculations.

Companies using Netscape's security technology to provide online shopping don't appear to have been unduly troubled by the news. Many have actually praised the swift response. Easynet's Grahame Davies pointed out that there are many other ways of obtaining credit card details without the effort involved in decrypting them from the internet. Sainsbury's, which has just launched an online wine store using Netscape Commerce Server, didn't believe that business would be affected.

Updated versions of the Netscape Navigator for Macintosh, Unix, and Windows can be downloaded from the Netscape home page, along with a patch for the Commerce Server software used by vendors. The new security enhancements have also been incorporated into Navigator 2.0, which is due to be released in Beta form shortly.

The original security breach was discovered by reverse engineering of the Netscape Navigator, which revealed that although 40-bit encryption keys are generated by the program, the random information used to generate the keys was much shorter, making them easier to crack. Up to 300 bits of random information will be used in the updated version, and Netscape is planning to engage independent security experts to ensure that the security in future versions of the product is thoroughly reviewed before release.

## Free calls come and go

Customers of cable telephone companies look set to get a mixed deal when they use their phone line to access the internet. While some providers have confirmed that users can access the internet using their free local calls, others appear to be backtracking, and referring specifically to voice calls in new contracts.

Videotron, which covers large parts of London as well as Southampton, Eastleigh and Winchester, has confirmed that domestic customers

will be able to continue to use free calls with their modems, and estimates that the free access provided could be worth as much as the subscription costs to an internet provider for only 30 minutes of calls per day.

The decision follows research commissioned by Videotron, which showed that 35,000 of its customers owned home computers. The decision will be backed up by an awareness campaign, promoting both cable television and the internet in London secondary schools.

Meanwhile, the small print for Nynex's CommUNITY free local calls scheme explains that it covers only calls made between two residential customers. One Brighton-based internet service provider with Nynex lines said free calls were still in operation at the moment, and are unlikely to change for the foreseeable future. However, many users have reacted angrily to the possibility of losing free net access.



## Cityscape's move to Demon will improve services, customers assured

Cambridge-based internet provider Cityscape has jumped ship from the Unipalm/Pipex network to Demon Internet, claiming the move will help its provide a better service to its

customers. The changeover also involves Demon Internet taking over the 25 percent stake in Cityscape that was previously owned by Unipalm/Pipex.

Reactions from users have

been mixed, with some fearing that they'll experience problems becoming part of a much larger network. Cityscape believes that there should be many improvements in the service, including

allowing customers access to Demon's dial-up network — currently being upgraded in order to provide customers with local-rate access for any destination anywhere in the UK.

CUTTING EDGE

## Ceneca and UIT spin new web tools for Windows and Mac

Ceneca Communications has announced a brand new web authoring tool, initially for the Macintosh, with versions for Unix and Windows to follow.

PageMill is claimed to be one of the first design tools aimed at non-technical users, and avoids the need to see any HTML codes. The PageMill editor is designed to be as simple to use as a word processor, automatically converting images that are dragged into the page to .GIF format so that they can be displayed over the web. Existing pages can be imported, and Ceneca claims that the product will even correct errors in the HTML.

Other features include an integrated browser, WYSIWYG creation of forms and ordinary text, and a pasteboard that automatically updates relative links between documents to ensure that they're always correct.

For more advanced users, SiteMill includes all the features of PageMill as well as management tools designed to keep track of all the information on a large web site, automatically checking that referenced pages really do exist. For more information, point your browser at <http://www.ceneca.com/>.

User Interface Technologies has announced the availability of HoTMetal Pro 2.0, the latest version of the popular web tool, and includes additional features like the ability to import files from a range of word processors, including Microsoft Word and WordPerfect.

Support for the HTML 3.0 standard and Netscape's own extensions to the language are included, as well as preview modes for a range of different web browsers. Improvements to the interface include floating palettes and a new table editor, as well as speed enhancements.

HoTMetal Pro costs £179 per user; more details are available from [info@uit.co.uk](mailto:info@uit.co.uk).

- See page 243 for more news of Ceneca Communications.



### Compuserve Wallet competes with Netscape

Compuserve's new electronic "Wallet" is set to offer competition for Netscape in the growing online shopping market. Although it's only just been launched and is supported by a handful of retailers, the Wallet has the backing of both Compuserve and Check Free, which provides electronic payment facilities to a wide range of companies, including MasterCard International.

The Compuserve Wallet is built in to the Mosaic for Windows 95 web browser, unveiled by Compuserve in August. It can be used with any internet access provider, and unlike Netscape's encryption technology it doesn't pass your credit card details directly to the vendor. With worries about online security on the increase, this is bound to be welcome.

Instead, the wallet contains all the information needed to make a purchase, including lists of the cards you hold and the billing address. Clicking on the wallet prompts the user for a password and allows them to select the card they want to pay with, before all the encrypted details are sent to the vendor, signed and passed directly on the CheckFree, where the transaction is processed. Compuserve claims that this increases the security of online shopping, but it remains to be seen whether their experience with the Electronic Mall is enough to persuade vendors to adopt the Wallet.

US market researcher Forrester believes that it could take up to 18 months before the internet is safe for commercial transactions. In a recent report, the company claims that VeriFone, which has 75 percent of the US credit card authorisation business, is likely to become one of the most important players in online transactions, following its tie-up with Enterprise Integration Technologies which developed the Secure HTTP protocol. According to Forrester, rather than develop their own transaction systems, people involved in sales over the web should ensure that their systems will be compatible with VeriFone.

Mega Download  
**Internet**

Bulletin Board  
0891 516 126

No Subscriptions

Full Download Access  
on your First Call

All Speeds to 28,800

Zmodem, Ymodem,  
Xmodem, Kermit,  
Sealink & others

New Files Daily

0891 516 126

Over 21,000 files  
for immediate  
download

Thousands  
of GIF files

World Wide Web  
Usenet FTP  
Telnet SLIP

Your own  
Internet  
email address

Super, Full Colour  
ANSI Graphics

Mega Download  
0891 516 126

Megadownload, PO Box 3463, London SE19 1DB  
Calls charged per minute  
39p cheap rate, 49p all other times



# Refreshing.

When the heat's on, nothing else gives you quite the same tingling sensation of sparkling stimulation ... feeling of cool crystal clarity in a world of chaos ... bright lights .... big colours buzz ... excitement of the senses ... scintillation of pin-point radiances ... sharpness ... satisfaction .... fulfilment .... fizz ....

No, only a long cool drink.

And perhaps a Sony monitor of course.

Upgrade to a Sony Trinitron® Monitor. It's the clear leader.



Multiscan 20se



Multiscan 17sf



Multiscan 15sf

## SONY®

Sony Computer Peripherals & Components UK

The Heights, Brooklands, Weybridge, Surrey

KT13 0XW Tel: 0181 760 0500

A division of Sony United Kingdom Limited.

Sony, Trinitron and Multiscan are registered trademarks of the Sony Corporation, Japan.

CUTTING EDGE



**N**etEstate claims to be the first company providing a searchable UK property service on the world wide web. The pages, found at <http://netestate.dsres.com/>, include properties for sale and rent in London, as well as a guide to the legal hurdles involved in buying property, and a mortgage calculator.

People hunting for somewhere to live can select an area, number of rooms and price bracket before being presented with a shortlist of properties. Clicking on an address displays more information, including a map with the location marked: if there aren't any properties in the area that match exactly, details of close matches will be shown instead.

Details of properties have been supplied by a range of estate agents who pay a one-off fee for each property advertised. According to netEstate's Matteo Berlucci, details of over 600 properties are available, though he conceded that at the moment, the bulk of them are in west London. He told *PCW* that discussions are currently under way with some larger chains of estate agents, which should enable them to provide a more comprehensive coverage, extending to more parts of London, but stressed that he wanted to make sure there was a good range of properties in each area before including it on the database.

### Newsweek launches Virtual City

Newsweek has launched a new magazine called Virtual City, designed to explain developments in the online world to management and professional people who aren't necessarily computer enthusiasts. According to the editors, "it's a guiding light to take on your forays into the cluttered electronic streets." Readers in the UK will have to make do with an AtoZ, however, until an international edition is launched.

## Cyberia in Paris

**L**ondon's Cyberia internet café is set to open up shop in Paris. The new café will be housed in the futuristic Pompidou Centre, and will open around the same time as a French office of Easynet.

## Adobe plans to acquire Ceneca

**D**TP giant Adobe has signed a letter of intent to acquire Ceneca Communications, creators of the PageMill Web authoring package. The deal will position Adobe as one of the leading players in the world of internet publishing. The company already has agreements with Netscape to include support for the Acrobat PDF (Portable Document Format) in Navigator. PageMaker 6.0, which the company acquired with its purchase of Aldus, now includes the ability to create both HTML and PDF output.

### More Net news

**T**he BBC is to set up what it calls an "interactive news service" operating from a new multimedia centre. Users will have access to instant news bulletins, as well as to BBC archives.

"They will be able to download text, radio, television pictures and graphics," promised Tony Hall, managing director of news and current affairs, at the Live 95 show. "We are talking at present to some of the main network providers to try to work out how we might do this, starting off small-scale but learning and growing."

The BBC is already participating in the Cambridge interactive TV trial, which allows users news and current affairs programs at a time of their choosing.

Hall gave few details of the multimedia centre, based at Shepherd's Bush, London, except that the plans had recently been approved by BBC governors. But it is part of a general move towards digital services which should draw the broadcasting and computing worlds together. The BBC launched its first digital audio broadcasting service on 27th September.

Free, live radio news feeds from all over the world can already be heard on the net thanks to a service launched in London by former BBC World Service staff (see *Newsprint*, November). The service, financed by participating radio stations, is at <http://www.wrn.org>.

The BBC's Web page is at <http://www.bbcnc.org.uk>

# Job.net

<http://www.vnu.co.uk/vnu/cc/>

*Job.net* from *Computer Contractor* magazine is a new service which offers global access to the current contract requirements advertised in *Computer Contractor* via the Internet.

What's more, you can access requirements that the agencies didn't even know about until after *Computer Contractor* magazine had gone to press. Within minutes of finding a new requirement, agencies can now "advertise" it on *Computer Contractor's Job.net* and moments later you can send an email CV and a message advising them of your availability.

### Contract recruitment and the Internet

Until now the drawback of the Internet for agencies and contractors alike, has been the lack of a well known, focal point where you can find most of the current IT contract assignments, without having to randomly surf the Internet.

Several agencies list their vacancies electronically but, in the main, they do so independently, which makes finding a contract fairly haphazard. *Job.net* transforms this into a highly efficient procedure which enables you to find the biggest and best selection of current jobs corresponding to your own search criteria.

### Accessing Job.net is easy

Anyone who can access the Internet can receive *Job.net*.

<http://www.vnu.co.uk/vnu/cc/>

**computer contractor**  
The Professional Contractors' Magazine

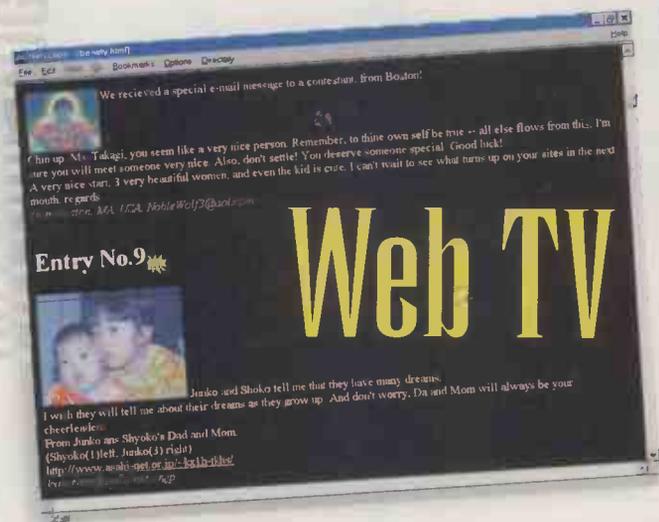
Tel: 0171 316 9390

Fax: 0171 316 9395

email: [contractor@mpn.com](mailto:contractor@mpn.com)



# net.surf



While we are on the subject of broadcasting, a Tokyo TV station is offering to put web users on television in a series of programs based on the net. So far as we can work out from the information available in Japanese English (try explaining yourself in Japanese before you snigger), it looks like an interesting attempt to put across the idea of the net's internationalism through the medium of a popular TV show. It's only surprising that the two most rapidly growing methods of mass communication haven't linked up sooner.

Producers from a company called NHK TV have set up a web site called Sim TV to act as a meeting point between the net and the show, called SimTV3, which was last broadcast on 13th October. They want people across the world to participate either through TV links or by sending in material. These three suggested items give you a flavour of the language and requirements:

- Moments: When was the most commemorative moment for you? Please send us the most celebrated and memorable moment of your life in a picture through internet.
- A Day In A Life: Tell us about your day. What do you do at 9am or 8 in the evening? We are asking for pictures that show your lifestyle throughout a typical day by time segments.
- NetBeauty: We are looking for somebody who is the most outstanding figure now. It can be yourself or somebody you know. Send us also a picture of that person when he/she is most lively and shining.

You can check Sim TV out for yourself at <http://www.simtv.nhk.or.jp>

Net software publisher Quarterdeck and pioneer service provider Demon are teaming up to consolidate their market position in Britain.

Quarterdeck's Mosaic browser and InternetSuite will be sold with 30 days' free use of Demon, which in turn will market

the software.

Quarterdeck has priced its Mosaic aggressively at £199.95; the suite will ship later this year for £44.95.

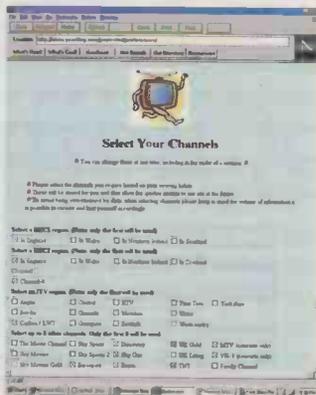
Web sites are [www.qdeck.com](http://www.qdeck.com) and [www.demon.net](http://www.demon.net).

Demon 0181 371 1234  
Quarterdeck 01344 873445

## Internet World International

The year's second Internet World International show will take place between the 5th and 7th of December at London's Olympia 2. Following the success of the first show at Wembley in May, the second will be part of the Online/CD-ROM Information Meeting, and the organisers expect the show to be even bigger than the last one — which itself was 300 percent larger than in 1994.

Yearling is the first UK comprehensive "interactive" TV listing available on the web. TV listings are likely to become a big web attraction with recent developments like the move to PC TVs and the announcement of CD-online, an internet package for CDi. Yearling is personalised so you can decide which channels you want listings for, and what type of program. It includes most of the main satellite channels but not all the channels available on cable. <http://www.yearling.com>

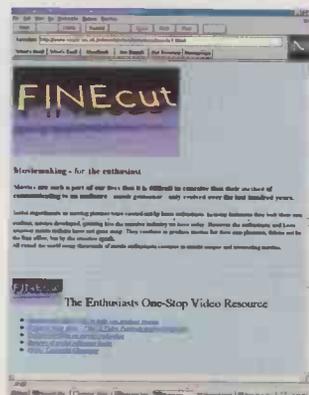


Waveguide is a general interest magazine on the web. The pages are competently put together, but the editorial content suffers from being too general. Advice on how to buy a laser printer sits uneasily with some rather out-of-date sports news and, when we looked at it, a review of Die Hard with a Vengeance. It's obviously being produced on a shoestring and it shows.

<http://www.demon.co.uk/waveguide/index.htm>

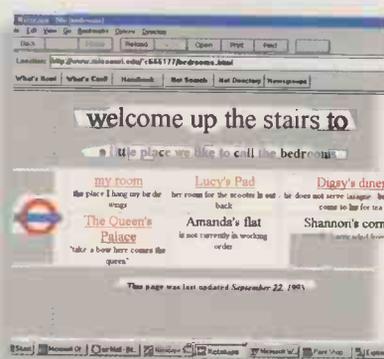
The search continues for a secure, reliable and simple way of doing business transactions on the net. US-based Viacheck is offering a complete software suite for online business. The \$395 ViaCheck Transaction System allows the orders and allegedly secure credit-card pay-

ments to be taken by a Web server. A demonstration page is at <http://www.theyellowpages/acheck.index.htm>



FINEcut is an online resource service for video moviemakers. It contains a mixture of articles, hints and tips, book reviews and listings of international film/video festivals that the amateur moviemaker can enter. For anyone interested in the subject it's well worth checking out: <http://www.rmplc.co.uk/eduweb/sites/terrymen/movie1.html>

Grand Central is a US-based site devoted to Britpop fans stranded in America. It apparently started on the America



Online bulletin board and has now been reborn as a web site. It contains links to all kinds of British sites including British hikers' pubs, British comedy, and British bands from Blur to Suede and beyond, plus the home pages of US Britpop fans. <http://www.missouri.edu/~c666177/>

## MEDIAPro COLOUR

£1695<sup>+VAT</sup>

NOW with 8Mb RAM standard

486 \ HD	340Mb	520Mb	810Mb
DX4-75	£1695	£1795	£1995
DX4-100	£1745	£1845	£2045

- **Fast internal 14.4k fax-modem**  
with FREE BitFax and BitCom software
- **Built-in Multimedia**
  - 16-bit sound, SoundBlaster compatible
  - stereo speakers and microphone socket
- **Weights only 6lb**  
2.7Kg (including battery)
- **FREE upgradeable software**  
MS Works 3.0 for Windows – special upgrade price to MS Office & Office Pro
- **Faster Local Bus**
  - 1Mb Local Bus 32-bit video
  - Local Bus 32-bit disk control
- **10.3" dual-scan colour screen**
  - port for external SVGA monitor
- **Reliable NiMH battery**
  - lasts up to 4 hours, with built-in advanced power management
  - fast 1½hr recharge – worldwide adaptor
- **Removable Hard Disk & FDD**
  - FDD swaps with Video/SCSI module
- **PCMCIA slot**
  - fits 1 Type III or 2 Type II cards
- **Enhanced I/O**
  - 1 faster serial port (16550 UART)
  - 1 faster EPP/ECP parallel port
- **Luxurious executive carry case**
  - plenty of room for all your accessories

### Also available

MONO screen, 8MB RAM ... from £1295

## FREE INTERNET ACCESS

- **Introductory offer from SpeedNet**  
Access to all Internet services for 30 days from the day you log on

## COLOUR SUPERMEDIA

£2195<sup>+VAT</sup>

486 \ HD	520Mb	810Mb	1.0Gb
DX4-75	£2195	£2395	£2595
DX4-100	£2245	£2445	£2645

### Same as COLOUR Notebook PLUS

- **Video Capture/SCSI module**
  - Capture, watch, edit images in JPEG, GIF, TIFF, & many other formats
  - Plug up to 7 SCSI devices, e.g. DAT Streamer, Scanner, Optical Drive
- **Low-power 2-speed CD-ROM drive**
  - Convenient – use only when you need
  - No need for batteries or mains
  - Easy Plug-&Play via PCMCIA slot

## UPGRADES & OPTIONS

<b>Screen</b>	9.5" TFT colour .....	add £495
<b>Memory</b>	16Mb RAM .....	add £390
	32Mb RAM .....	add £995
<b>Options</b>	Docking station – 2 card slots + 2 drive bays .....	£275
	*Double-speed (PCMCIA) CD-ROM drive .....	£279
	*Video capture/SCSI module .....	£249

\*included in SUPERMEDIA price

DELIVERY - overnight, UK mainland ... £15

All prices exclude VAT @ 17.5%

Obodex reserves right to change specifications & prices without notice. All trademarks acknowledged. E & OE

## YOUR PEACE OF MIND

With every MediaPro you get:

- GS & TUV International Safety standards
- Your 14-day Money Back Guarantee
- A full one year parts Warranty
- LIFETIME free labour Warranty
- A rapid Repair-While-You-Wait service
- Our 5 year expertise in notebook PCs



# Do you really need a desktop computer?

– when you can now get a versatile notebook...  
with 14.4k Fax-Modem... Local Bus Graphics... Multimedia...  
16-bit Stereo... Video Capture... SCSI... all built in

**T**HINK of the possibilities. A notebook with all the benefits of a high performance desktop PC. Bristling with over £400 of built-in 'extras'. Weighing only 6lbs. Ready to fly. At a price you can afford.

### The world at your fingertips

Faster Local Bus graphics and disk control. Ample memory for today's demanding software. Faster printing. Plus many more features that make our new Colour mediaPro such a pleasure to use.

And what better to enhance your mobile Power Office than a fast 14.4k fax-modem?

Surf the Internet. Explore the World Wide Web. Send and receive your E-Mail. Or just use it for all your business correspondence – wherever you are.

Unlike others, our fax-modem is built in, so you're free to use the PCMCIA slot for other devices.

### Multimedia and a lot more

Plug in our low-power CD-ROM drive and you have a full-blown mobile Multimedia system.

With the Video Capture module you can watch your favourite video and edit the captured images, as well

as use advanced SCSI devices – like DAT Streamers, Flat-bed Scanners, and Optical Storage Drives.

You can even dictate to your Wordprocessor and Spreadsheet – just add a microphone and some inexpensive software and start talking!

### Making it easy for you all the way

Combine the MediaPro's features and price with our five year expertise in notebooks, and you'll be hard pushed to find a better deal. *Anywhere.*

And now you can get a MediaPro for as little as £10 a week. We can arrange approval of this flexible low-cost lease within 2 hours – you can have the machine on your desk within 48 hours.

Find out more, call us today on

**0181-841 3555**  
fax **0181-841 3777**

OBODEX

Obodex Computers Ltd, Unit 1, Belvue Business Centre  
Belvue Road, Northolt, Middlesex UB5 5QQ **2 4 5**  
PERSONAL COMPUTER WORLD  
DECEMBER 1995

# INTERNET ACCESS

FROM

# £7.50

+VAT PER MONTH

# WITH NO HOURLY CHARGES

Information correct at time of going to press. All prices exclude VAT. E.& O.E.



*Get on the NET*

Global Internet Ltd · 113-123 Upper Richmond Road · London SW15 2TL

Tel: 0181-957 1002 Fax: 0181-957 1100 e-mail: [info@globalnet.co.uk](mailto:info@globalnet.co.uk)



# net.newbies

## Getting started on the net

These pages are designed to be an easy-to-use reference guide to the internet for the novice — or “newbie”, as hardened netters will call you. Here's an easy-reference guide to the tools which will help you make the most of the internet.

### What is the internet?

The internet consists of millions of computers interconnected in a global network. The number of users is difficult to measure, but those worldwide who can at least exchange electronic mail messages is estimated to be 30 million and this appears to be doubling each year.

### What is the world wide web?

It is not the internet. It is a service on the internet which uses special software (usually available free) to give users access to pages of information with pictures and multimedia instead of just text. About 15 million people around the world have access to the world wide web.

### What do I need to get on?

A PC of almost any age can be connected to the internet as long as you can plug it into a modem. You don't even need to be able to view graphics on your machine to look around (although it helps).

A modem allows your computer to dial in to another computer with a modem and communicate with it. They come in different speeds, from 2400 baud to more than ten times that. When you are using the internet, the speed at which things work is more likely to be

limited by the speed of your modem than by that of your computer. Buy the fastest you can afford. An old 2400 baud “V.22bis” model is fast enough to exchange electronic mail messages, but to send and receive files, or use the more exciting services on the Internet, a modem which runs at a speed of at least 14,400 baud “V32.bis” is vital. Fortunately, these have plummeted in price over the past few years and now cost as little as £100. If you have the money, go for a 28,800 baud V.34 modem. Over time you'll get back the added cost by reducing your phone bills.

### Okay, I've got a modem. Now what?

For a modem to bring you information, it has to have a number to dial. This is where a “service provider” comes in — you have to subscribe to one if you want to get online. Whatever kind of connection you have set up, you will have to pay your phone costs on top of any subscription, unless you are lucky enough to get free local calls through a cable company. The bigger service providers will have the numbers you dial, PoPs (points of presence) scattered across the country so you only have to dial a local number.

If there's no company near to your home which offers internet access, you may have to pay long-distance phone rates. Once connected, though, it doesn't matter where the information you are accessing is physically located: you are always charged at the same rate. A list of providers and telephone num-

bers is available below. For more details, have a look at our Internet Service Providers Buyers Guide, *PCW* October 95.

Typically, a subscription that only provides electronic mail costs around £5 a month and Delphi offers this. But full internet access which allows you to use email and internet services for any amount of time, limited only by the size of your potential phone bill costs more, currently between £8.50 and £15 per month. There are dozens of companies offering this kind of Internet access; none of them big enough to dominate the market. The basic service being offered is largely the same, although some higher-priced providers may claim to offer a more personal service or a better selection of access software.

### Online services: what do they offer?

Major online services like CompuServe or Delphi now offer Internet access and also have a large number of services of their own to which only their subscribers have access. These services include official technical support for hardware and software by electronic mail, online games, vast indexed software libraries and databases of business or consumer information. A monthly subscription tends to cost between £6 and £10 per month, plus a charge per hour if you are online for more than a set number of hours in that month. CompuServe is more expensive than the other internet providers, but you get what you pay for — it's pretty foolproof. Demon Internet is the best

known and most popular of the standard internet operators but doesn't cater too well for absolute beginners. Perhaps better for the raw newbie is Easynet (although it only has Pops in London and Edinburgh) or UK Online. UK Online is a special case, a cross between an internet provider and an online service. For £8.50 to £12.75 per month it offers unlimited access to the internet, partially “censored” to make it safer for children to browse, plus access to online magazines and other services.

Although programs like Windows Terminal can be used to access these services, it is normally easier to use specially-written online software. Any service provider should provide you with at least some of this software when you sign up, and if you want to choose something different, most of it can be acquired online, free of charge.



CUTTING EDGE

### PCW Contacts

**CompuServe** 0800 289378  
email: 70006.101@csi.  
compuServe.com

**Delphi** 0171 757 7080  
email: uk@delphi.com

**Demon** 0181 371 1000  
email: internet@demon.net  
email: sales@thenet.co.uk

**UK Online** 01749 333333  
email: sales@ukonline.co.uk

**Easynet** 0171 209 0990

If you don't understand what's written here or have any suggestions, please let us know. Contact **Paul\_Fisher@pcw.cmail.compuServe.com**, or “snailmail” (internet-speak for the post) to the address on page 12.

# CALLS TO AUSTRALIA

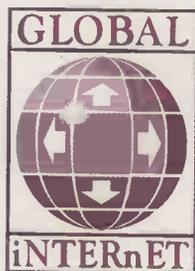


# 1p

## PER MINUTE\*

\*Calls at 1p per minute to Australia & the world can be made by two people using Internet Phone on their PC's over the Internet. Calls based on BT's weekend rate, other operators prices may vary. Contact Global Internet for details of Internet Phone and hardware requirements.

Information correct at time of going to press. All prices exclude VAT. E. & O.E.



*Get on the NET*

Global Internet Ltd · 113-123 Upper Richmond Road · London SW15 2TL

Tel: 0181-957 1002 Fax: 0181-957 1100 e-mail: [info@globalnet.co.uk](mailto:info@globalnet.co.uk)



# Innovations

## The disk strikes back...

**If you thought that the floppy was on its way out — think again! The growth of in-house disk duplication is a major broadside in the war against CD-ROM. Tim Frost reports.**

Predictions that the floppy disk will imminently be killed off by CD-ROM abound everywhere, except for the floppy disk industry. There, those companies making diskette copying machines — the sort that create *PCW* cover disks — are experiencing a boom. Several major diskette manufacturers, including KAO and Fuji, are busily opening up new diskette manufacturing plants rather than closing them down.

### Blooming marvellous

Two things have given the diskette a fresh bloom of life. First and most visibly is the launch of Windows 95. This has come at a time when the installed base of CD-ROM drives is still relatively small, so much of Windows 95 (including all the new Windows 95 versions of all those software packages we know and love) are going out on floppy. The added bonus for the diskette business is that these programs are now bigger than ever, with some taking 20 or more disks per set. But perhaps a more significant boost for the floppy comes from the fact that it is now possible for small companies to have their own floppy disk duplication plant in-house.

We've been through desktop publishing, now meet desktop

duplicating. There are just a handful of duplication equipment manufacturers, mostly based in the States — companies such as Rimage, Trace and CopyPro. In the past they concentrated on the big systems. If you wanted to get a number of disks copied you would go to a duplication company to do it, on a high cost/high volume duplicator. These would take care, not only of duplicating equipment, but also separate diskette printers and labellers too. But with the writing on the wall for the diskette business, these companies started to broaden their horizons. They found that many organisations, not just games companies but banks, corporates and industrial organisations have now discovered that the PC has enough penetration among their employees, branches and customers to start distributing data on floppy rather than on paper.

The nature of the data varies enormously from company to company. An insurance group may send out weekly financial updates to its independent sales force, and an electronics company may well rely on software to control their equipment. They want to produce their own floppy disks to go out with the equipment rather than rely on

someone else to do it for them, so they can also control the dispatch of regular software updates. These specialist fields are running in parallel with adventurous marketing departments who are using floppy disks as a sales tools with on-screen magazines, catalogues and interactive promotional "literature".

Using compression techniques, a good couple of megabytes can be stored on a disk — more than enough for an impressive show. To tempt companies into doing it themselves meant bringing the price down to a more approachable level; these machines now start at between £1,000 and £2,000, rather than the tens of even hundreds of thousands for high-volume duplicating systems. More importantly, the systems have to be easy to use, reliable, and with the option to include the duplication checking and labelling processes all in one box that would fit on a desk.

This is what the latest generation of desktop duplicators can do. At one end you have a chute that can take anything up to a hundred blank disks. These drop into a high-speed disk drive that can copy up to 200 disks in an hour. The data isn't sent as file format — an "image" of the data

as it will appear on the floppy is stored in memory and placed on the disk on a bit-by-bit basis. In order to make sure all the copies are good, there is a read-after-write process that checks the data on the disk against the master image.

The newer desktop duplicators then pass the finished disk onto the labelling part of the machine. This holds a large reel of blank labels which are fed through a miniature inkjet or dot-matrix printer head, printing out the label in time for it to attach itself to the copied disk.

This all-in-one package normally get all its instructions from a PC, which can deliver disk data and the accompanying label information at the same time. This allows the desktop duplicator to handle several different projects or a multi-disk set without stopping. Since the label is printed and mounted as soon as the disk is copied, there can be no problems with mislabelled disks.

### DIY duplication

The desktop duplicator has created its own mini-revolution in data distribution as companies discover the advantages in DIY duplication, the additional speed and control over duplication work, and — important to many financial organisations — the security of keeping their masters in-house at all times. More and more small and not-so-small duplication runs will go out from the desktop every day. ■

# BEFORE YOU GO SURFING...

Company	Local Call Rate* (with no surcharge)	V34 Modem Access across the UK	All inclusive Pricing	Annual cost* based on hours on-line per month			
				1 hour	6 hours	12 hours	24 hours
CityScape	✓	✓	✓	£230.00	£230.00	£230.00	£230.00
Compuserve Standard	X	X	X	£74.40	£96.60	£229.80	£496.20
Compuserve Supervalue	X	X	X	£187.20	£187.20	£187.20	£244.80
Delphi Standard	X	X	X	£120.00	£216.00	£504.00	£1,080.00
Delphi Advantage	X	X	X	£240.00	£240.00	£240.00	£326.40
Demon	✓	✓	✓	£132.50	£132.50	£132.50	£132.50
Global Internet	✓	✓	✓	£89.99	£89.99	£89.99	£89.99

## DON'T GET WIPED-OUT!



*Get on the NET*

Global Internet Ltd · 113-123 Upper Richmond Road · London SW15 2TL

Tel: 0181-957 1002 Fax: 0181-957 1100 e-mail: info@globalnet.co.uk

250

PERSONAL COMPUTER WORLD  
DECEMBER 1995

\*from the majority of the UK  
†includes any applicable setup charge  
Information correct at time of going to press.  
All prices exclude VAT.  
All trademarks acknowledged. E.&O.E.



# Horizons

## Making wavelets

**Wavelets is a compression technology whose applications range from astronomy to earthquake prediction. Ben Tisdall looks at what it can do for Intel's latest version of Indeo video interactive.**

Intel has announced Indeo video interactive. The latest version of the company's widely supported digital video format uses a new compression technology called wavelets.

Although much of the research for the development of wavelets was carried out as long ago as the thirties, it's only recently that they've begun to be used commercially. Their applications include astronomy, acoustics, earthquake prediction, fingerprint analysis and pure mathematics.

Intel felt that its earlier compression technology, vector quantisation, was coming to the end of its life. "We had milked it to the maximum," says Intel's Raza Zaidi. Wavelets is the new compression technology on the block and as Zaidi explained, "They're new, they're fresh and will allow us to grow the algorithm for a number of years." The other appeal of the technology is that it's a software-only standard which can be updated easily and which offers better image quality, at lower data rates than before. Intel claims that the latest version of Indeo will play back full-screen at near VHS quality, and that it compares favourably with MPEG1 when run on a Pentium PC.



*Wavelets in action: A 512 x 512 image was broken into blocks and processed with a wavelet transform to create a 128 x 128 composite*

The mathematics behind wavelets is closely related to Fourier transforms, discovered by Joseph Fourier in the early 19th century. Fourier worked out a way of representing functions by superimposing sines and cosines (mathematical functions representing harmonic waves).

Fourier transforms have become a standard method for solving and analysing differential equations, and for analysing and treating communication signals.

Unfortunately, Fourier analysis is not good at dealing with choppy signals or sharp spikes because sines and cosines are, by their very nature, non-local smooth curves which stretch into infinity. Wavelet analysis, by contrast, uses functions contained in finite domains.

The procedure for wavelet analysis is to take a wavelet function called an analysing wavelet, or mother wavelet. Temporal (time) analysis is carried out using a contracted high-frequency version of the function, while frequency analysis

uses a dilated, low-frequency version. By choosing the wavelets best adapted to a set of data or truncating some of it below a certain threshold, data will contain repetition and redundancy, and hence be ideal for compression.

Intel has taken advantage of wavelets to add a number of new features to Indeo. Earlier versions were reasonably successful with multimedia titles like Dorling Kindersley, Attica Cybernetics and Microsoft, but the product made few inroads with the games authors. The latest version of Indeo adds an optimised 8-bit palette and chroma-key capability aimed at that market.

Chroma-key is the technique used by weather forecasters. If you saw the film *Groundhog Day* you'll remember Bill Murray waving his arms around in front of a blue screen. Special software superimposes the forecaster's image over the real weather map. Games authors use this technique to allow an

object, whether it's a man or a spaceship, to be moved around on a realistic background.

Intel has taken a close look at scalability, too, with its latest iteration of Indeo. Earlier versions worked on a range of PCs, but if the PC couldn't keep up, the software would drop frames in an erratic way. For the user, this meant a very visible drop in quality.

The latest version uses a similar approach to that used by Netscape on the World Wide Web. When you view a large graphic using Netscape the software makes four passes at the image, building it up bit by bit. Similarly, each Indeo frame has four sub-bands. When the Indeo Codec (compression/decompression) algorithm starts running it tries to decode all four. If it can't manage the best, it falls back to the next one, and so on. Because it never completely drops a frame it looks better, and frames containing little or no movement will play back at the top sub-band even on a fairly sluggish PC.

The latest version of Indeo is designed to work best on a Pentium PC: a Pentium 90 will take about 30 minutes to compress a one-minute clip. Most Indeo users continue to design around double-spin CD-ROM data rates of 200 to 240Kb/sec because the installed base is double-speed, and at quad-speed rates a standard CD fills up rather quickly.

You might think that source quality is unimportant for a video clip likely to end up in a Window on a computer monitor. In fact, video compression is extremely sensitive to the quality of the source video tape. Compression algorithms, including those using wavelets, search for repetition and redundancy and so will tend to interpret noise as important, non-redundant, non-predictable material. This wastes space and means low-quality, lossy, compressed video will look much worse after compression than it did before. ■


 Bluesky

## Making software human

**In a world where computers are increasingly relied on to carry out tasks affecting people's lives without supervision, Nick Beard asks: "Can we produce fault-tolerant software?"**

Ever more aspects of human life are now touched by software. As we come to rely on technology, we begin to take for granted that it will be there, and that it will behave as we expect. We are frustrated when we are relying on a cash machine only to find it's out of service when we get there (especially when meeting a colleague who has insisted on meeting at the only restaurant in town primitive enough to refuse credit cards).

Similarly, airline reservation systems are so central to the functioning of airlines that airports can become quite chaotic when they go down. Software will become central to the competitive success of many industries, such as oil, banking, insurance, telecommunications, and transport. Yet it will never be error free. The best-quality software still contains around one or two errors per 20,000 lines of uncommented code. This error rate probably represents the quality limit on traditional fault avoidance (such as structured programming, reusable software modules and formal methods) or fault removal (testing, verification, validation) techniques.

Fault tolerance is the ability of computer systems to continue to

provide seamless delivery of expected services even after faults have developed in parts of the system. Hardware fault tolerance is well developed — such as redundant (i.e. duplicate) systems and "hot box" standby systems.

Software fault tolerance is less well established. There are two interpretations of the phrase "software fault tolerance". The first, *software-fault* tolerance, implies systems which are developed to cope with software faults (mainly software design and construction faults). The other meaning, *software fault-tolerance*, discusses the control and operation of fault tolerance, usually implemented in hardware, via software-implemented functions. An example would be monitoring software which switches functions from a failed processor to the back-up box.

A key distinction in *software-fault* tolerance is between the single version software and the multiple version software environments. In the single-version world, the key techniques are fault detection and recovery features, based around elements such as program modularity, system

closure, systems monitoring, decision verification and exception handling. In more advanced architectures — typically where mission-critical objectives exist — the main approach rests upon design diversity. Here, different programmers are given the job of meeting the same functional specification in different ways. Take for example a program requiring a module which controls a robotic arm, causing it to lift a block in response to an external stimulus. Various control mechanisms could be implemented, along with a monitoring routine which switches the control function between the modules if one of them fails to respond appropriately. This means that if one of the programmers had been on a binge the night before finishing his module (Module A), causing him to miss a glitch in his module, then Module B, written by the woman who drank less, steps in to take over when the glitch occurs. There are many techniques which can be applied in this arena, such as recovery blocks, N-version programming and self-checking programming.

To structure a fault-tolerant system, the system is broken into modules. Each module or

component is under the control of a design, which can itself be seen as a component of the overall system. This is a recursive model, since clearly each module may be sub-divided into smaller modules. Each component receives a request for service, and either provides that service or returns an exception. These "interfaces" between requestors and "providers" are at the heart of the control and monitoring function. There are three classes of exception: firstly, there are interface exceptions, where invalid services requests are detected, pointing the finger at the service requester. Secondly, local exceptions occur where a component detects that something is amiss and initiates routines which should return it to its service-providing ability. Finally, failure exceptions, where the component signals its inability to provide services. The difference between local and failure exceptions may be blurred where the component is able to fix itself but not immediately, so that it sends out a message stating "normal service will be resumed as soon as possible", suggesting that attempts should be made to fulfil the service request elsewhere for the time being. Within this basic framework, the various techniques outlined above are applied.

With software increasingly left to do things unattended — monitoring patients in hospitals, flying planes, controlling nuclear reactors — fault tolerance is not just a useful technique for maintaining access to your bank account. It could save your life. ■

### PCW Resource Guide

#### Software Fault Tolerance

Michael R. Lyu; Wiley

An up-to-date survey of techniques for making software fault tolerant, which is an increasingly important topic as software becomes ever more pervasive. From Wiley's Trends in Software series.

## Retro

## If you can't stand the heat... take the lid off

**Overheating and language problems were just a few of the teething problems experienced by the BBC Micro. But even these couldn't detract from the excitement of "a machine for everyone". Simon Rockman reminisces.**

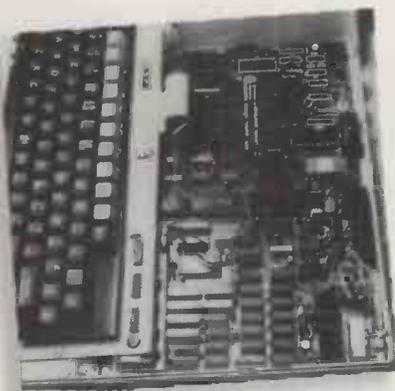
What was the most talked about micro of the eighties?

Worldwide, it might have been the IBM PC, but in January 1982 Chris Sadler and Sue Eisenbach claimed that it was the BBC Micro produced by Acorn. It was certainly eagerly awaited, partly because of reviews such as those in *PCW*, but mainly because of the huge delays which saw customers waiting months for machines they had already paid for.

The original review was an interesting mix of over-optimistic belief in Acorn's claims, exciting discovery, and some amazingly profound insight into what the future would hold. For example: "Every one of these interfaces is fully documented, and it is possible to imagine a whole industry will be set up to produce and market add-on kits utilising one or the other".

The review rightly praised the wide selection of ports and connectors. To equip a modern PC with these would probably cost as much as the original BBC Micro.

Prior to the launch it was rumoured that the machine



would be called the Proton, to tie in with the family name of its predecessor, the Atom. The most naive comment was the belief that the overheating problems experienced in the preview machine (serial number 10) would disappear when the system software was blown into masked ROM for the production machines. In practice, the production machines had Eproms for a very long time and even when masked ROM did arrive, most owners ran them with the lid off. The heat problems led to corrupted programs for both reviewers and users.

The only major complaint the reviewers had about the build quality was that the UHF modulator wasn't good enough. This was great for Microvitec, which sold a lot of rather expensive

monitors so that the BBC Micro could make the most of its impressive graphics modes, although this was glossed over in the review.

The debate over which language to use was becoming political. Some educators (being too far removed from reality) wanted Comal, which had no commercial value but produced elegant code. Acorn would have been happy with a version of the Basic used by the Atom and the article hints that the BBC wanted Microsoft Basic. The result was a compromise, but unlike so many compromises it was fast and excellent. The BBC Micro remained one of the fastest machines *PCW* had tested for quite a time after its launch. The review mentioned the BBC Basic ability to mix Basic and assembler – something which I am convinced led the UK to have more and better machine code programmers than any other country.

The review was mild in its criticism of the screen editor, although it pointed out of the full screen editor: "it isn't".

But it is the look to the future which was most impressive: "If

Acorn actually produces all the products that have been tentatively hinted at in the media, then this machine could be for everyone. How far the machine can be recommended, though, depends on the way Acorn's future developments go.

"The System seems ideal for a home machine with colour graphics and expansion capabilities including paddles, Teletext and voice synthesis, we would be happier if the case was more robust... Turning to the schoolroom, a classful of BBC machines connected to disks by an Econet (assuming Acorn's current release of Econet software is more extensive than our last view of it) would provide a great deal of hands-on experience for a reasonable cost".

That cost was £205 for a 16K Model A (the machine few people bought) and £292 for the 32K Model B, but by the time the BBC Micro was available, those prices had risen to allow the shops to make a margin – Acorn initially expected shops to sell machines without a profit and to make up for it on software sales.

The review rightly praised John Coll's manual – which Acorn valued at £10, but for which Coll received enough of a royalty to make him a very wealthy man.

The BBC Micro lived up to its promise, and more; but then, back in 1982 there were plenty of exciting machines. ■

# BOOKS

As the dust starts to settle on the media's love affair with the internet, we look at some books which view the net from a different angle. From post-cyber angst to a new HTML guide, to a handbook for budding online entrepreneurs.

**Silicon Snake Oil —  
Second Thoughts on the  
Information Highway**  
Author Clifford Stoll  
Publisher Macmillan  
ISBN 0-333-64787-4  
Price £9.99  
Rating →→→→→

Since writing *The Cuckoo's Egg*, the dramatic story of how he tracked down an international spy ring which hacked into his systems at Berkeley, California, Cliff Stoll hasn't just had second thoughts about the information superhighway. His second book, *Silicon Snake Oil*, contains third thoughts, fourth thoughts and fifth.

He attacks the use and unquestioning belief in technology in many aspects of nineties life, getting particularly passionate about computers' increasing and, to his mind, increasingly damaging infiltration of education and the library system. But his most heartfelt complaint seems to be that they waste time and that "sensation has no substitute". That is, they have wasted a lot of Cliff's time which he's suddenly realised he could have spent baking brownies or practising the clarinet. The book is not unlike Thomas De Quincey's *Confessions of an Opium Eater*. Stoll, like De Quincey, was an addict, albeit online rather than opium, who has survived cold turkey. After all, just because you are online, you don't have to read useless Usenet groups.

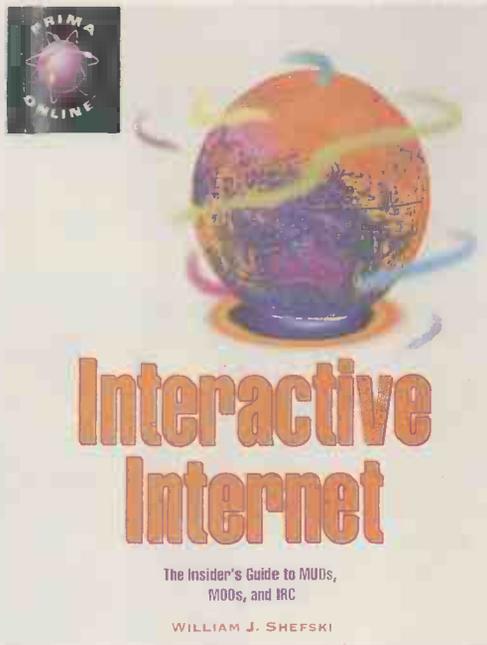
The problem is, Stoll can't be

categorised as a Luddite or even one of these neo-Luddites. He likes computers. He likes them a lot — he's got five of them. But he is fed up with them too, and so the book is riven with what he himself admits is a deep ambivalence towards them and the internet, hence some highly conflicting statements.

On the one hand, he refutes the claim that new communications technologies will fundamentally change society; on the other he describes how a universal postal system in the US produced a "blossoming magazine readership, a new value placed on literacy". He decries the erosion of literacy in the modern world that he believes is partly caused by email, but a few pages later prints a very moving communication sent to him electronically from a Croatian girl.

The great thing about the book is that he admits to these contradictions. This is a very personal reaction to the information superhighway. As with *The Cuckoo's Egg*, Stoll himself is very much present in the book, as are his sister Jeannie, some of his friends, and many anecdotes about his work as an astronomer. And it is this sense of humanity rather than the arguments themselves that make the book a successful and readable antidote to the cool cyberbabble of the technocrats who want to drive us down the highway without letting us take a second glance.

**Joanne Evans**



**Interactive  
Internet — The Insider's Guide to  
MUDs, MOOs and IRC**  
Author William J Shefski  
Publisher Prima Publishing  
Price £18.49  
ISBN 1-55958-748-2  
Pages 202  
Rating →→→→→

With the world wide web and email getting all the hype, it's unlikely that you'll have even heard of MUDs, MOOs or IRC. Most internet books barely give them a mention.

MUDs (multi-user dungeons, or dimensions) and IRC (Internet Relay Chat) channels are the most interactive resources on the internet and the way people can use it to communicate in real time. MUDs offer role-play

style gaming but also more serious business or educational applications. MOOs (Muds, Object-Ori-

ented) are a more flexible variation on the MUD theme with extra features.

This book is, of course, American. If you're British it's plain depressing to discover that in the States you can "scope" — pay a small monthly fee to have your local call area extended to adjacent or nearby exchanges.

This book does a good job of explaining where MUDs began and how to use them. Unfortunately, there are two fundamental problems with MUDs. Firstly, they have a tendency to be populated by extraordinarily dull people talking about equally dull topics, and secondly, they're firmly routed in the bad old character-based Unix interface of the internet rather than the friendly point-and-click graphical user interface of the world wide

web. As long as you're prepared to swallow these two drawbacks, this book looks like a fine introduction.

**Ben Tisdall**

#### The Which? Guide to Computers

**Author** Richard Wentk  
**Publisher** Which? Books  
**Price** £10.99  
**Pages** 270  
**ISBN** 0-85202-596-3  
**Rating** ◆◆◆◆◆

This one is aimed at novices — people who are still at the stage of wondering whether they need to buy a computer at all. It uses small-business case studies throughout to enable you to decide whether or not a computer is appropriate. For example: "Andrew Kemble runs an advertising agency and uses a database to keep track of sales leads." "We used to use a card index system and a set of diaries, and we had problems all the time... We got someone to install a database for all this. Now we can search for people by their personal details, company name or any other way..."

The main software categories get a chapter each, followed by a "packages to watch out for" box which lists some of the popular ones. The software sections are generally pretty sound and as up-to-date as you can expect from a book written BW (before Windows 95).

Unfortunately, even a week before publication, the hardware section was starting to look dated and, in places, misleading. For example, the author says: "If your computer uses a 486SX/25 chip, you can remove it and replace it with a 486DX2/66 chip." While it is possible to make this upgrade, you would need to have a motherboard capable of being switched up from 25MHz to 33MHz, and such an upgrade involves moving jumpers. Pentium processors, now being



heavily marketed as this Christmas's home PC purchase, are described as being for "advanced high-power applications such as photo-editing, CAD and large spreadsheets".

The Which? Guide is, for the most part, full of useful and practical advice on how to go about buying PC hardware, software and peripherals, but the publishers need to look at the lead time between writing the book and publishing it. In an industry as volatile as this one, six months is just too long.

#### HTML Visual Quick Reference

**Author** Dean Scharf  
**Publisher** Que  
**Price** £13.99  
**ISBN** 0-7897-0411-0  
**Pages** 160  
**http://www.mcp.com**  
**Rating** ◆◆◆◆◆

#### Launching a Business on the Web

**Authors** David Cook and Deborah Sellers  
**Publisher** Que  
**Price** £36.99  
**ISBN** 0-78970-188-X  
**Pages** 202  
**Rating** ◆◆◆◆◆

From the small stack of internet books which arrived this month, *HTML Visual Quick Reference* and *Launching a Business on the Web* stood

## HTML Visual Quick Reference



out. There's not much to say about the former. The author says he wrote it because he couldn't find a good book on the subject. This is a slim, clearly written paperback full of good general information, from browsers to "what is HTML and how does it work on the web". The bulk of the book is arranged in sets of facing pages or spreads. Each covers a single topic. There are a few on things like where to find servers, how to structure pages and design tips, but most are devoted to HTML coding. Normally there's a description on the left-hand page together with the syntax and a couple of screenshots on the right

showing the code on a typical HTML page. Although the book is not arranged alphabetically, there's a decent index at the back and an alphabetical listing of HTML code together with page references. All in all, pretty indispensable.

Launching a Business on the Web, subtitled: "A hands-on guide to successfully bring-

ing your business to a worldwide audience", is a much more substantial volume. It attempts to tackle the question which is currently troubling companies of all sizes — what is the point of putting a company onto the internet in the first place and how to make money from doing so. It attempts to be comprehensive. There are sections on net components and terminology, why the net is good for business, and choosing hardware and software. There's even a lengthy appendix on HTML. If you're serious about putting your business on the internet, this won't be the only book you'll need to look at. But it does deserve to be one of the first.

**Ben Tisdall**

### Top Ten Books: December 1995

1	Windows 95 Resource Kit	Microsoft	£46.99
2	Windows 95 Secrets	IDG Books	£38.99
3	Using Windows 95 Special Edition	Que	£32.99
4	Delphi Developer's Guide	Sams	£46.95
5	Delphi Starter Kit	IDG Books	£43.99
6	Using Visual Basic 4 User Friendly	Que	£22.99
7	Windows 95 for Dummies	IDG Books	£18.99
8	Parker Linux Unleashed	Sams	£39.50
9	Using HTML Special	Que	£37.49
10	Delphi Unleashed	Sams	£35.50

List supplied by the PC BookShop, 11 & 12 Sicilian Avenue, London WC1A 2HQ. Tel: 0171 831 0022. Fax: 0171 831 0443

# CD-ROMs

**Adele Dyer gets spaced out with Apollo 13, goes to the movies with Corel, and discovers cartoon clip-art as practised by the pros. And all from the comfort of her own computer.**



## **Apollo 13 - A Race Against Time; Space Age Encyclopedia**

In a sharp piece of marketing, Apollo 13 has been launched to coincide with the release of the movie of the same title. This seems to have had a rather unlikely, but fortunate influence on the makings of this CD.

Instead of opting for a text-based narrative, there is a huge amount of video and stills footage used to recreate the events. Obviously there are no clips from the actual movie, but instead the original film pictures have been used wherever possible and animation has been used to fill the gaps.

Apollo 13, and the Space Age Encyclopedia bundled with it, were both developed in the States by Computer Support Corporation which normally concentrates on graphics applications. As space enthusiasts they developed the Space Age Encyclopedia, and were spurred on to develop Apollo 13 by the imminent launch of the Hollywood version.

The graphics influence is obvious on Apollo 13. The two main sequences on the CD are highly visual, designed like television documentaries. Add to



Apollo 13 shows you the entire voyage using original footage and animation

this the fact that the CD has been put together by space enthusiasts, and the mission is shown at its best. Sensationalism is avoided, and concentration is on how the ground crew solved the problem and kept the astronauts alive.

The three main sections are a pictorial account of the voyage, an interview with the flight commander, James Lowell, and an explanation of how the mission was controlled. These are complemented by a text-based encyclopedia section which, although informative, is less scintillating than the other sections.

The Space Age encyclopedia is a little different. Although a mine of information, it is heavily text based. If you are really into the space program you will love the fact that it's so comprehensive, but for those with only a passing interest it can be a little

daunting. There are photographs and video clips to liven it up, but most of them are in a separate section and you will have to move about a fair deal to get the full picture.

If you were to rate Space Age on sheer weight of information, however, it cannot be faulted. It goes right through the history of the space program, from robotic to shuttle missions and nearly comes right up to date, the last entry being 2nd March 1995. It does have brief notes on missions scheduled, but it is disappointing not to find the Shuttle/Mir link-up detailed. In addition to the missions there are other sections tackling launch vehicles, space stations, space centres and the future of space exploration.

Designed for hardcore space enthusiasts, Apollo 13 nevertheless comes highly recommended to anyone.

## **Apollo 13 - A Race Against Time**

Contact DBS 01202 722554

Price £24.95

●●●●○

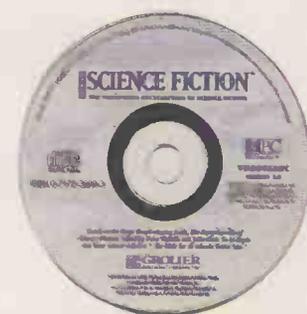
## **Space Age Encyclopedia**

Contact DBS 01202 722554

Price £49.95

●●●●○

Dual pack £59.95



## **Grolier Science Fiction**

The idea of a CD on science fiction sounds good. With such a potentially exciting visual content, no matter what the



medium, it could have been one of the most fascinating CDs this year. So what went wrong?

The main contents table looks promising. A vaguely gothic yet futuristic design shows the main themes: life forms, time, mind and spirit, about sf, space and science and technology. However, once inside the encyclopedia the predominant feature is text, text and more text.

Finding your way about the screeds of prose is not easy. There is no mapping from one area of the CD to another, so you cannot follow a line of inquiry except through the rather inadequate index. This lists all the subject headings under the theme you are pursuing, but not related ones, so clicking here is pointless if you are trying to get more information. The hypertext tends to direct you to wider issues, rather than to allied subjects, and the bright pink capitals do nothing to keep your eye of the main body of text.

The most disappointing element is the lack of true multimedia content. There are only 12 short videos, six film clips

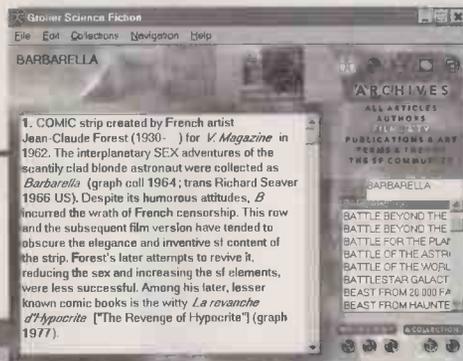
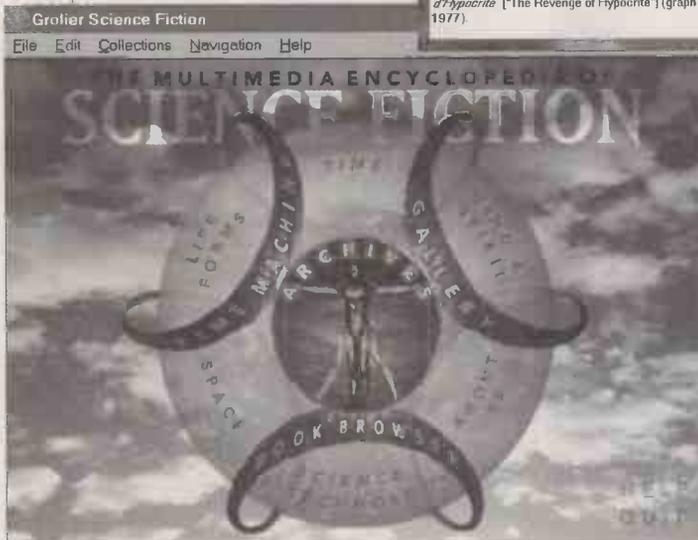
and six interviews, which makes you wonder what the point is of putting it on CD. Despite the inclusion of poster reproductions and original book covers, you might be better off just getting hold of a book with a good index.

But once you have got over the initial disappointment, the actual information contained is excellent. For a non-sci-fi reader there is a lot to interest you, as the wider issues of the genre are discussed. There are short interviews with sf luminaries, such as William Gibson. The main body of text contains a good summary of themes and movements, as well as discussing a host of authors and the whole range of sci-fi products.

For a sf fan this CD is probably extremely useful, but for the non-fanatic it's just not exciting enough.

**Grolier Science Fiction**  
**Contact** MHM 0181 600 6000  
**Price** £44.99  
 ●●●○○

*Science fiction becomes an art form in this comprehensive CD*



#### Corel All-Movie Guide

Anticipating the release of Cinemania 96, Corel has launched the All-Movie Guide. It takes more or less the same approach as Microsoft's product, but has certain telling differences.

The coverage of movies is probably the selling point of this CD. Over 90,000 films and TV shows are covered, including several foreign titles. All the information on the films is organised logically, each entry mentioning cast lists, plot, an array of categories and a list of alternative movies you may enjoy as well.

Some of this you could do without. The list of alternative films is little short of weird – suggesting Philadelphia Story and Room with a View as alternatives to Withnail and I is laughable. In addition, the categories do not really help to pinpoint the content of the film.

Comprehensive in its listing of films, the Corel All-Movie Guide has a novel way of rating them

The flags for Mad Max read: "Not for children, medium violence, graphic violence, nudity, adult situations, strong sexual content, acceptable ending, explicit language, profanity". You cannot help but feel it would have been better to include a more thorough plot synopsis and perhaps a critique, rather than these odd labels.

To compound this there are several omissions. There are no film clips or photographs for each film. There are photographs of some of the actors but not all, and some videos of interviews with various lesser luminaries. Neither does the CD include any critics entries, as Cinemania does.

The advantage of this package is its comprehensive list of films. As hard as I tried to find an obscure film not included, I could not manage it. As an encyclopedia it is reasonable, but as a film guide it falls well behind Cinemania.

**Corel All-Movie Guide**  
**Contact** Corel 0800 581028  
**Price** £49 + Shipping & VAT  
 ●●●○○



### Larry on CD; Famous Magazine Cartoons

Well known through the pages of many a national newspaper, Larry has now been drawn into the computer age via CD. Although Larry reputedly did not know anything about CD-ROM when the project was first mooted, he quickly became involved, drawing specially-commissioned computer-related cartoons and designing icons.

Collected here are 325 of Larry's favourites, grouped into 29 sections under such headings as jobs, office and home. To find the right image you can either go through all the cartoons in the appropriate section, or do a keyword search. There are 1,200 keywords, so you ought to be able to find something to fit your



criteria.

This is how clip-art ought to be. At last, someone has seen fit to release good cartoons for your use instead of relying on something that is royalty-free primarily because no-one in their right mind would want to admit to having drawn it. Needless to say, the quality of the cartoons here is exceptional and the breadth of subjects covered is impressive.

One word of warning though: the cartoons are not *entirely* royalty free; they are intended for use in non-commercial documents. You might be able to stick them in the gardening club newsletter, but not in your latest book.

Click Art has joined the club, releasing a series of cartoon and drawing clip-art products which are a little different from the company's normal run-of-the-

Larry — a PCW reader with a wicked sense of humour

mill clip-art CDs. One of the collections is entitled Famous Magazine Cartoons. While I did not recognise any of the famous names among the artists, the cartoons themselves are very good. The others include slightly unusual drawings made especially for Click Art, and a general collection of cartoons.

Click Art itself is sure the cartoons will not appeal as much as its regular clip-art collections, but it will be interesting to note how many people in the long term will find amusing cartoons more relevant to their readers than clip-art.

**Larry on CD**  
Contact ePublishing  
01865 372111  
Price £15  
●●●●○

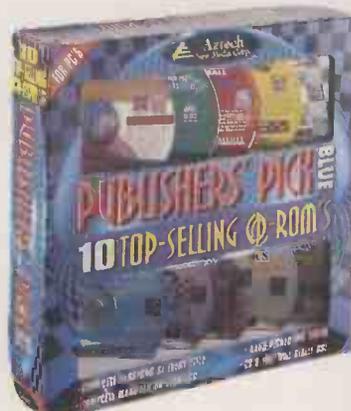
**Famous Magazine Cartoons, Fun 5 Pack Cartoons and Art Parts**  
Contact Principal Distribution  
01706 831831  
Price £29.99 each  
●●●●○

### Multipacks

For a long time many CDs have been overpriced for the quality of the products. Now distributors are cutting prices dramatically, especially with the current wave of multipacks. These have been around for some time, but gradually more distributors are getting in on the act and offering packs at knock-down prices. The cynic may argue they have simply found the perfect solution for shifting less popular titles; but do they in fact offer good value for money? The second wave of multipacks are now just starting to find their way into the shops. The first editions were almost entirely entertainment based. The emphasis was on games, games and more games, with the odd dirt-cheap and cheerful DTP package or utility thrown in. Aztech's Blue pack includes such titles as Dune II, Lemmings, Wayne's World and Grandmaster Chess.

Gradually, more "edutainment" titles are being included. Sirius includes Microsoft's Multimedia Mozart and Beyond Planet Earth, and Aztech is planning to include Hutchinson's and PC training CDs in its Green Pack.

Meanwhile, Softkey is honing its multipacks. Softkey still offers the standard long string of ten CDs with quite a few of its own applications and utilities as well as games.



It has also just released a range of three CD packs entitled Power Packs, each aimed at a specific interest group, such as space, cars, or a "weekend" pack including movie, cookery and astrology guides, typically costing £25.

While none of the CDs included on the packs will blow your mind with their brilliance, collectively they offer considerable scope for enjoyment with limited outlay. I will be very surprised if the likes of Cinemania or any of the Dorling Kindersley titles appear in a multipack in the immediate future, but this does not mean they should be written off. Certainly for new software users it could prove the perfect way to expand your general CD collection without breaking the bank.

**One Stop CD Strips Vols 1 and 2**  
Contact Softkey  
0181 789 2000  
Price Vols 1 and 2 £34.95

**Publisher's Pack Blue and Publisher's Pack Green**  
Contact Computer Future 01483 282829  
Price Blue £27.95, Green £29.99

**Sirius 5ft x 10 Pak**  
Contact One Stop Direct 0181 947 1001  
Price £34.03

01 491 822600

Handheld data capture... asset tracking... point of sale...  
stock counting... market research... order entry...

# the answers are in

Handheld computing, often coupled with bar code technology, is the most cost-effective solution to an enormous variety of organisational requirements. When you are looking for help in this specialist area, Paradigm Technology should be your first choice. We provide hardware, software and complete integrated systems with all the support you need, whether you are seasoned users or first time buyers. Our 1995/1996 catalogue is packed with information on every aspect of this technology – call us today for your free copy, for latest prices or just for a preliminary discussion about your specific needs.



PLEASE NOTE OUR NEW NUMBER  
01491 822600

# BAR CODES

# and handheld computing

## Business solutions

Our systems integration team can create complete solutions tailored to meet your needs exactly and based on industry leading hardware such as Psion's HC and their sensational new Workabout handheld computers. Alternatively, your objectives may be met by one of our own off-the-shelf software products. These include the new Windows version of *Questor*, our highly versatile, low cost user-configurable data collection system. Whatever your line of business, if your problem is data collection and manipulation, we have the experience and expertise to provide the solution. Call us for free demo disks, literature or just a preliminary discussion.



Psion Workabout from £270

Combined Workabout/Questor packages from £475!

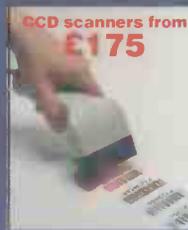


## Psion Series 3a – best deals

Psion Series 3/3a and Organiser II computers, Datapaks, Solid State Disks, PC links, S3a fax-modems plus popular software titles. Call today for bundle details and prices.



## Bar coding solutions



CCD scanners from £175



Laser scanners from £216



Wands from £39

● PSION ● OPTICON ● FUJITSU ● SYSTEL ● ZEBRA ●

We stock market leading hardware, peripherals and accessories with packages designed to get you up and running without delay.



Memory wands from £254



Scanner terminals from £1045



Thermal transfer printers from £945

“Help, I don't know anything about bar codes!”

**NO PROBLEM!** We have published a practical guide which answers all the most frequently asked questions. Phone for your free copy today!



PHONE NOW FOR FREE CATALOGUE!



01491 822600  
Fax: 01491 822601

PARADIGM TECHNOLOGY LIMITED

7Thames Park Lester Way Wallingford Oxon OX10 9TA  
VAT should be added to all prices which were correct at time of going to press. Delivery free on orders over £100. Products offered subject to availability. All major credit cards accepted. All trademarks acknowledged. Trade enquiries welcome. E&OE.



# Multimax

The Best Software      The Best Service      The Best Prices

MANY OTHER TITLES AVAILABLE - PLEASE CALL FOR PRICES, AVAILABILITY, REVIEWS, INFO

## ART/ARCHITECTURE/LITERATURE

A Passion for Art (Barnes Collection)	£37.00
Art and Music CDs (call for info) each	£19.00
Barnes' Booknotes	£21.00
Classic Library CD	£24.00
Coates Art Review - Impressionism (unboxed) CD	£15.00
Exploring Ancient Architecture CD	£30.50
Exploring Ancient Cities CD	£40.00
Great Artists and Paintings CD	£45.00
History and Art Series (call for info) each	£19.00
Investigating 20th Century Art (Tate)	£75.00
Karaoke MacB/R&B/Midsum Dream @ CDs	£14.00
Monarch Notes	£27.00
MS Art Gallery CD (Nat Gallery)	£27.00
Dorland Shakespeare CD	£25.00
Personal Library 2000 classics/poetry CD	£13.00
Romeo and Juliet CD	£31.00
The Ultimate Frank Lloyd Wright	£24.00

## CHILDREN'S READING CDs

A Silly Noisy House	£28.00
Adventures in Fairyland	£18.00
Alice in Wonderland	£13.00
Arthur's Teacher Tale (unboxed)	£14.50
Just Grandma and Me (unboxed)	£14.50
Harry and the Haunted House	£27.50
Jungle Book Reader	£28.00
<b>LITTLE MONSTER AT SCHOOL</b>	£19.00
New Kid on the Block	£27.70
Peter Pan	£28.00
Ruffs Bone	£27.50
The Tale of Benjamin Bunny	£11.50
The Tale of Peter Rabbit	£11.50
The Tortoise and the Hare	£29.00
Thumbelina (Time Warner)	£25.00

**LIVING BOOKS SPECIAL OFFER**  
**LITTLE MONSTER AT SCHOOL + LITTLE MONSTER AT SCHOOL - ARTHUR'S TEACHER TROUBLE**  
**ALL THREE FOR JUST £44.00+VAT**

## CHILDREN'S 3+

3 Balloons Alphabet, Numbers, Shapes CD	£22.00
Aladdin Activity Centre	£24.00
Alistair and the Alien Invasion CD	£22.00

**SUPERB VALUE AWARD WINNING CDs from IGDA**

Bailey's Bookhouse CD (2-6)	£14.00
Imagination Express CD	£14.00
Kid Desk CD (all ages)	£14.00
Millies Maths House CD (2-6)	£14.00
Odel Down Under	£14.00
Oregon Trail	£14.00
Sammy's Science House CD (3-8)	£14.00
Thinking Things CD (4-8)	£14.00
Thinking Things 2 CD (6-12)	£14.00

Busy Town CD	£33.00
Chadwick and the Sneaky Egg Thief CD	£19.00
Fisher Price 1-2-3s CD	£22.00
Fisher Price ABCs CD	£22.00
Fisher Price Dream Dolls House CD	£22.00
Fradzie Fish CD	£28.00
Kid Phonics CD	£25.00
Learning English CD	£12.00
Mavis Beacon Teaches Kids CD/3.5	£22.00
Noddy's Playtime 3.5	£18.00
Noddy's Big Adventure 3.5	£18.00
Putt Putt Goes to the Moon CD	£28.50
Putt Putt Joins the Parade CD unboxed	£16.50
Stradiwackus CD	£18.00
Tuneland CD unboxed	£15.00

## CHILDREN'S 7+

Algeblaster 3.5/CD	£25.00
Complete Algebra CD	£14.00
Counting on Frank CD	£25.00
Flying Colours CD	£25.00
Fun School Spelling 7+ 3.5/CD	£16.00
Fun School Maths 7+ 3.5/CD	£16.00
Honnetta's Book of Spells 3.5	£18.50
Hooray for Henrietta 3.5	£18.50
Maths Blaster 3.5/CD v1 or 2 each	£22.70
MS Creative Writer 3.5/CD	£24.00
MS Magic School Bus Human Body CD	£33.00
MS Magic School Bus Solar System CD	£33.00
MS Ultimate Haunted House CD	£24.00
Spellbound CD/3.5	£18.50

## SECONDARY GCSE AND BEYOND

ADI English 11/12/13/14 CD/3.5 NEW	£16.00
ADI French 11/12/13/14 each CD/3.5 NEW	£16.00
ADI Maths 11/12/13/14 each CD/3.5 NEW	£16.00
ADI Eng/Fr/Maths GCSE CD/3.5 each NEW	£21.00
A-Level Maths (COMPLETE COURSE) CD	£195.00
GCSE Maths (COMPLETE COURSE) CD	£95.00
see also other sections (Science, History, etc)	
GCSE Biology - Living Body	£34.00
COMPLETE GCSE ELECTRONICS	
- Understanding Electronic Systems	£99.00
- Animated Circuits ACE	£49.00
- CAD Pack	£79.00
COMPLETE GCSE PHYSICS	
- Earth & Universe	£34.00
- Electricity & Magnetism	£34.00
- Energy Resources	£34.00
- Forces & Effects	£34.00

## CHILDREN'S ART

Art Centre (EA) CD	£21.50
Creativity Centre 3.5	£22.00
Fun School Paint & Create 3.5/CD	£16.00
Magical Theatre CD	£19.00
MS Fine Artist CD	£24.00
Kid Pix v2 3.5	£24.00

**CD3 DISC STORAGE UNIT**  
 Brilliantly designed for storing, protecting, cataloguing and transferring up to 40 CDs.  
**ONLY £19.00 (RRP £35)**

## CHILDREN'S ALL AGES

Dinosaurs, Early Essentials, Junior Essentials, English, Maths, Science, French, German, Algebra, Geometry, Numbers, Statistics, Spelling	£17.00
Education (Henrietta Spelling, Maths) CD	£31.00
Fun School 4 under 5s/5-7/7-11 each	£15.50
Fun School 5 Dream/Time/Space each	£18.00
Fun School Young Scientist	£18.00
Jungle Book	£14.00
Kingfisher Micropaedia CD	£54.00
Kid Works 2 3.5/CD	£24.00
MacMillans Dictionary for Children CD	£18.00
Mario Missing/Playschool/Sums/Time each	£17.00
Mario Teaching Typing	£22.50
Random House Kids Encycl 2CDs	£28.00
Rescue Island	£14.00
What Air Can Do CD	£11.00

## COMPILATIONS

3R 6 Pack (6 CDs for Kids)	£19.00
5R 10 Pack Vol 1 (10 CDs)	£25.00
5R 10 Pack Vol 2 (10 CDs)	£25.00
5R 10 Pack Vol 3 (10 CDs)	£25.00
Award Winners (Elite, Civiz, Lemmings)	£18.00
Best of Microprose (Railrod Tyce etc)	£14.50
CD Interactive 16 titles/10 CDs	£29.00
Dune/7th Guest	£16.00
Kings Quest Compilation 1-6	£19.00
Leisure Suit Larry 1-8 (not 4)	£22.00
One Stop CD Shop v1 or 2 (11 CDs in each)	£18.00
Publishers Pick (10 CDs inc. Lemmings etc)	£19.00
Syndicate with UFO	£29.00
Temptation (7 GST, Lind of Lore, Indy Car, Indy Jones)	£31.00
World Cup Year 1994 (Champ Mngnr, Sen Soc)	£19.00

## DORLING KINDERSLEY MULTIMEDIA RANGE CDs

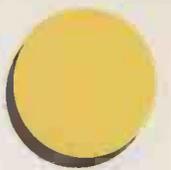
Ann Hooper's Sex Guide	£26.00
Eyewitness Encyclopaedia Science	£36.50
Eyewitness Encyclopaedia Nature	£36.50
History of the World	£36.50
Incredible Cross-Sections Stowaway	£25.00
My 1st Inc Amazing Dict UK Version	£25.00
PB Birthday Surprise	£24.00
The Ultimate Human Body	£36.50
The Way Things Work	£36.50
World Reference Atlas	£44.00

## ENCYCLOPAEDIAS/REFERENCE

2000 Greater & Lesser Mysteries CD	£16.80
3D World Atlas CD	£38.00
Aircraft Encyclopaedia CD	£14.00
Clinic of Knowledge 200 Set	£21.00
Complete Ref Library (landscape) CD	£42.00
Compons Interactive 35 CD	£21.00
Corel All Movie Guide	£38.00
Daily Telegraph 1992	£52.00
Global Explorer CD	£49.00
MS Bookshelf 95 CD	£47.00
MS Cinemania 95 CD	£36.50
MS Encarta 95 CD	£45.00
MS Ocean	£23.00
<b>ENCYCLOPAEDIA BRITANNICA CD</b> £642.00 44 million words: new v2 now also available for MAC.	
Grolier v7 Enc CD	£19.00
Hutchinson's Encyclopaedia 1995 CD	£32.00
Jets CD	£31.00
InfoWorld CD	£42.00
Oxford Compendium (Dict/Thes/Quot) CD	£49.00
Oxford Ref Shelf (16 ref books!!) CD	£49.00
Oxford Study Shelf CD	£29.50
World Atlas 5 CD	£15.00

## GAMES/ENTERTAINMENT CDs

PC3-also available as 3.5" - prices may vary	
1830 Railroad and Robber Barrons	£25.00
1944 Across the Rhine	£31.00
1942 Pacific Air War	PC3 £28.00
Acas of the Deep	PC3 £28.00
Air Havoc Control	£22.00
Alex Dampier Hockey	£19.50
Alone in the Dark 3	£32.00
Apache Longbow	£22.00
Asterix Caesar's Challenge	£28.00
Bridge Champion with Dmar Sharif	PC3 £25.00
Championsite Manager II	£29.00
Civilization (Windows)	£15.00
CIV Net	£24.00
Colonisation	PC3 £29.00
Command and Conquer	£31.00
Dark Forces	£30.00
<b>Dawn Patrol</b>	£12.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£16.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
Flight Unlimited: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£13.00
Desert Strike/Jungle Strike	£16.00
Diskworld UBX	£19.00
Doom	from £19.00
- DZone (900 Doom levels)	£15.00
Dungeon Master 2	£29.00
F15 Strike Eagle UBX	£9.00
First Encounters: Elite 3	PC3 £25.00
Flight Unlimited	£33.00
Full Throttle	£23.00
FX Fighter	£23.00
Gone Fishing	£28.00
Grand Prix II	£32.00
High Octane	£35.00
Indy Racing	£9.00
Jazz Jack Rabbit - full retail version	£22.00
Kings Quest 7	£27.00
Kyandia 3	£24.00
Last Dynasty	£24.00
Last Dynasty	£26.00
<b>Lemmings 2+1</b>	£1



# Kids' Stuff

**Bah! Humbug! Children shouldn't have presents at Christmas. Send 'em up the chimneys and down the mines. Make 'em work for their software. Paul "Scrooge" Begg has been sorting the over-the-moon excellent from the merely very good.**

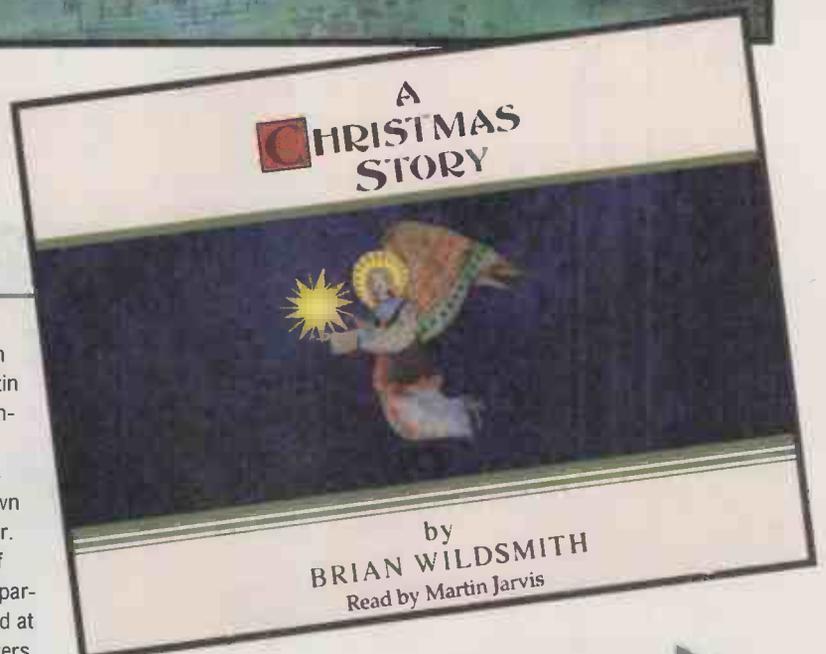
**T**here are times when I have trouble sleeping. I switch off the light, close my eyes and... well, my brain seems to go into hyperdrive thinking about work, the lack of money, the leaky guttering, money, the week-and-a-half-old bottle of milk I've still forgotten to throw out from my office. Something always comes along to keep me from sleep. I combat this with camomile tea and talking books – you know, stories read out on tape or audio CD.

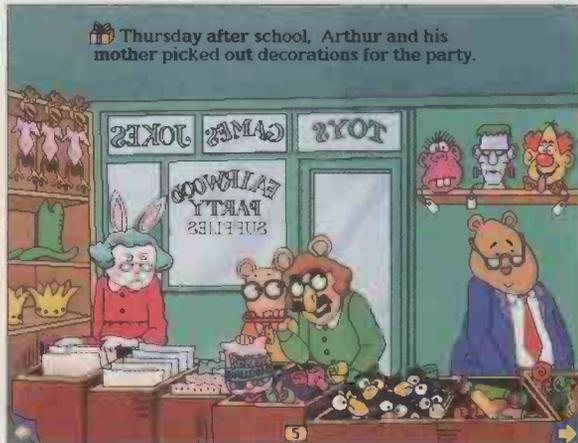
Siobán has inherited my love of talking books, has her own collection, and also likes to fall asleep listening to a tape. Probably her very favourite tapes are the five double-cassette collections of Richmal



**Above** The fish-wished castle: the other fish seem confused by it all  
**Right** A seasonal story on CD-ROM

Crompton's William stories read by Martin Jarvis. Although Martin Jarvis is a very accomplished stage and television actor, he is almost certainly known to you as a voice actor. He has done loads of talking books (being particularly accomplished at Dickens) and voiceovers for commercials.





Thursday after school, Arthur and his mother picked out decorations for the party.

### A Christmas Story

This said, I was keen to get *A Christmas Story*, an interactive storybook from Oxford University Press. Written and drawn by Brian Wildsmith – who seems pretty popular in Japan, where there is a Brian Wildsmith museum that receives 50,000 visitors a year! – and narrated by – yes, you guessed – Martin Jarvis, it tells the story of Rebecca, who was left to look after a baby donkey by her neighbours Mary and Joseph. But when the baby donkey began to pine for its mother, who Joseph had taken for Mary to ride on, Rebecca set out with the little donkey on a journey to find Mary and Joseph in Bethlehem. You can probably guess the sort of thing that happens next.

*A Christmas Story* is for young children, probably pre- and early school, who are just beginning to acquire some basic reading skills.

You can choose to have each page of the story read to you and, when Martin Jarvis has finished speaking, you can explore the page – clicking on hot-spots à la Broderbund Talking Books to produce an animation. The hot-spots are hidden, some quite cleverly, and the animation isn't always the same each time you click on it. And a further level of mystery and adventure lies in having to find the angel on each page.

The text can be displayed, so you can read along and follow

Arthur's Birthday: Mum does a Groucho impression, just one example of the wit of these popular titles

the spoken words. Alternatively, you can simply have the story read to you. Selecting either of these options disables the hot-spots, however.

The disc also contains a collection of twelve carols sung by the choristers of Christ Church Cathedral School, Oxford. The music score and words are displayed on screen and your child can either sing along alone, sing with the choristers, or just sit back and get into a festive mood. The whole package comes with a small but nicely produced little book.

I liked *A Christmas Story*, but for something with only seasonal appeal I suspect that you might think it's a little on the pricey side.

### The Fish Who Could Wish

Seasonal appeal isn't a problem with *The Fish Who Could Wish*, the second multimedia storybook offering from Oxford University Press. By John Bush and illustrator Korky Paul, and narrated by Robbie "Cracker" Coltrane, it works in much the same way as *A Christmas Story*. It's the story of a fish whose wishes always come true. Some of the wishes are bizarre:

Once, when he wished  
He could go out and ski  
It snowed for a week  
Under the sea

*The Fish Who Could Wish* has

better animation than *A Christmas Story*, and won a "Highly Commended" in the 1995 Best Toy Awards. An entertaining disc for young children.

### Arthur's Birthday

I mentioned earlier the Broderbund Living Books series. For my money the best titles were *Arthur's Teacher Trouble*, closely followed by *Just Grandma and Me*. Now there's *Arthur's Birthday*.

Arthur's having a birthday party on Saturday, but Muffy's having a party on that day too. And arrangements for both parties have progressed too far for anyone to make a change, so it looks as if the girls are going to go to one party and the boys to another – an arrangement nobody's happy about.

*Arthur's Birthday* has all the customary on-screen hot-spots, many with multiple responses, and is witty enough for adults to enjoy repeated playing too. The box also contains a free copy of the book, *Arthur's Birthday*, by Marc Brown. I'm not sure about the learning value of these programs, but at this time of year we deserve to sit back and enjoy something frivolous.

### Ride 'em, cowboy

Regular readers of this column will know that my daughter

Get set for a journey across the Old West

Siobán isn't partial to Westerns. Personally I think there's nothing better on a wet Saturday afternoon than settling into a comfy armchair with a John Wayne or Randolph Scott western on the box. I also enjoy a western paperback and among my favourite talking books are a couple of Louis L'Amour stories. You'll understand, therefore, that *Oregon Trail II* didn't hang around on my desk for very long. No, the silver disc was in the CD-ROM drive faster than you could draw a six-gun.

### Oregon Trail II

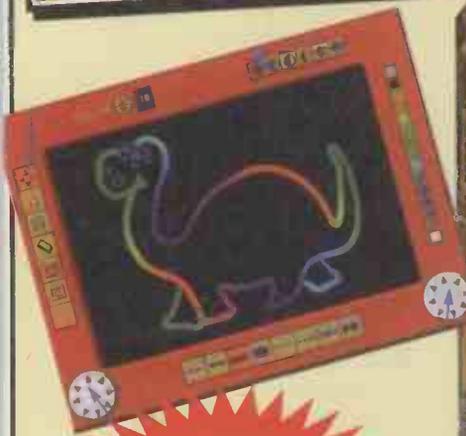
*Oregon Trail II* is both a game and an educational tool, concerning the geography of the Old West. Sadly, the Old West doesn't figure in the National Curriculum, so a full knowledge of the trials and tribulations of would-be settlers on the American frontier isn't likely to help you get through any exams. But this is Christmas, so who cares!

With *Oregon Trail II* you are at the head of a pioneer family crossing the Oregon, California and Mormon trails to a new life. To start, you choose the town from where you want to embark on your journey. You also choose the year, from 1840 to 1860, so you venture into the unknown or follow a well-trodden route. And you choose who you are going to be. You can be anything from a total greenhorn



# FAMILY FUN!

Software for all the family to enjoy.



**DISK**  
**£19.95**  
inc. VAT



## Etch A Sketch

### ETCH A SKETCH

The World's Favourite Drawing Toy comes to the computer with brilliant improvements, games and special effects. The fun of the toy and the latest computer graphics let kids develop a range of important skills by making creativity fun!

**ENHANCED CD-ROM**  
**£29.95**  
inc. VAT



### DOODLE-MATION

The incredible Doodle pad for the Electronic Age. It's the serious dose of colour, motion, sound and special effects that lets you create anything you desire - then save, print or even use your doodle as a screensaver or wallpaper!

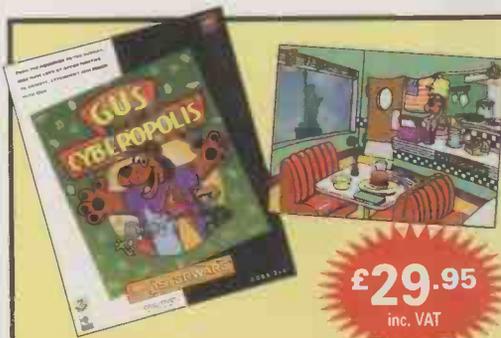
**£19.95**  
inc. VAT



### CHADWICK

Kids can join Chadwick and all his friends through an adventure book for hours of fun colouring the story, discovering magical objects and learning to read as they go!

**£29.95**  
inc. VAT



### GUS GOES TO CYBEROPOLIS

Explore this magical cartoon town with the coolest dog around - kids can explore the cities sights - such as the International cafe or the Science Museum learning and playing with Maths, English, History, Science and so much more as they go.

**£29.95**  
inc. VAT



### JIGSOFT

Relax with any picture, any number of pieces, any difficulty level with a jigsaw puzzle - you can even import your own picture to use as a jigsaw. All the choices are yours so it can be easy enough for kids or hard enough for the greatest veteran!

**£29.95**  
inc. VAT

AVAILABLE FROM THESE LEADING STORES

**Byte**  
The Computer Superstore

**GAME PC WORLD**  
THE COMPUTER SUPERSTORE

**TOYS 'R' US**

**FUTURE ZONE**



FOR A FULL CATALOGUE OF FAMILY FUN PRODUCTS CALL GUILDSoft ON 01752 895100



to a professional such as a doctor, and you can select some special skills that might help you out along the way.

Next you have to purchase the necessities for your journey, such as a wagon, draft animals, food and other supplies. In doing this you talk to loads of different people who advise you or rook you rotten. I got through all this, only to discover that I had too few animals to pull the wagon. So it's a matter of bartering and selling. And all this is done in a 3D rendered town that's full of things to explore. The trouble is, if you hang around too long you could get caught in the mountains when the winter snows fall.

En-route you can get advice by consulting what I'm told is an authentic handbook and record a diary of your adventures, and if you're lucky you'll make it to your destination. Then you'll learn what happened to you and your family in the future.

### The Amazon Trail

If the Old West doesn't appeal to you, as it doesn't to Siobán, you can journey up the Amazon! The Amazon Trail does pretty much the same as The Oregon Trail, but in this adventure a mysterious disease threatens to wipe out an Inca village. The only thing that can save the village is a medicinal plant, hidden deep in the rainforest, and you have been elected to get it.

It's no picnic. There are dangers all along the way, from poisonous fish to yellow fever, headhunters, poison-dart frogs and vampire bats. There's also

this strange blue mist that sends you back in time to meet the real explorers, naturalists, scientists, conquistadors and Inca kings.

Both discs are good fun, enhance computer skills and play a part in improving reading and comprehension skills, but most important they are fun!

### Circus!

Circus! is the brightest and most colourful CD-ROM I've seen in a long time, is great fun to explore, and has some skill and memory testing games that will keep you absorbed for hours. It's guaranteed to be a winner with the kids too.

Circus! is designed to be explored. Clicking on something makes something else happen. You can take a quick tour by clicking on the ticket booth in front of the Show Tent and Zippy the mouse will guide you

Circus: The magician at work. You really have to see this in action to appreciate it



The Amazon Trail: the starting point for your journey

through the program.

There are two main parts to Circus!, the Show and Backstage. You can move from one area to the other at any point during the program. The Show is made up of eight Circus Acts featuring different characters. The Backstage area includes the Music Tent, the Clown's Trailer, the Magic Trunk, and the Lake. The show acts include all your circus favourites: clowns, lions, elephants, the human cannon ball, trapeze act, a magician, and more. But not only do you get to see their act, there's a testing puzzle or game to play. For example, one of the clowns is trapped inside a pile of cylinders by Rex, the magician. You have to get him out by trying to recall a precise sequence of colours you've only glimpsed.

Backstage you get to visit the music tent, and you can have fun in the clown's trailer, exploring the rooms and messing about with make-up.

Circus!'s author, Ayshe

Farman-Farmaian, a graduate of the MIT Media Lab, won an award for her interactive movie A la Rencontre de Philippe. She is to be congratuated for creating something so bright and colourful, and which will keep boredom at bay for quite some time. Circus! is heavy on system requirements, though. You'll need a 486SX-33 or better and 8Mb of RAM, and even then you might find it runs a tad sluggish.

### PCW Details

#### A Christmas Story

Price £29.99 inc VAT

Contact Oxford University Press

Tel 01865 267679

Fax 01865 267990

Rating ★★★★★

#### The Fish Who Could Wish

Price £29.99 inc VAT

Contact Oxford University Press

Tel 01865 267679

Fax 01865 267990

Rating ★★★★★

#### Arthur's Birthday

Price £39.99 inc

Contact Broderbund

Tel 0181 296 9454

Fax 0181 296 9455

Rating ★★★★★

#### Oregon Trail II

Price £19.95

Contact Iona Software

Tel 0181 296 9454

Fax 0181 296 9455

Rating ★★★★★

#### The Amazon Trail

Price £19.95

Contact Iona Software

Tel 0181 296 9454

Fax 0181 296 9455

Rating ★★★★★

#### Circus!

Price £39.99 inc

Contact Matra Hachette Multimedia

Tel 0181 600 6000

Fax 0191 600 6060

Rating ★★★★★

# Home Suite Makes Life Sweet

Available in these leading stores:

**ALDERS**  
ALL TOGETHER A BETTER CHOICE

**Byte**

The Computer Superstore

**ZONE**

**GAME**

**HMV**  
NOW HMV KNOW GAMES

**SILICA**  
AT DEBENHAMS

**WH SMITH**

**STAPLES**  
The Office Superstore



MEGASTORES

# The Complete HomeSuite



Both 3.5" disk and CD-ROM included.

Runs under Windows and Windows 95



**Party/Wedding Planner**  
Make your next party your best party. Organise guest lists and invitations. Track expenses, gifts and thank-you notes.



**Phone Book**  
Put your phone book on line and never lose track of a friend's phone number again. Store phone and fax numbers, and use your modem to dial automatically.



**Home Budget**  
Take control of your income and expenses. Analyse your spending habits. Print checks and keep an on-line register. Develop a budget and then track your progress.



**Home Inventory**  
Record all your valuables for insurance purposes. View belongings by category or location. Estimate replacement costs.



**Contact Manager**  
Track business and social contacts and record each call, letter, fax or meeting you have with each person.



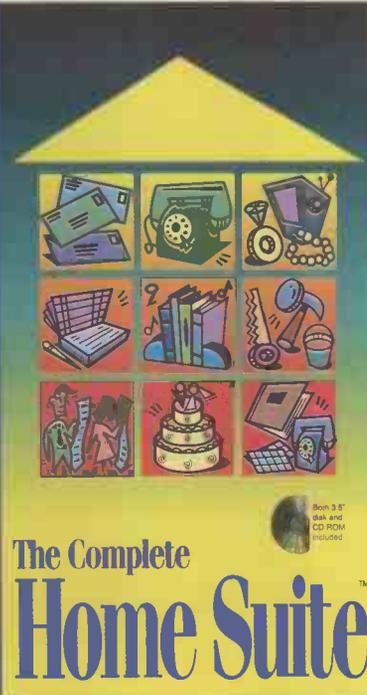
**Home Library**  
Inventory your CDs, books, magazines and baseball cards. Keep track of your collection and print reports.

**Make Your Life Easier**

11 ready-to-use solutions for the whole family!

- Party/Wedding Planner
- Phone Book
- Mail List Manager
- Home Inventory
- Home Librarian
- Home Repair
- Club Membership
- Home Budget
- Contact Manager
- Stock Portfolio
- Conversion Calculator

The Alpha Quick Results Series



**The Complete Home Suite**



**Home Repair**  
Every home owner knows a house requires constant upkeep. Track repairs, improvements and expenses. Plan for major projects.



**Mail List Manager**  
Organise mailing lists for business or home use. Track business and social acquaintances and print labels for large mailings.

**Plus!**

**Stock Portfolio**  
to keep track of your investments.

&

**Conversion Calculator**  
the ultimate universal conversion utility with dozens of conversion types.



**Club Membership**  
Manage your club's membership list, keep track of donations and organise members into committees.

All This For  
**£29.95!**  
ex. VAT

All The Home Management Programs You'll Ever Need...Under One Roof

Free! **DR.T's Sing-A-Long**



Included on the CD ROM is the childrens music program Dr.T's Sing- A-Long. The words and music to all the kids favourites can be played, and the child can sing when a microphone is plugged into the PC, as the cartoon characters dance and act on screen! It's an adventure into the world of music and your child is the star!

11/PCW/A1

**Alpha 0800 220607**

0 1 7 5 2 8 9 7 1 0 0  
Alpha Software Corporation

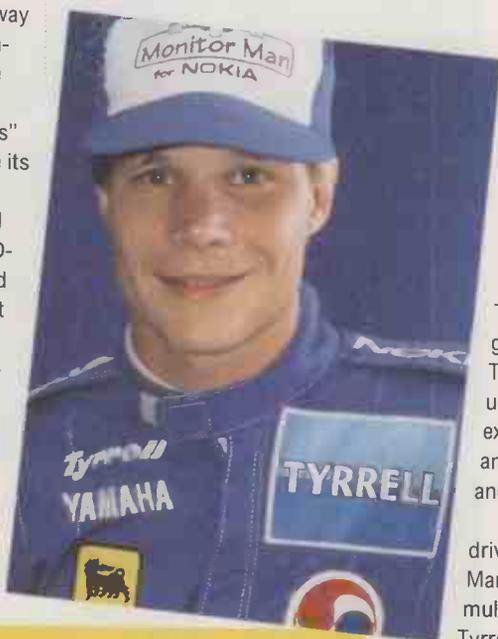
\*Prices may vary at retailers. © Copyright 1995, Alpha Software Corporation, The Software Centre, East Way, Lee Mill Industrial Estate, Ivybridge PL21 9PE Telephone: 01752 897100 Fax: 01752 894833 All rights reserved. All other brands are the property of their respective owners.

# Win a Notino

**H**i-Grade are giving away one of their new Pentium notebooks. The Notino P75M is reviewed in "First Impressions" this month, but to summarise its high-spec features, it comes with a PCI bus, an 11.3in dual scan colour LCD display, a CD-ROM drive and a stereo sound system. On top of this you get a plethora of great extras including a trackpad, an infra-red port and built-in joystick controls.

To win, answer this easy question. Where is Mount Ancochuma?

- a) Brazil
- b) Bolivia
- c) Colombia



## Win a Nokia Trinitron monitor

Monitor Man have given us a 15in Nokia Trinitron monitor to give away this month. The monitor is in the usual Nokia tradition of excellent build quality, and will run 1024 x 758 and 76Hz.

So why the racing driver? Well, Monitor Man sponsor this Formula One driver from the Tyrrell team. To win the monitor, all you have to

do is tell us who he is. Is he:

- a) Mika Faló
- b) Damon Hill
- c) Michael Schumacher

## Win Flying Fingers or Mini Office

EuroPress Software are giving away 20 copies of Flying Fingers and 20 copies of Mini Office, on

either floppy or CD-ROM.

Flying Fingers is multilingual, letting you choose to practice in English, French, German or Spanish. You can program it to remind you when to practice, and play games to help increase your speed.

Mini Office includes a word processor, database, spreadsheet, report generator and chart maker.

To win, just tell us which language Flying Fingers does not support:

- a) Italian
- b) French
- c) German

### Rules of entry

The competition is open to all readers of Personal Computer World except for employees, and their families, of VNU Business Publications, Hi-Grade, Monitor Man and EuroPress Software. Entries to arrive by 14th December 1995. The Editor of PCW is the sole judge of the competition and his decision is final. No cash alternative is available in lieu of prizes.

### PCW/Hi-Grade Competition

To enter any or all of these competitions, fill in this coupon:

Name

Address

Postcode

Daytime Tel

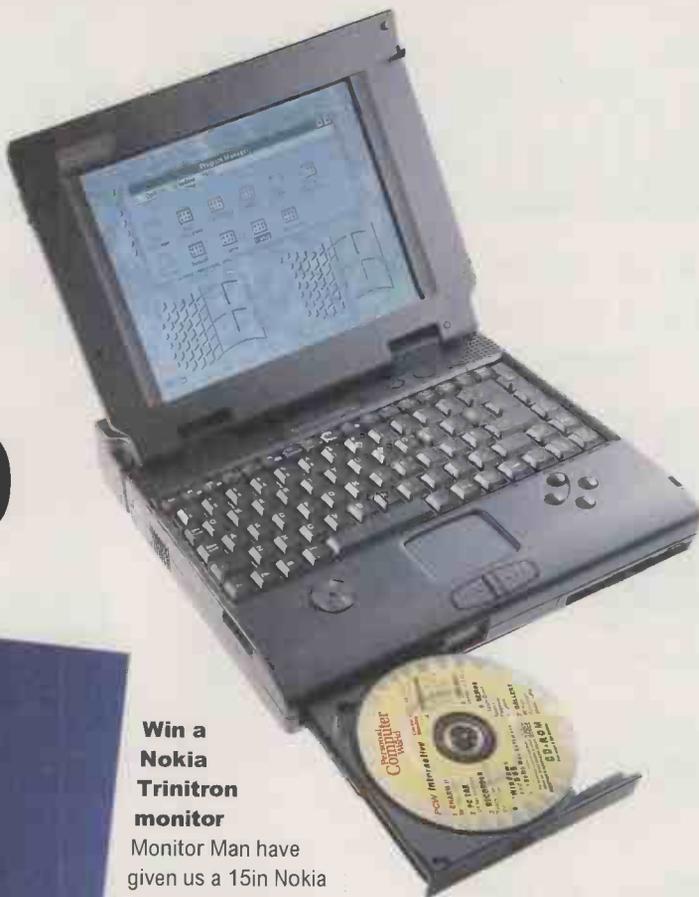
Answers (tick a, b or c)

Hi-Grade:      a      b      c

Monitor Man:   a      b      c

EuroPress:     a      b      c

Send your completed coupon to: December Competition, PCW Editorial, VNU Business Publications, VNU House, 32-34 Broadwick Street, London W1A 2HG.





# Screenplay

NEWS

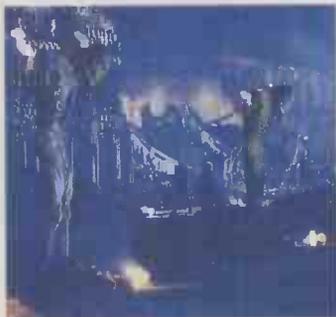
## Let **Kombat** Kommence

**M**ortal Kombat III, the latest instalment of the hit beat-em-up series from Williams, is all set to make its debut on the PC. The game, which should be out by the time you read this, continues the story of oriental warrior Lui Kang and his quest to save the world from the evil god Shao Kahn.

With full 256-colour VGA graphics, the PC CD-ROM version features outstanding animation, all the characters from the arcade game and realistic stereo sound effects. It is said to be the best conversion yet thanks to hard-disk access speeds and the memory capacity of today's machines. This is backed up by the original programmers, Ed Boon and Oliver Tobias.

Mortal Kombat III will be published by GTE Interactive on 13 October 1995. It will hit the Sony Playstation, Sega Saturn and other console formats shortly afterwards. To find out more about the whole Mortal Kombat story, turn to our feature on page 98, and look for a full review in "Screenplay" soon.

*Nintendo: Phone THE on 01782 566566*



### Charts



HMV LEVEL ONE

1	Command & Conquer (CD)	Virgin
2	Phantasmagoria (CD)	Sierra
3	Championship Manager 2 (CD)	Domark
4	Fade To Black (CD)	EA
5	Need For Speed (CD)	EA
6	7th Guest - White Label (CD)	Virgin
7	Dark Forces (PC & CD)	Lucas
8	PGA Tour Golf '96 (CD)	EA
9	Complete Ultima 7 Classics (CD)	EA
10	Magic Carpet 2 (CD)	EA
11	Full Throttle (CD)	US Gold
12	Star Trek The Final Unity (CD)	Microprose
13	Ultimate Doom (PC)	US Gold
14	Indycar - White Label (PC/CD)	Kixx
15	Ultima Underworld 1&2 (CD)	EA
16	World Cup Year '94 (PC)	Empire
17	Day Of The Tentacle (CD)	US Gold
18	Star Trek 25th Anniversary (CD)	Virgin
19	Strike Commander (CD)	EA
20	Premier Manager 3: Multi Ed (CD)	Gremlin

## Ultra unveiled

After 19 months of intense development, the chipset for Nintendo's Ultra 64 games console has been completed. A joint effort between the Japanese games giants and US-based Silicon Graphics, the technology is said to deliver greater graphics performance than Sony's Playstation and the Sega Saturn.

The Ultra 64 will be powered by a 64-bit processor, complemented by a MIPS Multimedia Engine and the Silicon Graphics video chip. Together it is claimed they will deliver over 600,000 texture-mapped polygons per second, with real-time anti-aliasing, real-time tri-linear MIP-mapped Interpolation (TLMMI) and perspective correction.

To produce what it calls true next-generation software for the new machine, Nintendo has put together a "dream team" of early developers. The team includes Rare, producers of Donkey Kong Country, Acclaim, Virgin Interactive, Williams and Sierra Online. Each company has a string of outstanding titles to its name and all see the Ultra 64 as the next big thing in games.

The Ultra 64 is due for release this November in Japan, and is expected to retail for less than \$250 US dollars.

## Windows worms

Following the successful launch of its Windows 95 title Pitfall - The Mayan Adventure, Activision is converting the console hit Earthworm Jim to this new platform. Originally developed by Shiny Entertainment, the PC version will take full advantage of Microsoft's enhanced video and audio features.

In this madcap action adventure with cartoon-like animation, Earthworm Jim is a worm who inherits superhuman powers

when an indestructible cybernetics suit falls out of the sky and lands on him. Defending his right to wear the suit, Jim must battle a variety of baddies in a effort to save Princess What's Her Name. If you think this all sounds a bit silly, you're right.

Earthworm Jim is already available on Super Nintendo and Sega Megadrive, and will swing into action on Windows this November.

*Activision 0181 742 9400*

## Magic Carpet rides again

Magic Carpet 2, the sequel to Bullfrog's bestselling 3D fantasy adventure, is all set to swoop onto the scene this Christmas. The game follows the same format as before, but boasts an improved flight experience with faster response and smoother graphics. Bullfrog has upped the villain count with a positive horde of new monsters, and players have an even greater number of spells at their disposal. Other features include SVGA graphics, night adventures, cavern levels and mission-based scenarios to add an extra dimension to the gameplay.

*Bullfrog is on 01483 579399 and Magic Carpet 2 will cost £44.99.*

# Pitfall

## The Mayan Adventure



The next generation of the classic Atari VCS game Pitfall pits Chris Cain against quicksand and wild animals. He never stops monkeying around.

**P**itfall – The Mayan Adventure is the long awaited update to David Crane's classic Atari VCS cartridge adventures. Those games centred on the exploits of Pitfall Harry, and this time you play the son of the legendary vine-swinging hero.

Designed by Activision for Windows 95, Pitfall – The Mayan Adventure takes all of the fun of its predecessor and brings it up to date. In this game Harry Jr's job is to rescue his famous father, kidnapped in the jungle by the dreaded warrior spirit, Zakelua: Lord of Evil. It appears



the jungle and ending up at Zakelua's lair. On each level, the idea is to find the exit to the next, collecting valu-

ables and avoiding a horde of hungry inhabitants along the way. And animals aren't the only danger – you'll have to watch out for Zakelua's army, quicksand, crumbling rock faces and strong river currents.

Pitfall – The

attackers and other weapons can be collected en route. By far the best in the early stages is the boomerang, which can take out a whole batch of bad guys in one fell swoop, turn around and return to you.

The graphics in Pitfall – The Mayan Adventure are a far cry from those in the original 8-bit

restart Windows. You can play in either a window or full screen, depending on your preference and the power of the PC you are using. Most people seem to prefer full-screen action, but I was happy with a double-sized window.

Audio has also come a long way, and ambient sounds can be played off the CD to create a real adventure atmosphere. The music's good too, but you can't have both at the same time. Best of all though, the game-play hasn't changed a bit. This version of Pitfall is just as addictive as its predecessors, with plenty of levels to keep you going and that "just one more go" appeal.

Pitfall has always been a classic and nothing has changed. This game is probably the best of the Windows 95 crop at the moment, although if you play it full screen it's no different to a DOS product. Either way, it comes with my highest possible recommendation.

### System Requirements

486/33MHz or higher, 8Mb RAM, Windows 95, double-speed CD-ROM, VESA Local Bus or PCI SVGA video card, mouse  
Price £35-£45

Contact Activision 0181 742 9400



Dad had recently taken an interest in ancient Mayan treasure, and so Zakelua decided to take an unhealthy interest in him.

Playing the hero, you start your adventure armed only with your wits, your father's journal and a trusty sling. The quest is split into 14 different sections, starting in the outer regions of

Mayan Adventure has you climbing trees, swinging on vines, zooming down zip lines and generally monkeying around. The path from start to finish is never a straight line and careful timing is required to avoid the pitfalls. Your sling can be used to ward off would-be



series, with detailed design, luscious colour and smooth parallax scrolling. The game claims to run best in 256-colour mode, but will work at higher bit depths so you don't need to



# Fury3

**Nicola Kingsley finds fast and Fury-ous action in the new Windows version of this futuristic showdown. It's full-on warfare all the way.**

Hell hath no fury if it can be compared to this new Windows-based 3D shoot-'em up from Microsoft. Right from the onset, it's full-on warfare with 24 demanding missions to keep you on your toes.

The date is 2832 and as Councillor for the Terran's Council of Peace, it's your job to stop the Bions ruining a fragile coalition among seven peaceful planets. The action starts on Terran and the idea is to make your way across eight planets to Fury, the homeworld of the Bions.

Your ship is equipped at the start with a ServoKinetic Laser, a high-powered weapon which conveniently regenerates its own ammunition. Other increasingly deadly weapons can be picked up as you progress through the game.

Shields on, and let's get going. Press start and seconds later you're flying over a 3D-bitmapped terrain that looks like a cross between the Alps and the Sahara. Every last ounce of skill is required because not only do you have to shoot down as many enemy ships as possible while being attacked on all sides, you also have to watch the compass to find the main targets of the mission as well as negotiating the ever-changing terrain.

Through the clouds and into the far reaches of the sky the fighting continues. On the

ground, even under the ground, targets wait, but a kill is almost enough of a reward with a huge juicy explosion and lots of flying debris. Once three missions are completed, the next planet beckons with its own particular landscape, climate and hidden evils.

Gameplay is similar in feel to Descent, with an up-

tempo techno soundtrack. The action feels faster, due to the open space dogfights which leave the horizon spinning around outside the cockpit. Some readers may be reminded of Terminal Velocity, and Microsoft has admitted to using the same graphic engine.

Unfortunately, Fury3 isn't that smooth on the recommended minimum 486DX/66. Graphic detail can be reduced, which helps to increase speed, and the game runs faster when used with Windows 95 – as recommended by Microsoft. It works with Windows 3.1 but can be troublesome to set up.

Fury3 can be fully installed to your local hard disk, which helps speed things up a bit. This is especially important if you have anything less than a double-speed CD drive, but you will lose the video clips. You will need between 55 and 70Mb of disk space for a full install, depending on whether you are running Windows 95 or 3.1.

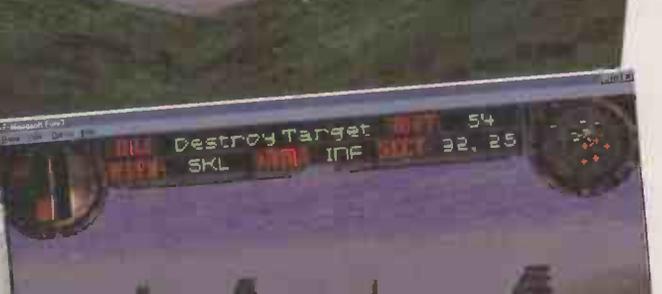
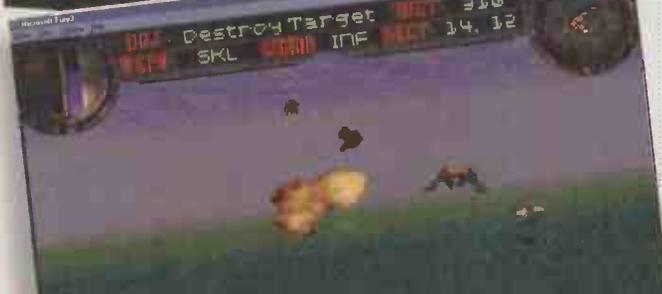
The game is only available on CD-ROM and at the moment comes bundled with Microsoft's new joystick, the Sidewinder 3D Pro (see this month's Gadgets spread on pages 56-57) which incidentally seems to work best, if only under Windows 95. The cost for the bundle is rather high at £69.99.

Although demanding on hardware, Fury3 makes for a fast and furious experience with lots of challenging flying and shooting into the bargain. I'll try and keep the peace for the price of this bundle, but I think I'll need Windows 95 first.

#### System Requirements

486 DX2/66, Local Bus SVGA video card, 8Mb RAM, double-speed CD-ROM, Windows (preferably Windows 95), minimum 10Mb hard disk space (95), 14Mb (3.1)  
 Price £69.99 with joystick, £39.99 on CD-ROM

Contact Microsoft 01734 270001



# Pinball Space Cadet

If you're a pub pinball fan, you'll find Pinball Space Cadet offers all the fun of the real thing without chipping away at your pocket money, says Doug Chapman.

While technological advances almost everywhere around us, the confines and configurations of the average pinball machine have changed very little. Microsoft's 3D Pinball Space Cadet, supplied as part of the Windows 95 Plus pack, adheres to the time-worn plot of these arcade favourites admirably.

The screen layout is simple – a birds-eye view of the pinball table, and the player's actions are limited to controlling the left and right flippers and the ball release. Each game begins with

the catapulting of a ball into the table and ends with the loss of the third ball. The aim of the



game, apart from the obvious attraction of bettering your highest score, is to continually reach the next level. As the game's title suggests, you start out as a

mere space cadet but with each feature passed, a further level is reached and your status rises.

The most outstanding feature of Space Cadet is the option to change your view of the table to 3D, giving you the effect that you really are standing, flippers in hand, at the table. It makes the game harder and more realistic. An aid to this increase in

difficulty comes in the shape of a cheat, enabling you to tilt the table sideways or back or forth as you wish.

The graphics are bright and appealing to the eye, and there are enough flashes of light and crash-bang sound effects as the ball rebounds into a variety of ramps and buffers, to maintain the impression of reality. However, whereas

the sound effects are rather good, the music is disappointing. There is none of the brash soundtrack that accompanies most state-of-the-art pub

machines: this is a drab opening tune that sounds like an afterthought.

Poor music notwithstanding, 3D Pinball Space Cadet is excellent entertainment and highly addictive. The game is difficult enough to make it a long-standing challenge and after several hours of playing I still fell short of its highest levels. It compares favourably with other computer pinball games, and can be compared favourably to Tristan or Crystal Caliburn on the Apple Macintosh.

If pinball is your thing then Microsoft Plus is a worthy investment, providing all the excitement of the real thing without the need to continually feed it coins. If not, the game admirably boosts an already interesting package from Microsoft and is undoubtedly worth checking out.

#### System Requirements

486 PC or higher, 8Mb of RAM, 25Mb free hard disk space, Windows 95

Contact Microsoft  
01734 270001

## Leisure Lines

### Brainteasers courtesy of JJ Clessa.

#### This Month's Quickie

What number is twice the product of its digits?

#### This Month's Prize Puzzle

A nice easy problem in the run up to Christmas, this year. So don't all write in complaining how simple it is – I know already.

My friend has a farm in which he keeps five types of animal – geese, sheep, horses, hens and cows. The number of geese is less than one third of the number of hens, and three less than half the number of cows. The sheep and hens outnumber the horses and cows by three; the horses and hens constitute one less than half the total number of animals; and the horses and cows comprise 7/16 of the total.

How many animals of each type are there?

Answers on a postcard or backs of sealed envelopes – no letters and no floppy disks – to: PCW Prize Puzzle – December 1995 PO Box 99 Harrogate N Yorks HG2 0XJ to arrive not later than 20th December 1995

Good Luck!

#### Winner of September 1995 Prize Puzzle

Not a very exciting response to our September logic problem. Perhaps it was the warts, acne and dimples that put people off, or it might have been that many of our regular puzzlers were on holiday. Just over 60 entries came in. Of course, it could have been the fact that the problem was not exactly defined. Two answers – Aaron or David could have fitted the bill, so we accepted either.

Anyway, the winning card – drawn at random – came from a Mr CT Harris, of Poole in Dorset. He also sent us a very nice picture of Kevin Costner in his wetsuit on the other side of the card (can we have Julia Roberts in her swimsuit next time please?).

Congratulations Mr Harris – your prize will be with you shortly.

Meanwhile, to all the losers, our usual message – keep trying, it could be your turn next.

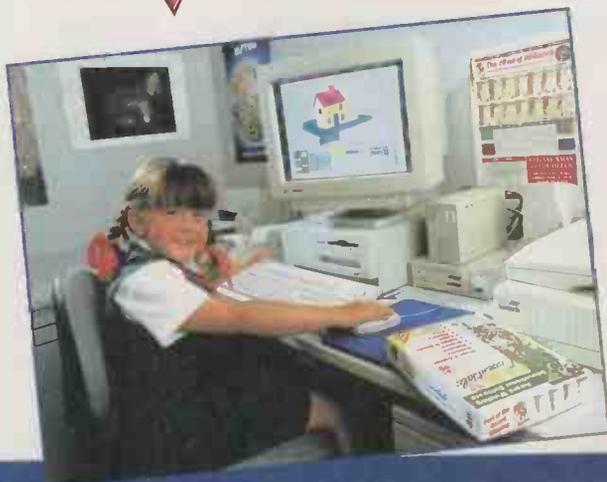
**10**  
out of **10**  
TEN OUT OF TEN  
EDUCATIONAL  
SYSTEMS

Introducing

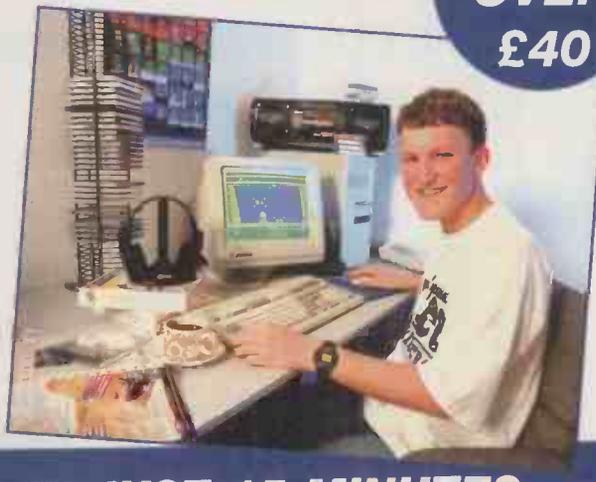
THE FUN LEARNING SYSTEM

FOR SCHOOL . . . AND HOME!

SAVE  
OVER  
£40



100%  
MADE IN U.K.



IMPROVE MATHS AND SPELLING IN JUST 15 MINUTES

These FUN EDUCATIONAL SOFTWARE PACKAGES were compared by The Times Educational Supplement with systems costing over £1,500 and they concluded: "If the National Council for Education and Technology's researchers ever got round to assessing the impact of a daily 15 minutes with 10 out of 10 they would surely discover real improvements in Maths and Spelling."

If you have children aged 6 to 16 take this opportunity to judge the real improvements for yourself. Buy MATHS or ENGLISH (or both) at just £4.99 each. The RRP is £25.95 each - A SAVING OF OVER £40!

These are brand new full versions, in attractive durable library boxes with colour manual and you are under no obligation to make any further purchases.

Versions of Maths and English are available on 3.5" Disc for: PC & Compatibles, Acorn, Apple Mac and Commodore Amiga. CD's are also available for PC & Compatibles.



Great fun as you play and learn



Fast action learning from games



Progress is automatically recorded



Varied educational challenges

EXCLUSIVE MAIL ORDER OFFER



Order either for £4.99 + £1 P & P  
Order both for £9.98 + £2 P & P

AS SEEN ON TV



10 out of 10 as featured on Satellite Television's The Children's Channel



Steve Botterill (MD) 10 out of 10 Interviewed by Granada TV on 'The Program'



MATHS & ENGLISH  
JUST £4.99 EACH  
Limited Period Only

WHAT THE PRESS SAYS:

Top Of The League - CD ROM NOW  
Truly Remarkable - Amiga User International  
Great Value For Money - Amiga Computing  
Seriously Useful - PC Plus  
Excellent Value - PC Home  
Children Can't Help But Learn - Acorn Computing  
Highly Recommended - Archimedes World

HOW TO ORDER

Tell us your name, address, type of computer & which titles you want on 3.5" DISC or on CD.

PAYMENT Can Be Made:

BY PHONE

With ACCESS/VISA on 24hr answering service.

BY POST

With cheques/PO's or ACCESS/VISA.

BY FAX

With ACCESS/VISA - available 24 hours.

BY FOOT

Call in during office hours Monday to Friday

Please allow up to 28 days for delivery



10 out of 10 Educational Systems  
Troydale Mills, Troydale Lane, Pudsey,  
LS28, England  
Tel: 0113 239 4627  
Fax: 0113 239 4629

The 10 out of 10 Series only £25.95 each  
Available From Stores Nationwide!

CLASSIFIED

● **A new book using Visual Basic in sampling & control, includes a comprehensive tutorial for beginners on Visual Basic**

Opens the door to the use of sensors, transducers and instruments with your PC. Links directly to hardware via RS232 serial ports & GPIB (IEEE-488). Shows the use of Analogue to Digital/Digital to Analogue conversion, Control, Counting, Stepper motors, Digital I/O control, Power control, inc. Mains control. (Comprehensive modular hardware is also available if required).

● **A must for Industrial/Educational users & even Inventors!**

If you want to be a user and manipulator of live data, then this 430 page book is a must for you. Extensive use is made of DLL, DDE and OLE, so that you can integrate your programs into other Windows applications.

● **Includes 3.5" disk of sample programs**

● **Price is just £29 + £6 post & packing (£35 total inc VAT)**

24 hour credit card orders  
Tel: 01254 665511



Cheques payable to "UNILAB Limited", with orders by post:  
Unilab Limited, The Science Park, Hutton Street, Blackburn BB1 3BT  
General Enquiries: 01254 681222

## MICROMART INDEX

SEE ALSO MICROMART CLASSIFIED – Go to Main Ad Index

<b>A</b>	Alpha Business Computers	287	<b>L</b>	Lasermoon Ltd	287	<b>T</b>	Tech-Mate (UK) Ltd	319
	Altek Instruments	331					Teleadapt	237
	A-Z Business Computers	315	<b>M</b>	Mega Download	241		Telesystems Ltd	243
<b>B</b>	Birdguide Ltd	315		Microcosm Ltd	331		The Keyboard Company	295
<b>C</b>	Cafe Net	345		Monitorman	297		The Legend BBS	343
	California Scientific Software	315	<b>O</b>	One Stop Software	283		Themis (UK)	303
	Clove Technology	303		Online Now	283/345		TVC Sales	283
<b>G</b>	Greenman Toner Service Co Ltd	315	<b>P</b>	Postech	278	<b>U</b>	Trevan Designs Ltd	343
	Graham Jacobs Associates	331		Print Revival	295		Unilab	272
<b>H</b>	Harper Collins	293/5	<b>R</b>	Roland Digital Group	321	<b>V</b>	Vectorjet Ltd	281
<b>I</b>	Ink Well	278	<b>S</b>	Soho Soundhouse	319	<b>W</b>	Wise Imaging	287
<b>J</b>	JJA	278/321		SNAP Computer Supplies Limited	319		Worthington Data Solutions	275
<b>K</b>	Komputer Knowledge	345		SMS Shareware	292	<b>X</b>	XGL Systems	293
				Strangeways BBS	343			
				System Insight	277			

# Hands On Contents

## OPERATING SYSTEMS

### Windows 95 274

Tabbed dialogue boxes have some new properties. Tim Nott has some tips.

### Windows 3.1 276

Back to basics: Tim Nott gets down to DOS again, with Dblspace and Autoexec.bat in focus.

### OS/2 282

In the first of a new series of columns, Terence Green explains why we should sit up and take notice of OS/2.

### DOS 284

Simon Collin shows you how to tune Windows 95 to get the best from your DOS applications.

### 32-Bit 286

The trials of Tonto, loaded up with Linux and on the road with Chris Bidmead.

## APPLICATIONS

### Word Processing 291

Microsoft has a venomous new virus, but all is not lost. Tim Phillips shows you how to beat "Prank Macro".

### Spreadsheets 296

Stephen Wells on how to achieve a smooth changeover between DOS and Windows spreadsheets.

### Databases 302

The last of Codd's rules for modern RDBMSs explored, and you're not properly addressed without your Postcode. With Mark Whitehorn.

### Graphics & DTP 308

The luxury of layering can be found in some bitmapped drawing packages; Gordon Laing has been experimenting in Photoshop 3.0.

### Multimedia 314

Authorware, or Director? Panicos Georghiades and Gabriel Jacobs bring you the pick of the packages.

### Sound 318

Steven Helstrip beats a path to the door of Cubase 2.0, and keeps the beat of more percussion tracks.

## PROGRAMMING

### Visual Programming 324

Data access in Excel 7.0, and why Designer Widgets is full of bugs. With Tim Anderson.

Hands On is the place where readers can contribute to PCW, and as always we'll pay for anything we use. Macros, sections of code and hints and tips will be rewarded with a £20 book or record token (please say which you'd prefer) and we'll pay hard cash for longer, more involved pieces. Please include relevant screenshots in .GIF format.

All submissions should be emailed to the author of the appropriate section, or snailmailed to Hands On, *Personal Computer World* Editorial, VNU House, 32-34 Broadwick Street, London W1A 2HG. Questions and short hints and tips can be faxed on 0171 316 9313.

We're constantly working to improve the contents of Hands On. If you have any suggestions, send them to the Editor at the address above, or email them to: [editor@pcw.ccmil.compuserve.com](mailto:editor@pcw.ccmil.compuserve.com)

### Low Level 328

Low Level has come to the end of its run. In his last Hands On column, Mike Liardet goes through the Windows, with the help of Visual Basic.

### Numbers Count 335

Wondrous Numbers capture the gaze of Mike Mudge. Your chance to find out why...

## AND THE REST...

### Networks 338

Brasso works wonders on Windows 95 — the CD, that is. Stephen Rodda explains.

### Comms 342

Finding interesting forums, and Windows on the web are just some of the comms problems frowning Stephen Cobb's brow.

### Macintosh 346

Which to choose — a PowerSurge Mac or a Power Computing Mac clone? Chris Cain has arguments for and against both.

### Computer Answers 349

Frank Leonhardt presents his regular forum for your problems, hints & tips and solutions.

### Beginners 351

Eleanor Turton-Hill guides you through the minefield of PC jargon and confusion. This month, upgrading your hard disk.



## Hot property

**There's no shortage of properties in Windows 95. In fact they're everywhere, as Tim Nott, right-clicking his way around his screen, found out. He's been finding out about fonts, too.**

They used to be called tabbed dialogue boxes and first made their appearance in places such as the Word for Windows "Options" command. Now they're everywhere and, confusingly, are called "Property Sheets". I would suggest "Leaflet" or "Book" would more appropriate for something with more than one page, but never mind. Practically every object on the screen has "Properties" — right-click on an empty part of the desktop, and down at the bottom of the pop-up menu "Properties" summons a tabbed dialogue box for display settings — exactly as if you had gone via Control Panel. Right-click on the Taskbar, and "Properties" leads to various options for the Start Menu and Taskbar, such as turning the clock off. Properties of a shortcut tell you where it resides, where it points to and lets you change the icon — a direct descendant of

Program Manager's "File/Properties".

It's really worth spending some time right-clicking on everything in sight. The property sheet for "My Computer" for instance is a quick way to Control Panel/System and the Recycle Bin properties let you set its size for each drive and do away with the confirmation dialogue. Right-click on a drive letter in "My Computer" and you'll get a pie-chart display of free space, and on the second page, access to the scanning, defragmenting and backup tools. Folder properties include, most usefully, the total of nested folders, files and disk space consumed.

There are a few tips worth knowing on property sheets generally. Anything you don't understand, click first on the question mark button, then on the thing. You can also right-click on the thing, then click with either button on the "What's this?" panel that pops up. However, this doesn't always work as there is another curious feature of property sheets. Move the cursor around, and you'll notice that in certain places it changes to an I-beam: not just in the edit boxes, but in the "grey" (or whatever colour you have) area as well. You can't edit this information, but you can select it and copy it to the clipboard. For example, examine the properties of MSPAINT.EXE and you'll find you can select and copy all sorts of data, such as the

creation date and version information. Another little trick concerns the "Location" information. This only gives the name of the folder containing the object, but hold the pointer over this and a pop-up appears giving the full path.

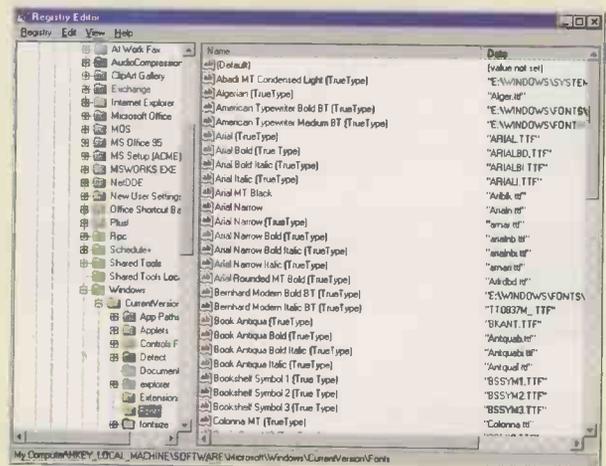
### Fonts, folders and phantoms

One thing I was hoping for in Windows 95 was an improvement to font management. Well, there's good news and bad news. The good news is that you don't need to separate .FOT and .TTF files cluttering up the system folder anymore. You can also view and print samples of any font — even if it isn't installed. You can add fonts through the "New font dialog" or by dragging from another folder, much as you could with File Manager and the Control Panel Font section under Windows 3.1. If you use the former method, there is, again as previously, a check box for the option to copy the actual file over (you'd probably want to do this if installing from disk or CD), or not (if the font is already on your hard disk, but not in the default Fonts folder).

If you use the latter method (which, after all, is what Windows 95 is all about) you'll find that unlike dragging an .EXE file with the left button, you don't get a shortcut: the whole caboodle is either copied between drives, or moved between folders on the same drive. If you don't want to copy/move the file, use the right button and choose "Create shortcut". Now, in any normal folder you get a shortcut but in the Fonts folder you don't. The icon has the little shortcut arrow symbol, but the filename and size are that of the source file. Moreover, there's no shortcut page in the Properties sheet, and if you delete a

### Who's that girl?

The properties for data files vary very much with the type of data — Microsoft Office documents such as Excel and Word have two extra pages for summary information and statistics. Media files also run to three pages, with all sorts of information including copyright, and a player. Which brings me to the great Windows 95 FAQ (Frequently Asked Question). Who is the singer on the "Good Times" video clip? Well, look in the property sheet of Goodtime.avi and all will be revealed. You might also like to check out the authorship of "The Microsoft Sound" in your Windows\Media folder. Not one of his more interesting works, I feel, but it's good to see another Englishman in the Microsoft charts.



Regedit tells truths about your fonts, unavailable elsewhere

font shortcut it goes straight to oblivion, bypassing the Recycle Bin.

So what on earth is going on here? Are these shortcuts, the full files, or some other strange entity? The secret is that the Fonts folder is a "special case" — you can't, for example, create any nested folders. And if you look at it with File Manager (run winfile.exe from the Start Menu "Run" command) the shortcuts don't exist at all. Still, logic is not one of Windows 95's strong suits. What can you say of a system where, to shut down the computer, you click on the "Start" button?

If you'd like a touch of sanity, start the Registry Editor. If you can't find it in the start menu, type "regedit" from the "Run" prompt. Start at the section HKEY\_LOCAL\_MACHINE and click on the plus sign next to it. Keep clicking on the plusses down through Software, Microsoft, Windows, Current Version, Fonts. You should then see, on the right of the screen, a list of font names, files, and if not located in the default font folder, the path. Why you have to go through this rigmarole to find out what's what on your hard disk is beyond me, but never mind.

So the upshot is if you want to keep separate sets of fonts (say a limited set for word processing and a wider range for graphics or DTP applications), it can be done. Keep your standard fonts in C:\Windows\Fonts. Create a new folder (say C:\Windows\More Fonts) for the fancy stuff, and copy the .TTF files in there. When you want to install the additional fonts, select all, right drag to the Fonts folder, and create shortcuts. To uninstall them you're going to have to pick out each "shortcut" individually and delete it. Not very good, is it? And while I'm in a Windows-bashing mood, check out the screen version of the Symbol font — that's the .FON version with a red "A" icon. Notice anything strange compared to the MS Serif and MS Sans Serif screen fonts?

### Gang warfare

But now for something far more important. Having last month found out how to change the start-up and shut-down screens, the next question any seeker of truth asks is "Where's the gang screen?"

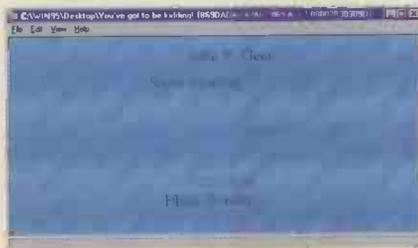
Are you sitting comfortably? Right, then right-click on the desktop, create a new folder and name it:

"and now, the moment you've all been waiting for"

No, I'm not joking. Omit the quotes, but get the rest exactly as printed. Then right-click on the folder once more and rename it to:

### Documentary evidence

One thing I like about Windows 95 is the emphasis on documents rather than applications. I find the "Documents" list on the Start button very handy, and I like the way the applets show the file first, then the application in the title bar — so you see "My Picture - Paint" or "My Letter - WordPad" on the Taskbar. So why on earth did the designers of Office 95 revert to the old way, with the program first? It doesn't require tremendous learning effort to remember that the "W" icon stands for Word, and the "X" for Excel. So why the totally redundant "Microsoft Word..." afterwards, taking up the space where you want to see the document name?



At last — the Windows 95 gang screen

"we proudly present for your viewing pleasure"

Right-click and rename again, including the capitals and exclamation mark, to:

"The Microsoft Windows 95 Product Team!"

If you really want to impress bystanders, skip all that and just create a new folder called

"anything.{869DADA0-42A0-1069-A2E7-08002B30309D}"

The "anything" can be anything you like, but the stop, brackets and numbers must be just right — again, omit the quotes. You're now ready to go: if you've got sound on your PC, turn it on, open the folder and wonder how much disk space that lot takes up.

Finally, thanks to everyone who has written in with feedback and tips, especially Gareth Cooke, Ian Hayhurst and Ian Abbott who all came up with the gang-screen secret. All further tips will be gratefully received and usually published and acknowledged in the fullness of time. So if you've sent me deep hacks into the registry that haven't appeared in print yet, be patient.

### PCW Contacts

Tim Nott can be contacted by post via PCW or by email at [timn@cix.compulink.co.uk](mailto:timn@cix.compulink.co.uk)

## Print and Read Bar Codes on your PC

### Bar Code Readers



### Radio Cordless Scanners



### Portable Bar Code Readers



### Also Available:

- Labelling Software for Dot-matrix, DeskJet and LaserJet Printers
- Bar Code Fonts for Windows™
- Laser Scanners • CCD Scanners
- MagStripe Readers
- Slot-Badge Scanners
- Same Day Shipping
- Made in the USA
- 2 Year Warranty
- 30 Day ££ Back Guarantee
- Direct From Manufacturer?

Call Toll Free in UK

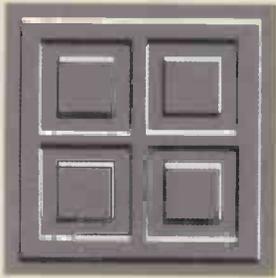
**0800 393 213**

30 Day Money Back Guarantee!

Prices Subject to Change Without Notice  
21-23 Fenian Street • Dublin 2, Ireland

Tel. 010 353 1 6614 566 • Fax: 010 353 1 6614 622 • VAT not Included

**WORTHINGTON**  
DATA SOLUTIONS



## Life before Windows

**How does DOS affect Windows? Tim Nott examines the ins and outs of the Dblspace and Autoexec.Bat commands, and recommends Recorder for a change of keyboard layout.**

Microsoft's bundled disk compression software loads DBLSPACE.BIN automatically prior to processing CONFIG.SYS. DBLSPACE.SYS, usually appearing at the end of CONFIG.SYS with the /MOVE switch, relocates as much as possible into the high memory area, with the rest at the bottom of conventional memory.

That's enough about CONFIG.SYS, because as you no doubt realise there's another file, AUTOEXEC.BAT, that needs to be processed. History has blurred the distinction between the two. The commands in AUTOEXEC.BAT, unlike CONFIG.SYS, are the sort of thing you can enter from the keyboard: a BAT(CH) file is simply a series of DOS commands that can be played back from a file, rather than having to type each one in, and the AUTOEXEC bit means that your PC will AUTOMATICALLY EXECUTE it after CONFIG.SYS has had its say.

The first line you'll see here is probably

```
@ECHO OFF
```

All this does is to stop the subsequent commands "echoing" (being displayed) on the screen. The @ sign stops the ECHO command itself from appearing.

Next, you might typically get:

```
PROMPT=$p$g
```

This defines the appearance of the DOS prompt. By default (i.e. with no PROMPT command) you get just the current drive and a greater-than sign. The "\$p" adds the current directory path, which is useful. You can augment this in all sorts of ways — adding time, date, your own text and so on, and if you really want to get your anorak dirty use "Escape" codes to change screen and text colours or even

key assignments — see the DOS help files on PROMPT and ANSI.SYS for more.

You can have a separate prompt for DOS sessions under Windows — useful if the user needs to be reminded that they are in a full-screen DOS session under Windows rather than the real thing. Stick in a line, for example:

```
SET WINPMT=Type EXIT to return to  
Windows $P$G.
```

Which brings me on to the SET command in general. This creates and defines "environmental variables". Typical of these are TEMP, showing the directory where temporary files (such as printer output) should be stored, and PATH. If a program file is on the PATH (its directory will be listed to the right of the equals sign) then you don't have to change to that directory (or specify the full path) to run the program. At its simplest, you'll probably have something like

```
SET PATH=C:;C:\DOS;C:\WINDOWS
```

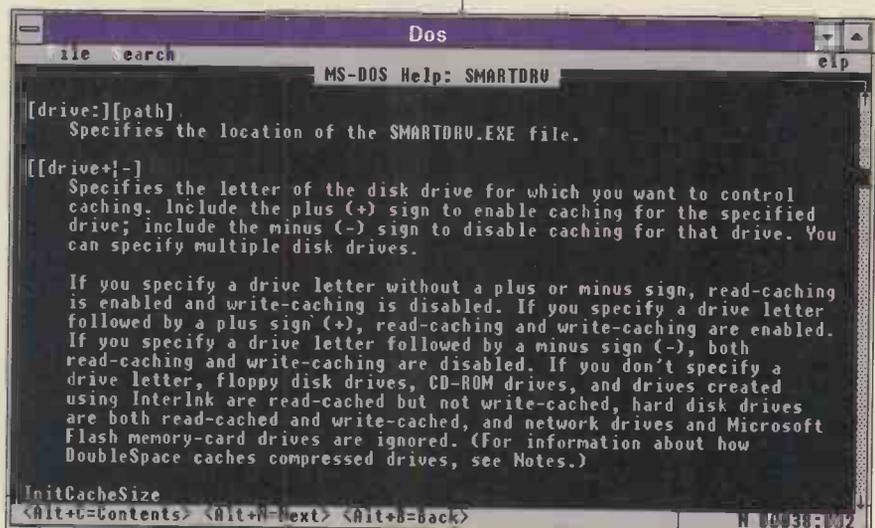
Note that first, you can leave out "SET" and the equals sign, and that each directory needs to be separated by a semicolon. Other applications may add their own paths, either on the same line or by adding a separate line such as

```
SET PATH=%PATH%;C:\WIZZO
```

where %PATH% stands in for the existing path. There may be more system variables defined by using the SET command — examples include SET MSINPUT, which Microsoft mouse and keyboard drivers need, or SET BLASTER which defines the IRQ, DMA and other esoteric settings for a SoundBlaster card.

You don't need a mouse driver loaded in AUTOEXEC.BAT if you're only running Windows. If however you want to use the mouse under DOS (or a Windowed DOS session) you'll either need something like MOUSE.EXE or MOUSE.COM in AUTOEXEC.BAT or a MOUSE.SYS loaded by CONFIG.SYS. The keyboard command is another option — you don't need it in Windows, as the country settings are all in Control Panel — but if you want

*All you ever wanted to know about Smartdrive, from the DOS "Help" command*



your pound sign to stay put at Shift+3 in DOS sessions, you ought to have KEYB UK, ,C:\DOS\KEYBOARD.SYS (or sometimes just KEYB UK).

As with CONFIG.SYS there are all sorts of third-party drivers and TSRs (programs that stay in memory) that your particular hardware or programs may need, such as a scanner driver, network drivers, third-party disk compression, or support for a file-transfer program such as LapLink.

SMARTDRV is a process that speeds up disk access by keeping recently-accessed data in memory, cutting out unnecessary disk reads and writes. There are a heap of possible parameters here, and no room to go into detail, but typing "SMARTDRV" at the DOS prompt will show the current settings. Append "/" to that for a list of what all the options mean or "help smartdrv" for the full help text.

The important settings, however, are the two numbers. The first is the cache size, in Kilobytes, prior to running Windows. The second is that used when Windows is running. If you have 4Mb or less on your machines, Microsoft recommends setting these to 1024/512 — over 4Mb but under 6Mb to 2048/1024, and over 6Mb to 2048/2048. But, if you're running the faster 32-bit file access under Windows 3.11 (check in Control Panel/386 Enhanced) VCACHE will look after hard-disk cacheing and you will only need Smartdrv for floppy disks or CD-ROMs, so a lower value (usually 128) will free up memory. Control Panel should change the Smartdrv settings automatically, but you should check.

Finally, if your machine, heaven forbid, is prone to crashes, you might wish to go

*Choose a new keyboard layout — and automate switching with Recorder*

for safety rather than speed by disabling "write behind" cacheing altogether, so that data gets written to disk immediately. The "X" switch after SMARTDRV achieves this. Order doesn't generally matter much, but there are exceptions. If you have a CD-ROM drive, make sure that the command that gives access to the drive (usually MSCDEX.EXE) loads before SMARTDRV, otherwise you won't be able to use disk cacheing on the CD.

Going back to last month, I mentioned that certain lines in CONFIG.SYS were needed to be able to load drivers and other programs "high" — keeping as much conventional memory (below 640Kb) free as possible. You may also have noticed that some lines in your CONFIG.SYS and AUTOEXEC.BAT are rather more complicated than the examples I've given, with entries starting "DEVICEHIGH" or "LH" followed by a barrage of numbers and letters before the main command.

These two things are not unconnected. DEVICEHIGH and LOADHIGH (which can be abbreviated to LH) attempt to load whatever follows into upper memory. This isn't quite as easy as it sounds, as some drivers and programs need a lot of memory to start, then contract to take up less, and the order in which things are loaded can make a tremendous difference.

Fortunately, trial and error isn't the only way to optimise this process. From the plain DOS prompt (not a Windows DOS session) type "MEMMAKER" and follow the prompts. If, as any self-respecting dabbler would, you want to use the

# NEW! INKJET SUPPLIES CATALOGUE

56 pages in full colour!

## FREE - Call Now!

*Quality Inkjet Refills*  
*Original Inkjet Cartridges*  
*Special Inkjet Paper*  
*Inkjet Transparency Film*  
*Bulk Inkjet Ink*  
*Inkjet Labels*

**NEW!**  
Inkjet Refills for Epson Stylus Colour  
and Canon BJC-4000 available now.

### FIRST CLASS POST SAME DAY DESPATCH



Call  
now  
for  
details

## SYSTEM INSIGHT

The Inkjet Specialists

Dept PCW 1295, Freepost (S06209)  
Hedge End, Southampton SO32 2EE  
Tel: 01329 835500  
Fax: 01329 835501

All Major CREDIT/DEBIT  
Cards Accepted

CLASSIFIED

**REMANUFACTURED  
TONER CARTRIDGES  
& INKJET REFILLS**



**THAT DON'T COST  
THE EARTH**

Tel: 01873 854913  
Fax: 01873 858040

Inkwell, 8 Brecon Road, Abergavenny NP7 5UG

## BARCODING

products at discounted prices

We also specialist in discounted UNIX software and hardware. In addition to low prices and unusual products, we offer personal service, support and advice. Pricing examples:-

Barcode Wand and pc wedge	£ 195
Wand and wedge for Unix/RS232 terminals	250
CCD Scanner with integrated decoder	390
Mobile data capture terminal with voice	385
Barcode printer decoder - print from any op. system on any printer	330
Barcode printing for Windows	185

We are specialists in shop floor data collection  
All our Barcoding Products are supplied on an unconditional 30 day moneyback guarantee. Most items are on 2 year warranty.



Prices plus V.A.T. and carriage at cost  
For quotations phone 01257 452237 - 9am-6pm  
JJA Ltd., 38 Beechfields, Chorley PR7 5RE

## BARCODE SCANNERS AND MAGNETIC CARD READERS

We import directly from hand picked manufacturers and distribute in UK all types of Auto-ID devices and PoS components. To prove the high standard of manufacturing, durability and resilience of our products, we offer 12 months warranty on every item we sell, and to prove our customer care, we pass the benefit of our buying policy directly to the public, with more competitive prices and generous terms. The variety of interfaces we offer with every model makes our range particularly attractive to integrators of PoS, Access Control, Security, T & A, Data Protection and Licence control systems and the simplicity of installation makes it ideal for the end users. Our list includes prices as low as:

- £120 for CCD scanners
- £ 35 for Light Pen/Wand barcode readers
- £ 65 for Slot/Swipe barcode readers
- £ 13 for magnetic card readers [single track]
- £ 29 for magnetic card readers [twin track]
- £350 for magnetic cards encoders

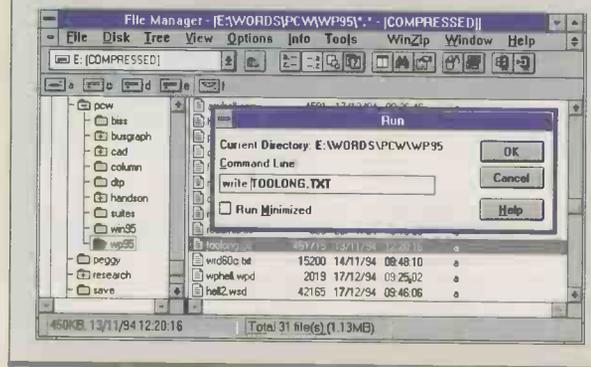
We shall be delighted to send a colour catalogue of our full range, provide competitive cost quotations or only discuss your requirement. Just call us!

**POSTech LTD**  
Unit 3b, Kingsway Court, First Avenue  
HOVE East Sussex BN3 2LQ  
Tel [01273] 746 816 Fax [01273] 771 516

## Run, run, run

While Windows 95 users are gloating over their "Run" command on the Start Menu and "Open with..." from the mouse button, bear in mind that something similar is available in File Manager. With no file selected, choose "Run" from the "File" menu, and you can type in the name of any executable file (even a DOS program) and run it. With a program file selected, the name will appear in the box, highlighted. Move the cursor to the end with the "End" key, type a space,

and whatever command-line switches you want to specify or data file you want to load. The counterpart to this is to highlight a data file — say it's one of those annoying .TXT files that are too big for Notepad: choose "File/Run..." again, press "Home" to get the cursor to the beginning of the line and type "Write", plus a space. Hey presto! The outsize text file appears in Windows Write.



● With "File/Run..." you can use associated files in a different application

"Custom" rather than "Express" setup, do press F1 at the following screen to find out what all those settings mean. The "optimise for Windows" option in particular is a trifle misleading, as this actually increases the memory available for Windows DOS sessions while decreasing that available from naked DOS. You'll need to restart your PC twice (or rather, Memmaker does it for you). If all has gone well, Memmaker will have tried several hundred combinations of how and where to load each item (that's what all the numbers mean), and you should have considerably more free conventional memory — experimenting here retrieved 110Kb. Note that if you add or remove drivers and programs in CONFIG.SYS or AUTOEXEC.BAT you'll need to run Memmaker again.

Control Panel/International and make the change there — a bit of a nuisance. One curiosity of the keyboard layout settings is that although they are stored in SYSTEM.INI, you don't, as with most changes to this file, have to restart Windows for these to take effect.

And that, for a Windows column, is quite enough about DOS for now. It does help, however, to have some idea what Windows needs and doesn't need, and to realise it's not just DOS that benefits from as much base memory as possible. We'll have another look next month at how to pick and choose between different setups.

For a more streamlined approach to changing keyboard layout, try using Recorder. Start by getting the relevant files in place. Go to Control Panel/International and choose the new keyboard layout in the usual way. If this is the first time, you'll be prompted for an installation disk.

Having done this, change it back to British or whatever you normally use. Repeat these steps and you should find that instead of being prompted for a disk, you are asked if you want to use the current driver or a new one — click "Current". Making sure you're in your default layout, start Recorder from Program Manager.

### International rescue

Cosmopolitan Windows 95 users have a very neat utility for changing keyboard settings and character sets on the fly. DOS users can just type "keyb" followed by a two-letter code to instantly change the keyboard layout. Windows 3.1 users have the choice of either buying a multi-lingual word processor such as Accent, that can take this in its stride, or go to

From the "Options" menu ensure that "Minimize on use" and "Shortcut keys" are ticked. Then from the "Macro" menu choose "Record". Give the Macro a name — say "French keyboard". Check that Playback is to "Same Application", "Fast", with the "Shortcut keys enabled" checked, and "Continuous loop" unchecked. Set the "Record mouse" box to "Ignore" and give the macro a shortcut key — such as Ctrl+F12. Now you're ready to start. Click on "Record" and Recorder will shrink to an icon, leaving you back in Program Manager. Ignoring the quotes, type: "Alt+f" then "r"

which will bring up the "Run" dialogue box. In this, type



# Discover your software's potential. And your own.

Most of us use only a fraction of the capabilities of our software.

Leaving us with the uneasy feeling that we could be a lot more productive if we had the time and money (£300 a day for awayday courses!) to put in further training.

Which is where DiscoverWare comes in.

DiscoverWare is a multimedia interactive personal training series on CD-ROM, designed to help you learn in the most effective way possible: on your own PC, in your own time.

Using the dynamic interface of a "live-action" TV studio with full-motion video and sound, DiscoverWare makes the process of learning both exciting and enjoyable.

First, a TV presenter explains the format of the DiscoverWare Trainer. Second, experienced tutors lead you through each aspect of your software programme. Third, you carry out hands-on exercises using full-motion video animations - as though you were using the actual programme.

DiscoverWare comes in two versions: entry-level version for beginners for around £29.99 and DiscoverWare Pro for beginners and more experienced users for around £94.99.

The first Trainers in the series currently available are: Windows® 95, Windows 3.1x™, Word 6.0™, Excel 5.0™, Powerpoint 4.0™, Access 2.0™, Word Perfect 6.0™, Lotus 1-2-3 for Windows™.

Watch out for other trainers available at all good software suppliers and book-sellers or call our freephone number for details.

So unleash your software's potential. And your own.



**DiscoverWare™**  
Personal training for life

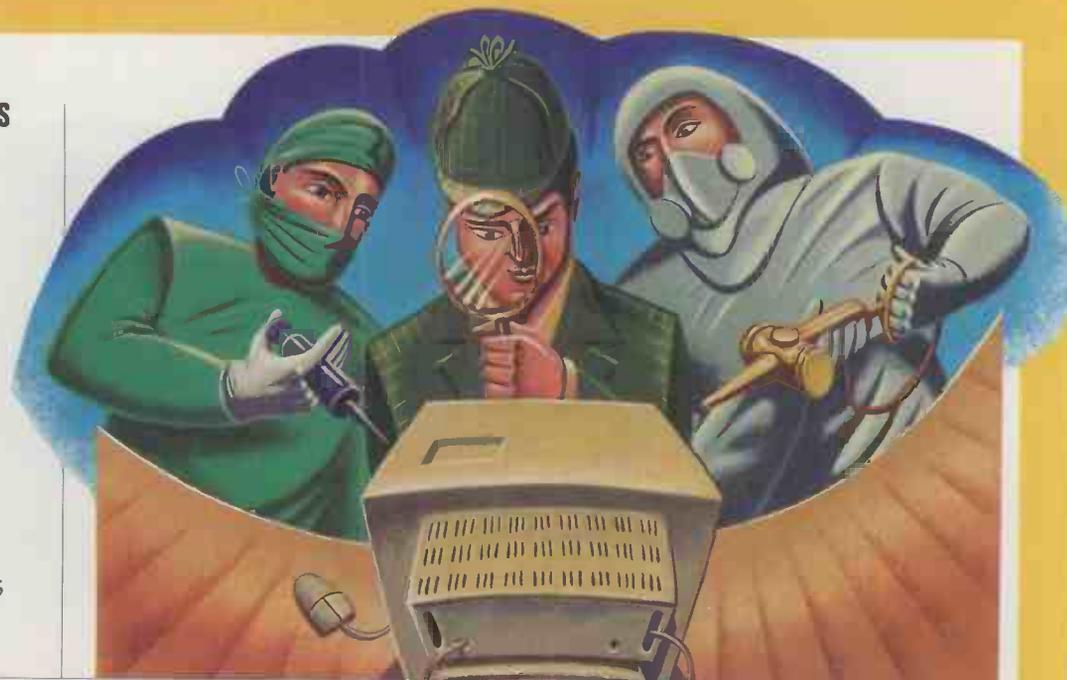
Call now on  
**0800 413078**

**YOU NEED NORTON ANTIVIRUS FOR WINDOWS 95.**

Windows 95 is a truly remarkable operating system.

But it has no built-in anti-virus protection. And while your current 16-bit anti-virus software won't run in Windows 95, thousands of existing viruses will.

You need a true anti-virus solution for Windows 95; Norton AntiVirus.



**IN WINDOWS 95 YOU'LL NEED TO PROTECT AGAINST, DETECT AND DESTROY EXISTING 16-BIT AND NEW 32-BIT VIRUSES.**

**NCSA CERTIFIED SO YOU CAN REST EASY.**

NCSA tests conclusively demonstrate that Norton AntiVirus for Windows 95 detects and destroys 100% of known viruses in circulation today\*. But more importantly, thanks to our unique virus detection technology, it



will provide continuous protection against new, unknown viruses by allowing you to spot any suspicious activity, no matter where it is lurking.

You can have all this ironclad protection with no disruption to your work.

Because Norton AntiVirus monitors file access and usage in the background, identifying viral activity long before it can do any damage or come to your attention.

**NORTON ANTI-VIRUS FOR WINDOWS 95**

**WINDOWS 95 COMPLIANT**  
*True 32-bit application. Supports long file names and Universal Naming Conventions.*

**AUTOMATIC BACKGROUND MONITORING**  
*Virtual device driver unobtrusively checks for viruses in the background. Ensures backups and files transferred are virus free.*

**FAST SCANNING**  
*Provides ironclad virus protection without affecting productivity. Scans even compressed files fast.*

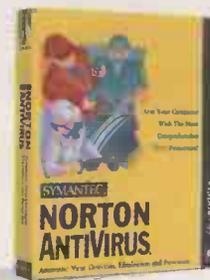
**EXCLUSIVE VIRUS SENSOR**  
*Provides continuous transparent protection against existing new, unknown viruses.*

**NCSA CERTIFIED**  
*Detects 100% of viruses found in circulation.*

**SIXTY DAY MONEY-BACK GUARANTEE.**

Why gamble on running Windows 95 without all the virus protection you can get?

Find out more about this exciting new product now - call 0800 526459.



Also available from Symantec for Windows 95 are Norton Navigator and Norton Utilities. Outside the UK, please call (0)1734 662969. \*Verified in independent tests conducted by NCSA and VSUM, July 1995.

**SYMANTEC.**

- To find out more about this exciting new product, call 0800 526459
- Or simply return the completed coupon
- Or fax it to 01734 662979



**TRADE-UP EDITION NOW ON SALE FOR JUST £29**  
Sixty day money-back guarantee

Name \_\_\_\_\_  
Job Title \_\_\_\_\_ Company \_\_\_\_\_  
Address \_\_\_\_\_  
Postcode \_\_\_\_\_  
Telephone \_\_\_\_\_ Fax \_\_\_\_\_

"control.exe main.cpl international" followed by the return key. This will save time when the macro is replayed, skipping the loading of all the Control Panel bits that you don't need. The International settings dialogue will appear, so type "Alt+k" to get to the Keyboard Layout section. Type the first letter of the language you want, and repeat until you see it in the box — you will find that French takes two f's as it comes after Finnish. Press return once to close the dialogue, and again to confirm that the current driver should be used. You can now pick up the mouse again, click on the Recorder icon and save the macro — note that you have to save the macro file as well. You should now be typing in tongues: if you've followed the French example, Q will have been replaced by A, W by Z, M shifted up to the row above and the punctuation will be all over the place.

Now comes the difficult bit. Using the same steps, record a second macro to change everything back. It's hard, because you have to record the macro in the "foreign" language — to save too much agony, the full stop on a French layout is shift+comma on a UK board. By the same token, running the "French" macro when you're already using that layout will grind to a halt, as Windows will be trying to interpret the wrong keystrokes. Similarly, if you want to use more than two layouts, then you'll need a pair of macros for each in order to touch base with the standard layout before loading a new one.

### PCW Contacts

Tim Nott can be contacted either by post c/o PCW or by email on [timn@cix.compulink.co.uk](mailto:timn@cix.compulink.co.uk)

## Ten Top Tips for Windows

### Wallpaper

Wallpaper uses up memory. An 800 x 600, 256-colour image takes nearly half a megabyte. Small tiled Images are far more economical.

### Clipboard

If you've been using the Clipboard to copy large chunks of text or graphics, free up memory by clearing it. Use the Clipboard Viewer's "Edit/Delete" command or save time by copying a single letter to the clipboard — it will replace the existing contents.

### Paintbrush

When pasting into Paintbrush, first make sure the "Image Attributes" are set large enough to accept the whole picture. If the visible work area is still smaller than the picture, zoom out first — that way you won't lose any of it.

### Cardfile

If you've got a modem attached to your PC you can use the Cardfile utility to dial phone numbers. Go to the "Card" menu and choose "Autodial" — you may need to click on the "Setup" button to set the port and dialling method the first time. If you haven't highlighted a phone number, the autodialler will pick the first thing it thinks is a phone number on the current card. It doesn't like spaces, so use hyphens instead.

### Screenshots

If you want to have a "Screenshot" — like the ones in PCW — for inclusion in documents, or just to produce some very confusing wallpaper, remember the PrintScreen key captures the entire screen to the clipboard, but Alt+PrintScreen just captures the current window or dialogue box.

### Recorder

You can't edit Recorder macros, but you can see the list of keystrokes and mouse movements, which may be useful for debugging. Highlight a macro, then hold down the Shift key while you select "Properties..." from the "Macro" menu.

### System Resources

Some applications gobble system resources and don't give them all back when shut down. If your system slows down as the day goes on, check the "Help/About" box in any Windows component. The only way to retrieve "leaked" resources is to re-start Windows.

### Icons

If icons are turning into black squares, or you get an "Insufficient memory" error when trying to move or create them, then the most likely cause is that your display is set to more than 256 colours. Yes, it's another Windows bug — the workaround is to keep fewer icons in each program group.

### Paintbrush

Having defined a cut-out with the scissors tool, dragging with the left mouse button makes the cut-out "transparent" — any background colour is left behind. Dragging with the right button copies the background as well...

### More Paintbrush

...and holding down the Control key while dragging copies, rather than moves, the selection.

## INKJET & LASER PRINTER SUPPLIES

### ★ INK JET REFILLS ★

Refill your cartridges with our NEW improved professionally designed KITS. High quality inks manufactured to BS 5750 with full instructions. **MOST PRINTERS CATERED FOR.** Many coloured inks available.



### ★ ORIGINAL SUPPLIES ★

Vectorjet now stocks a wide range of Inkjet and Laser consumables. **GREAT SAVINGS** ON COMPUTER PRODUCTS, CARTRIDGES, DISCS, etc.



### ★ RECYCLED CARTRIDGE SERVICE ★

**Inkjet and Laser.**  
High quality fully guaranteed.

Phone for our **FREE** catalogue



## Vectorjet Ltd

A MEMBER OF THE GUILD OF MASTER CRAFTSMEN



☎ 01763-273115

UK

FAX

01763-273383

Same day despatch with credit card orders

**Vectorjet Ltd, Freepost SG 447**  
Unit 29, Park Farm Industrial Estate  
Buntingford, Hertfordshire, SG9 9YA



## A voyage around OS/2

**In the first of a new series of regular columns Terence Green outlines OS/2. He explains what it is, why it deserves serious consideration, and whether you should Warp this way or that.**

There's a lot of confusion around as to what OS/2 is, and why it deserves consideration; much of it caused by the fact that most PC-based operating systems are still being designed on the fly. However, the day when a "How do I..." question about some work-related task (such as transferring a presentation between PCs in London and Cairo) doesn't drag the operating system into view as well, has yet to arrive.

To set the scene for my first column in *PCW* we'll take a short trip around OS/2. But initially a word about hardware because, as so many Windows 95 upgraders are discovering, all hardware is not created equal. Reliable hardware is crucial to a reliable operating system function. Inevitably, any large piece of software has bugs and if the hardware is flaky to start with, you're asking for trouble.

### Hardware matters

Operating systems are tricky customers. Having assessed several versions of DOS, Windows, Windows NT and OS/2 over the years, the main problem has to be with getting them to a state where you can begin to form opinions about their value as applications platforms.

Having to use IBM PC-compatible hardware doesn't help. Maybe PCI (peripheral component interconnect) and Plug & Play will resolve most of the hardware issues in due course. Perhaps the PowerPC, which has a more clearly-defined hardware specification, will



provide a viable alternative choice. By then we'll all be running 32-bit operating systems on 150MHz processors with 32Mb RAM, at a guess.

However, it has taken nearly 15 years for the IBM PC to progress from its insufficiently rigorous initial specification to PCI spec, and Plug & Play is in its infancy, so for now we are stuck with the haphazard PC.

That wasn't so bad when most of us started with DOS or Windows already running on our PCs. That's half the battle won. Problems may arise later but the basic system works. As users upgrade to Windows 95 now, many of us are finding (as did those who upgraded earlier to OS/2 or Windows NT) that hardware matters. Issues that DOS doesn't care

about, and Windows glosses over, come to the fore when any operating system attempts to resolve them.

Sound cards that use the same address for a MIDI port as an Adaptec SCSI card don't cause problems under DOS/Windows if you never use the MIDI port. But any operating system that plans to be more reliable than DOS/Windows needs to somehow resolve that conflict. So it's worth remembering that you can improve the reliability of any operating system by dealing with hardware conflicts. Unfortunately, the best way to do this with a standard PC is to make a list of all the IRQs (interrupt request lines), port addresses, and DMA (direct memory access) channels that your peripheral cards use. There's no middle path between this and buying an entirely Plug & Play system.

### What is OS/2?

OS/2 began in the early eighties as a Microsoft replacement for MSDOS. IBM got involved as a joint development partner and things went pear-shaped for a while until 1990 when OS/2 1.3 appeared.

By this time, the idea of OS/2 as a DOS replacement had long ago foundered, but OS/2 1.3 is a remarkably stable base for Microsoft LAN Manager and IBM LAN Server which, at the time, shared quite a lot of code. But by this time, Microsoft and IBM's relationship was on the rocks and Microsoft dropped OS/2 in order to concentrate on bringing out Windows NT (which it did in 1993).

Meanwhile, IBM wrestled with the successor to OS/2 1.3. Finally, in 1992, they shipped OS/2 2.0. It supported DOS, Windows, and OS/2 applications. The Windows bit was okay provided you didn't try anything too complicated. Nevertheless, it was quite an achievement when it worked at all.

### Wot, no apps?

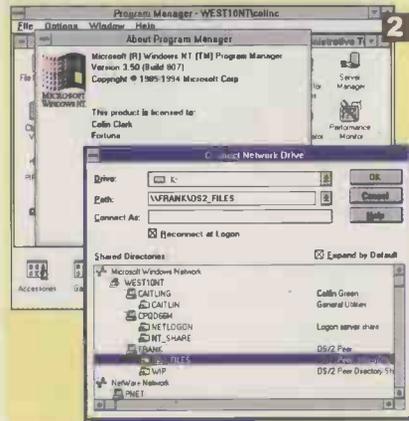
I must answer the question; "Why does OS/2 have no applications...?" Actually, there are lots, but there are two reasons why there aren't more: one is that most Windows applications run just fine on OS/2 Warp; the other is a developer issue.

Applications which exploit 32-bit operating systems aren't trivial creations. Both OS/2 and Windows NT have suffered from a lack of general applications to match the choice on Windows 3.1. Microsoft developed Windows 95 in part to drive the development of 32-bit applications for Windows NT. For nearly two years now we've known that Windows 95 was imminent. Developers had to keep their existing Windows 3.1 products competitive while developing new Windows 95 applications. OS/2 just didn't get a look in.

Now that Windows 95 is available it will be interesting to see how quickly Win95 applications appear that truly exploit the 32-bit sub-system. And if Windows 95 proves less reliable than OS/2, how soon will those applications be ported over to the other 32-bit desktop OS (OS/2 Warp) given that it is easier to port 32-bit applications between platforms than to port 16-bit applications to 32-bit?



**Fig 1 OS/2 Warp Red Pack runs Microsoft Windows**



**Fig 2 OS/2 Warp Connect Peer Services, in the Windows NT network browser**

**Warped or unWarped?**

Current products are known as "Warp with Win-OS/2" and "Warp without Win-OS/2" — which might give you an idea as to why people say IBM marketing is not a patch on Microsoft's. Within IBM they're known as Blue Box and Red Box, after the packaging. Blue Box with Win-OS/2 is preferable to the Red Box version, which is an upgrade for Windows users who can install it directly over their existing Windows, or Windows for Workgroups, with a minimum of fuss. The idea is that when these users upgrade, they move to the full-pack Blue Box version with Win-OS/2.

There were few OS/2 applications but the DOS multitasking worked rather well. OS/2 2.0 was a mix of 16-bit and 32-bit code, so IBM gradually reduced the 16-bit components until Warp shipped as a complete 32-bit system.

Initially, OS/2 shipped with the Win-OS/2 sub-system, a special version of Windows which was compiled to run under OS/2. IBM can do this because it owns derivative rights to Windows 3.1 code. Later, IBM shipped OS/2 for Windows which doesn't include Win-OS/2 because it can run Microsoft Windows 3.1 (after a little tweaking). The two versions; one with, and one without Win-OS/2, were carried through to Warp (also known as OS/2 version 3).

The most recent version of OS/2 Warp to ship is Warp Connect, mainly intended for business users because it includes a bunch of network connectivity options that enable OS/2 workstations to be clients in OS/2, Windows, and NetWare networks.

All OS/2 Warp versions ship with a large set of bundled applications in the Bonus Pack. Some, such as the Internet Access Kit, are rather good; some are "Lite" versions of nifty, full-featured software such as Faxworks; and others just have foolish names like IBM Works.

**PCW Contacts**

Terence Green can be contacted either by post c/o PCW, or by email to [tgreen@cix.compulink.co.uk](mailto:tgreen@cix.compulink.co.uk)

**Warp Server**

At times, it has been hard to decipher IBM's approach to OS/2 — sometimes it seems as if they're aiming it at home users, and other times at large corporates. The next Warp variant to ship will be Warp Server which is going to be pitched against Windows NT and Microsoft Back Office. This seems to suggest that corporate users are Warp's ambition but that's the wrong way to look at the positioning of Warp. The point of Warp Server is that it is an applications server. This is much the same tack that Microsoft is taking with Office 95 and Back Office; focusing on the applications platform rather than the operating system.

So it isn't important whether Warp is a home user or corporate operating system. What is important is the applications you run on it. If you want reliable Internet access software you can find it in Warp's Internet Access Kit (IAK). If you want to mount an applications server on a network, you can look to Warp Server. The same operating system is behind both. Warp and the IAK will run on an 8Mb 486 at home, and Warp Server on a dual Pentium SMP box with 32Mb of RAM in the office. Both home and business-critical applications run on Warp.

**OS/2 SOFTWARE SPECIAL OFFERS**

All prices subject to VAT +p&g

**DeSCRIBE Word Processor**  
This is the most technically advanced OS/2 word processor available.  
This price is unbeatable  
**ONLY £45**

**HOBBS CD-ROM**  
With 650 MB of OS/2 information, the Hobbes archived CD ROM is a must for any dedicated OS/2 user.  
**ONLY £16**

**GALACTIC CIVILISATIONS**  
A fantastic 32-BIT game. The extremely playable and exciting game that will take you beyond the stars.  
**ONLY £39.95**  
reduced from £49.95

Contact us for your **FREE** catalogue - over 1000 OS/2 products

OneStop Software  
Maggs House  
78 Queens Road  
Clifton, Bristol, BS8 1QX  
Tel: (0117) 985 3370  
Fax: (0117) 985 3373

**ONLINE NOW LIMITED**

Why delay? download today!

**Access the "USER FRIENDLY" Bulletin Board!**

- \* Over 600 MB of Software Available. Wide range of applications.
- \* Much of the Software offered by the BEST libraries in the UK.
- \* No membership fees, subscription charges or direct debits.
- \* No download restrictions for the first time or frequent users.

**True multiline facilities**  
**0839 661188 and 0839 661199**  
**Log on at up to 9600 bps, 8N1**

Telephone charges 39p/min cheap rate 49p/min all other times. Online Now Ltd, Bridge House, Bridge Street, W-on-T, Sy, KT12 1AJ For more information phone 0839 669977 (recorded)

**PUT YOUR SOFTWARE INTO YOUR LIFE**

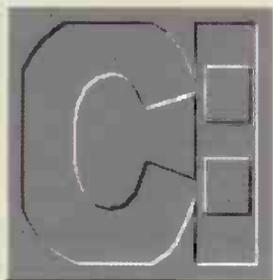
- LEATHER BINDERS
- ALL SIZES
- A-4 / ORG-FILESIZE
- A-5 OR COMPACT
- PREDRILLED PAPER
- MULTIHOLE PUNCHES
- LOW-LOW PRICES

**USE Lotus Organiser - Sidekick - all program printouts in our Quality, Leather Ring Binders**

Descriptions and Recommendations of all binder sizes and ways to use with your computer. Choose the right system for you.

If you now use Organiser binder we offer predrilled paper - punches, and refills.

**We supply many of the U.K.'s best managed co.'s - FAX for catalogue 0181-871-0084 - Tel 870-9152**  
TVC Sales - Corp. qty discounts given



## Start it up...

**Windows 95 doesn't just affect Windows — Simon Collin suggests ways in which you can use Windows to get the best results from DOS, too.**

Windows 95 has overshadowed nearly every other computing event this summer. In past months I've been writing about how Windows 95 will change the way you see and use DOS. Now it's arrived, I can show you how to tune it to make the most of your DOS applications.

One of the confusing aspects of Windows 95 is that, although it's a self-contained operating system, it seems to boot up under good old DOS and then switch to Windows. Several readers have asked whether this is correct and how Windows now processes the old CONFIG.SYS and AUTOEXEC.BAT files.

In many cases, Windows 95 completely eliminates the need for CONFIG.SYS and AUTOEXEC.BAT. In fact, it also knocks COMMAND.COM on the head, freeing up more conventional memory. Windows still uses CONFIG.SYS and AUTOEXEC.BAT to load any non-native drivers or applications — typically a real-mode driver, such as an old CD-ROM or sound-card driver.

When you install Windows 95, it will check what's in the CONFIG and AUTOEXEC files and will treat the commands, in most cases, as if they were native Windows and load them automatically. For example, it will load system drivers like HIMEM.SYS and IFSHLP.SYS directly from Windows. It's the third-party drivers that might be in your CONFIG files that cause Windows to have to switch back to real mode and execute the COMMAND.COM DOS interpreter. COMMAND.COM is used to parse the lines in the two files and act on their instructions.

If your PC doesn't have extra drivers, there's no need for you to keep CONFIG.SYS and AUTOEXEC.BAT. If you do have these two files on your PC, you're wasting RAM since Windows has to

load COMMAND.COM to deal with them. To free an extra 8Kb of conventional memory, look in your CONFIG.SYS and AUTOEXEC.BAT files to see whether a real-mode driver is needed; if not, you can delete these files and save some memory.

Before you do this, make sure you have a working Windows start-up disk (that was created during your setup) or create a system floppy disk. Once you have your floppy start-up disk in hand, start by renaming the two files to CONFIG.OLD and AUTOEXEC.OLD and restart your PC to see what difference it makes.

If your PC starts up as normal, you had no real-mode drivers in these files and you've saved 8Kb of precious memory. If you do have problems, insert the startup disk and reboot, then rename the .OLD files to their original CONFIG.SYS and AUTOEXEC.BAT titles.

### Multiple configurations

One excellent feature of Windows 95 is its ability to create custom CONFIG.SYS and AUTOEXEC.BAT settings for any DOS session running under Windows.

For example, if you have a particular peripheral that needs a special driver, but you only use it from a DOS application (such as a card to link to a mainframe, a voice synthesiser or a data acquisition adaptor), or if you need particular PATH settings or environment variables for an application, you can use Windows to isolate these requirements from everything else in the system.

If you want to set up a totally different CONFIG.SYS file to provide more BUFFER or FILES statements for a particular DOS application, the simplest way is to create a unique DOS session with its own CONFIG.SYS file. This will be executed by Windows when the DOS



session is started.

The route to this solution is to modify the Properties of the DOS session. From the Windows Desktop, start an MSDOS session from the Start button. Alternatively, create a shortcut to a DOS session by moving onto the Desktop, clicking on the right-hand mouse button and selecting Create Shortcut.

### Shortcut

Type in COMMAND.COM as the command line when prompted. This creates a shortcut icon to start the DOS session that you can access directly from the Desktop.

Highlight the MSDOS shortcut icon and click on the right-hand mouse button to view its Properties screen. From here, click on the Program tag and you'll see the basic details about the MSDOS shell. Click on the Advanced button. You are now given the option to define how the MSDOS session is started: it can be automatically set up by Windows or manually defined by you. Select the third radio button and you're given further options to define the AUTOEXEC.BAT and CONFIG.SYS files for this session.

In the two scroll boxes at the bottom of the window are the existing contents of the CONFIG and AUTOEXEC files that Windows is using as a default. If you want to change these to customise the settings (for new BUFFER and FILES statements) just edit the contents in the scroll box. You've now got a totally independent MSDOS session that will only load any memory-hungry driver, or statements, when you start it.

### PCW Contacts

Write care of PCW or via email to  
[scollin@cix.compulink.co.uk](mailto:scollin@cix.compulink.co.uk) or  
 CompuServe 72241,601

# Professional Quality Workstations

## ACT NOW! SAVE £££'S

HURRY! LIMITED PERIOD ONLY

### PC HOLDALL

From a Special Offer £69  
Choice of 3 sizes in 4 finishes

WAS £119  
SPECIAL OFFER PRICE £99  
LIMITED PERIOD ONLY



2 SHELF HEIGHT OPTIONS

Above: PC Holdall 900 (36") in Mid Teak.

Inset: PC Holdall 600 (24") in Dark Mahogany with extension and mouse board, and PC Holdall 750 (30") in Soft Grey.



Choose from three sizes in four finishes to create your ideal workstation. Plenty of knee-room and a comfortable keying posture are ensured by the separate keyboard/mouse shelf, which glides neatly away on its smooth roller runners.

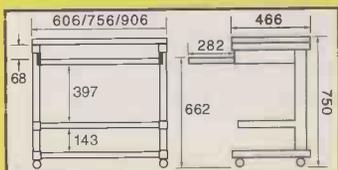
The printer shelf (optionally 75mm higher than standard position shown\*) is also on roller runners for easy access, and there is a spacious stationery shelf below.

Space saving robust folding extensions (306mm wide) and a sliding mouse board can be added either side to tailor your workstation precisely to your needs.

There is thick (3mm) rounded safety edging on the full 18mm thick worksurfaces to eliminate painful sharp corners, and braked twin-wheel castors are standard.

Every detail has been designed to save you space, time and hassle.

But the best news of all is that by buying direct you can have a professional quality workstation for as little as £69!



\*Only supplied if requested when ordering

Model	Code	RRP	Offer Price	inc VAT
PC Holdall 600†	H60	£84	£69	£81.08
PC Holdall 750	H75	£104	£89	£104.58
PC Holdall 900	H90	£119	£99	£116.33
Extension	HX	£15	£13	£15.28
Mouse Board	MB	£15	£13	£15.28

†INCLUDES FREE MOUSE BOARD

How is it that you can buy a quality workstation direct from Budget Workstations for as little as £69? The secret is that we sell direct to you the user, cutting out middlemen and retailers adding their 40% or 50% mark-ups.

### Fast Delivery, Wide Choice

We manufacture a wide range of computer workstations, every one in a choice of no less than four colour finishes.

And when you order from us, we'll deliver to your door fast from stock held at our factory. That's a promise.

### The Triple Guarantee

Our triple guarantee of quality lets you buy with confidence.

<p><b>30 DAYS MONEY BACK GUARANTEE</b></p> <p>No hassle refund if you return goods complete and as new within 30 days</p>	<p>BS EN ISO 9002:1994 APPROVED BY BVQI</p> <p>Our British Standards Quality Certification virtually guarantees you won't need our guarantees</p>	<p><b>12 MONTHS NO QUIBBLE GUARANTEE</b></p> <p>Any fault will be promptly and courteously rectified at our expense</p>
---	---	---

### Experience Counts

For over a decade we have made nothing but workstations, and our experience shows in features like strong 18mm worktops with extra thick 3mm edging with a rounded profile for comfort and safety.

Plus easy-glide runners for sliding shelves, braked twin-wheel castors, and rigid tubular steel frames.

It's the difference you only get at Budget.

### Act Now

Why not get your computer organised right now by calling 0181-871 4322 to place your order.

You could be computing in comfort tomorrow. Hurry and you can take advantage of our special offer prices.

### Choose your colour



Colour reproduction is not exact. Goods are packed ready for easy assembly. UK mainland carriage charges exclude certain postcodes. Workstations are suitable for equipment shown, but no claim to universal suitability is made. Our Standard Terms of Sale (available on request) apply to all orders. Special prices are for payment with order only.

### HOW TO ORDER

■ BY PHONE ■ BY MAIL ■ IN PERSON

Delivery to your Door Carriage Costs: One large item plus any attachable accessories: £10+VAT (£11.75 inc VAT). Additional large items: £7+VAT (£8.23 inc VAT) each

### Budget Workstations

Units 13-14, Glenville Mews Industrial Estate, Kimber Road, London SW18 4NJ

Call now (24 hours) to order

**0181-871 4322**

Fax: 0181-870 7986



Personal Callers Welcome - Monday-Friday 9am-5pm



# Linux on the hoof

**Chris Bidmead managed to load Linux onto his trusty portable so he could take it everywhere with him. Here, he relates his trials, tribulations and triumphs.**

My mate Marcus said "Get a life" when I told him I was taking Linux on holiday. He can talk: he's just bought a Gateway 2000 120MHz Pentium machine with 2Gb disk space and a sub-woofer for making Doom sound more dangerous. And all he runs on it is Windows 16-bit. I ask you; is that a life?

I only told him because I was proud to have got Linux onto Tonto, my trusty portable. Marcus has Linux, too, but he runs it on an old 386 machine (where, unlike Windows, it gets by just fine).

A good conversationalist is witty and wise; a *really good* conversationalist brings out the best in others so that *they* feel witty and wise. In this sense, Linux is a brilliant conversationalist because the exercise of getting it across to Tonto has left me feeling very smart indeed, although really of course I'm only piggybacking on the shoulders of the giants who built (and who are continuing to build) the thing.

Caldera, the Linux in question, comes on a CD-ROM. Tonto doesn't have a CD-ROM drive, and there isn't even a SCSI interface to hang one on. The Caldera manual says you can install the operating system over a network: you make a boot diskette and a root diskette in the usual way, and then evoke NFS (the Network File System) to get the thing across from a CD-ROM installed on another machine running Caldera.

The other machine was standing by, but how to connect to it? Although Tonto takes SCSI or network PCMCIA cards I didn't have any handy and there were only a few hours to go before the taxi to the airport. I dug out an old DLink Pocket

Ethernet Adaptor — the kind you screw onto the parallel port. I now had the makings of a network machine.

The preview version of Caldera comes with a selection of ready-built kernels, and there's a map in the 125-page Getting Started booklet that tells you which one to use for the combination of network adaptor, SCSI card and CD-ROM device you're using. There isn't a pre-built kernel for every combination: each kernel contains multiple drivers and sniffer software to home in on your particular hardware. This approach avoids tons of unnecessary drivers being included in your particular kernel but will still leave some redundancy. Linux doesn't (as yet) offer full support for dynamic driver loading.

## Recompilation

Alas, the map didn't mention the old DLink adaptor. I hoped it might be in there anyway but when I tried the pre-cooked kernel in the "Other Brand not listed here" category, it wasn't recognised. There was nothing for it but to build my own kernel. It's a condition of the Linux licence (and fundamental to its operation as well as its philosophy) that distributions come with their own source code. To cook up your own kernel you recompile the source — all 13Mb of it.

If you're new to Linux this might sound a formidable task. And yes, it is, but not if you follow the footsteps of those giants. They've made recompilation easy by writing scripts that can be read by "make", the utility that controls compilation. No more about "make" now; suffice it to say that I simply read the instructions in the

kernel "How To" document, followed those big footsteps and made a few very simple yes/no decisions *en route*.

## New kernel

About an hour later I ended up with a new kernel image called zImage (the "z" is a reminder that it's compressed). Compressed is the standard format for Linux kernels these days — "lilo", the boot loader, is primed to deal with these automatically.

Note that zImage is an image of the kernel — unlike the boot images on the Caldera CD, which are images of the whole floppy you use to boot. It's important to be clear about this if you're substituting a home-made kernel of your own. And don't try using "rawrite" to put zImage onto a floppy in the same way that you initially created the boot floppy.

There are a couple of ways of getting your new kernel onto a boot disk. The simplest is probably to create a boot floppy of some kind (I used the dud one I had already tried) and substitute your new zImage for the file called "vmlinuz" already on the floppy. There should be enough room on the floppy, so all you have to do is rename "vmlinuz" — Unix thinks of this as a "move" operation, so the command is something like

```
mv vmlinuz vmlinuz.old
```

— and copy zImage over to the floppy, giving it the new name "vmlinuz". If you've mounted your floppy on /mnt/floppy, for the Caldera distribution the appropriate command to do this will be

```
cp /usr/src/linux/arc/i386/boot/zImage /mnt/floppy/vmlinuz
```

Linux copes with a whole variety of file systems. Its standard file system is called "Ext2" but the Caldera boot floppies use the cheap and cheerful Minix file system. When you boot with this diskette it first invokes lilo (the Linux boot manager) which will still be looking for the old kernel (it finds it via a disk map, not through the file system, so the change of name won't fool it). You need to re-run lilo to change the disk map. Ordinarily, if you're installing a new kernel on your base system, all you need to do to fix the map is run /sbin/lilo. But on this occasion we want to fix up lilo on the floppy.

Even if you're not a Linux fan it's worth knowing about lilo because it can boot a number of other operating systems as well, and is more flexible than OS/2's Boot Manager and more economical with partitions. We'll be investigating lilo in the coming months, but let's concentrate on this particular problem for now. In theory

we could close everything down, boot from the floppy and run lilo from there, but it's much simpler to evoke our hard disk-based lilo and ask it to regard the floppy as the root file system on which we want to work. lilo accepts a parameter

```
-r <newroot>
```

which allows us to do this, so we can fix up the map with the command

```
/sbin/lilo -r /mnt/floppy
```

This new boot disk, in conjunction with the standard root disk, was all that Tonto needed to get going. Initially, it still didn't recognise the Pocket Ethernet adaptor, but this was easily fixed by reconfiguring the parallel port as LPT2. A second minor problem (translate this as "a hitch that held me back for the best part of an hour") was that the giant who wrote the Caldera installation script hadn't taken on board an official change in the name of the Pocket Ethernet Adaptor port; from /dev/dl0 to /dev/eth0. The simplest way around this is to lie to the installation script and pretend that you're using an internal rather than an external adaptor.

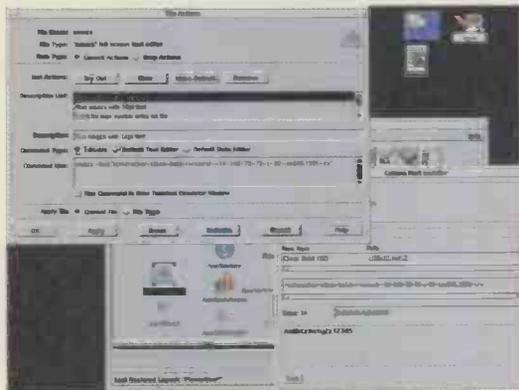
**Hair today**

Hooray! I now had a small Linux system connected to the network. The next trick was to use NFS to hook it to the CD-ROM running on the desktop Caldera machine. Like much of Linux, this is one of those things that sounds impossibly hairy yet

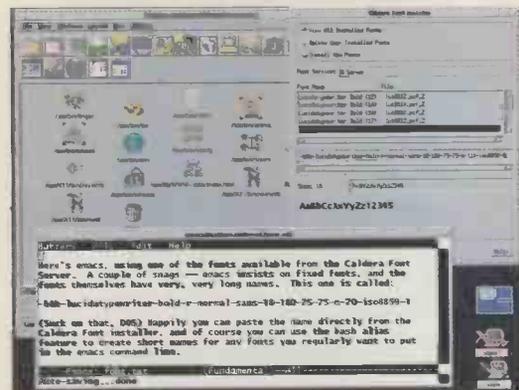
turns out to be astonishingly simple. As long as the appropriate NFS daemons are running on both machines (which by default they are) there are only two things to be done. Firstly, "export" the CD-ROM from the desktop machine. You do this by naming the appropriate directory (in my case, /mnt/cdrom) in a file called exports that lives in /etc. In the case of a first-time NFS installation you may have to create this file (any text editor will do). Then you simply use the standard mount command to attach this directory to a mount point you create on the other machine (my Tonto) on the other side of the network. In this case the file type will be -t nfs and the source device will include the network name of the desktop machine; caldera:/mnt/cdrom. In fact, because this way of writing the source device name is unique to NFS and therefore implies it, you don't need the -t parameter under Linux. Actually it is even simpler because the Caldera install script acknowledges that you might need to do an NFS install, and automates it all for you. I only got to know about the weird science underpinning all this because of the bug-ettes that needed sorting out in this preview version.

**Foreign climes**

I ran the rest of Caldera's Express install, which loads and configures everything you need to get going, including the X Window



**Fig 1** An alternative way of evoking emacs with the required font is to use Looking Glass's ability to attach command lines to icons. Unfortunately the dialogue box where you set this up refuses to be a target for cut and paste, so the whole tedious font name must be inserted by hand



**Fig 2** The Caldera font server can hand out Speedo, Adobe Type 1 and TrueType fonts — one of the key features of Caldera I didn't get to play with on my X-less holiday machine

**CD-ROM's UNIX and DOS**

**Motif 2.0 (Linux and BSD)**

We are specialists in UNIX (and DOS) Freeware with a wealth of expertise, let us help you. Free Technical Support. Call the specialists!

**LINUX FT**

- UNIX V Clone for PCs 3486 will run directly from the CD and/or hard disk. With X windows, tel, expect, ghostscript, TCP/IP, client and server NFS, C++, on-line doc'n Full source. £23.50
  - LINUX DEVELOPER Resource-Call for details £17.50
  - Standards CD US & International Standards, RFCs, ITUS, ISO X, ISDN, Sys 7, Posix, modem, API, SCSI, Windows etc £23.50
  - BDS 4.4 Lite: 386BSD, NetBSD, FreeBSD (incl X Windows, TCP/IP, client server NFS) £23.50
  - Internet Tools CD: Net tools, Util's, daemons (Inetd, ftpd), Crynwr, SNMP (PC) TCP/IP, SLIP, PPP, routing & monitoring, mailers (mime, popper, imap) and more £23.50
  - Source Code CD: Net/2 (4.3BSD), InterViews, MACH, GNU, X11R5 (base), DOS GNU C++, perl £23.50
  - USENET CD: Archives from many groups eg: comp. sources (UNIX, PC's, AMIGA etc) £18.95
  - Prime Time Freeware: vast range of languages, Util's, Perl, Tex, AI O'S, COMMS etc etc than we can list from £15.00
- New! Slnet and Cica windows archives only from us! Call for details. For further details contact the specialists:

**Lasermoon Ltd,**

The Forge, Fareham Road, Wickham, Hants PO17 5DE England

All prices ex P&P and VAT. Educational/Student discount.

Phone: +44 (0) 1329 834944 Fax: +44 (0) 1329 834955  
 Support: 01329 834430 info@lasermoon.co.uk

**HARD DISKS**



**MICROPOLIS**

2.0 GB	£607
4.3 GB AV	£875
9.1 GB AV	£1599

**MEMORY**

**72 Pin SIMMs**

- 4 MB 32bit £89
- 4 MB 36bit £99
- 8 MB 32bit £189
- 8 MB 36bit £199



EDO Memory - £phone

Price exclusive of VAT & delivery

**ALPHA BUSINESS COMPUTERS**  
 01734 758808

**image/text scanning**



**Wise Imaging**  
 image/text scanning services

51 Hoddesdon Road  
 Stanstead Abbots  
 Ware, Hertfordshire  
 SG12 8EJ  
 Tel: 01920 870 905  
 Fax: 01920 871 337

We offer a professional prompt, and low cost answer to all your image/text (OCR) scanning needs in both colour and B&W. Photographs, signatures, logos, clipart, drawings and text output in any format are our speciality. Aimed squarely at the business user or individual our scans can help you to enhance your business stationery, presentations, DTP work or advertising material. Customer help and friendly advice is always available and customer satisfaction is given utmost priority. Call or write now for further details!

System. Because Tonto has a double-scan LCD screen I wasn't surprised that the automated X configuration came unstuck and left me with a text screen full of error messages instead of the colourful windowed display. I knew (well, I thought I knew) that I now had everything I needed on board Tonto and could work out the X configuration later.

Alas, I was wrong. It was only when I got to foreign climes that I discovered that the X server I'd installed by default was the wrong one, and the one I needed was still back home on the Caldera CD. An Internet connection could have fixed this in a jiffy but the holiday home didn't even have a phone. Result: my explorations of Caldera were limited to a character interface.

The bad news is that it turns out there isn't really very much to learn about Caldera from this viewpoint because, apart from the NetWare client software, the added Caldera features like the Looking Glass desktop (Fig 1), the Font Server (Fig 2), the Icon Editor and the

### A line about Linux

Here's part of a missive from Mark Jessop (m-jessop@dircon.co.uk) that came in just as I was putting the finishing touches to this month's effort: "Dear Chris, may I start by saying how good your Hands On section is; it's one of the first sections of the magazine I turn to."

Mark goes on to concur with what I wrote a couple of months ago about Linux support: "The way I see it, Linux is all about having a go yourself and it rather defeats the object to start screaming for support the minute something doesn't quite work as it should, or when you mess it up. You can't really expect vast amounts of free support on a product that is essentially free."

Mark reckons that: "Most of the fun is in learning, and the satisfaction gained from making the thing work. I was under the impression that this was why Linux was created in the first place."

Of course that's true of Unix too — it started out as a very humble platform for Ken Thompson's Space Invaders game. But like Unix, Linux has grown up. These days it's pretty much a professional operating system; witness the Caldera project.

● Complimentary correspondence about this column continues to arrive at a steady pace, so I must be doing something right — at least I'm getting better at responding promptly. Sorry I haven't the space here to thank you all by name.

## PD — Phase Change Dual Drive

Add an extra parameter to the AHA15XX device driver so it can handle logical unit numbers (LUNs) and a new DEVICE=OPTICAL.SYS line, and the job's done.

I was roundly impressed with OS/2's ability to cope with the new PD drive that turned up for review. The Plasmon PD 2000 is a curious hybrid: a standard quad-speed CD-ROM drive that also takes 650Mb read/write optical cartridges. I don't normally rave about hardware, but this is a handy SCSI peripheral that you'll probably see a lot of during the coming year or so.

Everybody needs a CD-ROM drive these days and everyone has always needed more storage space. The PD-2000 fits the bill on both counts and unlike previous read/write opticals it isn't frighteningly expensive: street price is around £550 and the cartridges cost about £35 each.

One of the supposed advantages of being a computer journalist is the steady parade of manufacturers touting their wares in front of you — this may sound good but the crunch comes when you ask: "And what operating systems does it work with?" At which point the product manager will usually look at you as if you'd accused him of beating his wife: "Windows," he says. "And?..." you ask encouragingly. The product manager shakes his head — you're obviously too weird for further consideration.

Not so with the new Plasmon drive. A driver for OS/2 is included along with all the usual DOS and Windows utilities. Actually it's a generic IBM optical drive driver but it works fine, giving you a pair of drives; one for the CD-ROM and another for the phase change optical drive.

They both use the same tray and laser but OS/2 handles the changes automatically, as long as you don't jump in and try to access a drive before it has run up to speed. A pair of LEDs on the front panel helps you to track this: the busy light flashes while the new disk or cartridge is settling in, and the PD/CD light shows orange or green according to the media loaded and hence the drive letter you'll be

accessing. It would be nice if the operating system could block access to whichever drive happens to be invalid but the generic driver isn't capable of such refinements. The other catch is that it only handles FAT (file allocation table) formatting, not HPFS (high performance filing system).

The PD-2000 also works with a Mac but I was more interested in seeing what Linux would make of it. Because it's SCSI I was moderately hopeful — the various Linux docs breezily state: "All SCSI-based drives should work if the controller is supported." I guessed that Linux would be able to handle the PD-2000 as a SCSI CD-ROM but would be baffled by the optical read/write side of things. But when I swapped out my faithful old NEC CD-38 attached to the Caldera machine and installed the PD-2000, this assumption turned out to be upside down.

I created a mount point called PD in the /mnt directory, and the command `mount -t msdos /dev/sda /mnt/PD` gave me 650Mb of instant new read/write disk space. It's somewhat slower than a hard disk drive (categorising it as secondary storage) but is actually faster than most of the hard disks among which I spent my early computing years, and perfectly usable as a primary drive if you're pushed. Don't mix this up with the older magneto-optical drives that need a separate turn to erase each track before they can write to it again. Phase-change writes a lot faster because it can overlay old data immediately.

The reason I haven't managed to get it working as a CD drive could simply be that I might just need to recompile the kernel for a Panasonic/Matsushita device. The problem will be more complicated if the SCSI hard drive doesn't know how to give way to a second logical unit on the same SCSI address.

But the joy of Linux is that the source code is all there to be hacked if a problem like this arises. Unfortunately, the joy of Bidmead is that he's a hopeless C programmer. Or perhaps *hopeful* C programmer might be more accurate. Anyway, one way or another I'm fairly optimistic about sorting this out and I will report back to you in next month's column.

Control Panel, are all X-based. But if you don't know much about Linux (and I'm still close to being a raw beginner) there's tons to be learnt using a simple text screen. As I discovered, Linux, like other modern Unixes, looks very pretty but the real power is under the hood.

### PCW Contacts

Chris Bidmead is a consultant and commentator on advanced technology. He can be contacted at [bidmead@cix.compulink.co.uk](mailto:bidmead@cix.compulink.co.uk)

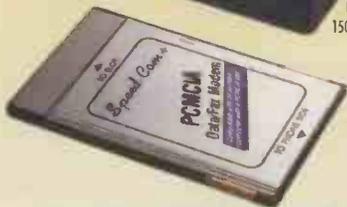


# VOICE, FAX & DATA MODEMS

**FREE** Compuserve membership +  
**£10 FREE** usage with all modems



ULTRA COMPACT  
150mm x 115mm x 30mm



**ORION**  
TECHNOLOGY LTD

Tel: **01252 838393**

Fax: **01252 834881**

37 Kingsmead, Frimley Green, Surrey, GU16 6LX

## SPEED COM PLUS

14400 data/14400 fax/voice

### ORION INTERNAL

£129 + VAT & DELIVERY

### ORION EXTERNAL

£139 + VAT & DELIVERY

### ORION PCMCIA

£169 + VAT & DELIVERY

## SPEED COM PRO

28800 data/14400 fax

### ORION INTERNAL

£129 + VAT & DELIVERY

### ORION EXTERNAL

£139 + VAT & DELIVERY

### ORION PCMCIA

£169 + VAT & DELIVERY

### COMBO PCMCIA CARD

14400 Data/Fax + Ethernet £249 + VAT & DELIVERY

28800 Data/Fax + Ethernet £329 + VAT & DELIVERY

All modems supplied with CHEYENNE'S Award winning BITWARE software. Total integration of all your communications, capable of auto-detecting Voice, Fax or Data calls, all within one software package. Features include: Unlimited number of voice mailboxes (Voice modems only), Fax-on-Demand, Fax Back, Voice-on-Demand, E-mail integration, pager notification, Macros (short-cuts for Word, Word Perfect, Ami Pro etc.), Sound card integration, create your own BBS, remote access, Windows '95 compatible, plus much more.

Modems are complete packages designed for UK use i.e. full 4 wire working (handset rings, PABX recall and power failure ringing). Speed Com Plus and Pro are BZT not BABT approved.

## ESSENTIAL APPLICATION TOOLS

### Doc-To-Help®

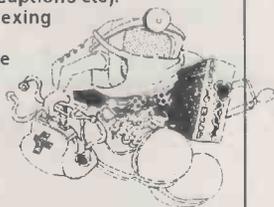
from WexTech

**SINGLE-SOURCE DOCUMENTATION AND HELP AUTHORIZING SYSTEM**

Create printed documents and Windows Online Help simultaneously with Doc-To-Help's single-source documentation system

From rough layout to final printout, from the first hypertext link to custom installation of the finished Help file, Doc-To-Help offers tools to speed and facilitate every aspect of document Help authoring. Doc-To-Help customizes Microsoft Word for Windows to create a graphical authoring environment that allows simultaneous creation of printed documents and Online help.

- Customizable, professionally-formatted document templates.
- Multiple file support.
- Automatic formatting options (for screen shots, captions etc).
- A powerful indexing utility.
- Simplified table creation and formatting.
- Easy cross-referencing within the document.



### DemoSHIELD™

from Stirling Technologies Inc

**VISUAL DEVELOPMENT TOOL FOR INTERACTIVE APPLICATION DEMOS AND TUTORIALS**

DemoSHIELD is for anyone who wants to create:

- Business Presentations
- Computer-Based Training
  - Software Demos
- Help Wizards • Hypertext
- Prototypes • Tutorials
- Multi-media Resumes
- Slide Shows • Story Boards

DemoSHIELD consists of several VISUAL tools to assist in visual planning, creating and testing a demo or tutorial. Absolutely NO knowledge of C or any other programming language is needed. It is all point and click. It is totally VISUAL! You can:

- Make things happen automatically in a demo or wait for the user to interact.
  - Create a fully interactive demo.
  - Show a sequence of scenes to some and not to others
  - Create tutorials that track performance. Include the standard branching techniques of computer-based instruction.
  - Create a demo to teach or advertise a software application.
- DemoSHIELD for Windows is quick and easy to learn and includes ten extensive demonstration examples.

### InstallSHIELD™

from Stirling Technologies Inc

**SHOULDN'T YOU BE USING THE INSTALLATION PROGRAM USED IN THE WORLD'S LEADING APPLICATIONS?**

**NEW VERSION**  
**InstallSHIELD3 International**

First impressions last!  
Use InstallSHIELD to create a bullet proof installation system for your application.

- Quickly create industry standard, bulletproof, professional installations.
- InstallSHIELD Setup Wizard guides your users step-by-step through the installation of your application.
- Automatically create folders, short-cuts and program items.
- Complete control over the flow and logic of your application.
- Integrated unInstallSHIELD to provide automatic uninstall.
- Available for MS Windows, Windows 95, Windows NT and OS/2.

All Trademarks Acknowledged

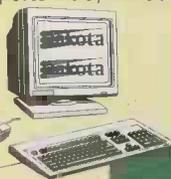
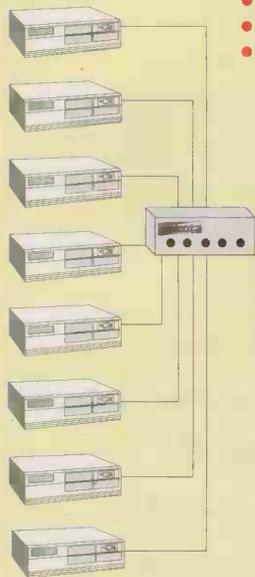
**SYSTEMSTAR**  
SOFTTOOLS LIMITED

4A BROCKET ROAD WELWYN GARDEN CITY AL8 7TY  
TELEPHONE: (01707) 278300 FACSIMILE: (01707) 268471

## KEYBOARD, MONITOR & MOUSE SWITCHES

Our Keyboard, Monitor & Mouse switches control multiple computers with **1 Keyboard, Monitor & Mouse**

- 2, 4, 8 or 12 Computers controlled from 1 Keyboard, Monitor and/or Mouse
- VGA and SVGA Compatible (Up to 1280 x 1024)
- Works with AT/XT & PS/2 Keyboards
- Supports DOS, Windows 3.x and Windows 95



**2 Device Option** £39  
2 Computers to 1 Keyboard, Monitor & Mouse

**4 Device Option** £45  
4 Computers to 1 Keyboard, Monitor & Mouse

**12 Device Option** £299  
12 Computers to 1 Keyboard, Monitor & Mouse

**New Low Prices**

**2 Device Option** £25  
2 Computers to 1 Keyboard & Monitor

**4 Device Option** £40  
4 Computers to 1 Keyboard & Monitor

**8 Device Option** £179  
8 Computers to 1 Keyboard & Monitor

**12 Device Option** £199  
12 Computers to 1 Keyboard & Monitor

## KEYBOARD, MONITOR & MOUSE - AUTOMATIC BOOTUP

The ServeView automatic switch is the ultimate in computer switching devices. Fully expandable, it allows for **keyboard & mouse emulation during boot-up** on AT or PS/2 computers. A must for anyone where reliability is of prime importance.

- 2, 4, 8, 12 or 16 Computers controlled from 1 Keyboard, Monitor and Mouse
- VGA, SVGA & EGA Compatible (Up to 1280 x 1024)
- Automatic booting with AT/XT & PS/2 Keyboards
- Automatic booting on Serial & PS/2 Mice
- Scan mode automatically switches between CPUs
- Num Lock, Scroll Lock & Caps Lock for all keyboards
- Supports upto 256 computers
- All commands executed from the keyboard
- Non-Volatile memory stores configuration setup

**Call Now for an evaluation unit**

**4 Device - ServeView** £595  
4 CPUs to 1 Keyboard, Monitor & Mouse

**8 Device - ServeView** £995  
8 CPUs to 1 Keyboard, Monitor & Mouse

**12 Device - ServeView** £1395  
12 CPUs to 1 Keyboard, Monitor & Mouse

**16 Device - ServeView** £1795  
16 CPUs to 1 Keyboard, Monitor & Mouse

**4 Device - MasterView** £350  
4 CPUs to 1 Key/Mon/Mouse-Non Expandable

**6 Device - MasterView** £395  
6 CPUs (non-PS/2) to 1 Key/Mon/Mouse-Non Expandable

## MULTI-ACCESS PC SHARERS

Multi-Access PC Sharers enable one computer to be shared by up to 4 Keyboards, Monitors and Serial Mice



- Extend up to 75 metres away
- VGA & SVGA Compatible
- Up to 1280 x 1024 resolution
- Supports DOS, Windows, OS/2, 95 & NT
- All users see the same screen

**2 Site Option** £99  
2 Keyboards & 2 Monitors to 1 Computer

**2 Site Option** £129  
2 Keyboards, 2 Monitors & 2 Mice to 1 Computer

**4 Site Option** £199  
4 Keyboards, 4 Monitors & 4 Mice to 1 Computer



## MULTI-DISPLAY DEVICES

Dakota Monitor Splitters allow up to 64 Monitors to display identical images. Perfect for training, exhibitions, demonstrations and classrooms.

- Extends up to 75 metres away
- VGA & SVGA Compatible
- Supports up to 1280 x 1024 resolution
- Displays up to 64 Monitors
- Independent of any operating system

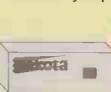
**2 Monitors** £ 79

**4 Monitors** £149

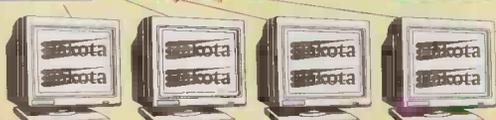
**8 Monitors** £199

**16 Monitors** £299

**64 Monitors** £899



**Reduced Prices**



## PRINTER SWITCH BOXES

**Ring Now for Next Day Delivery**

**Manual Printer Switch** £11  
2 Computers to 1 Printer or vice versa

**Manual Printer Switch** £19  
4 Computers to 1 Printer or vice versa

**Manual Printer Switch** £22  
2 Computers to 2 Printer

**Automatic Printer Switch** £29  
2 Computers to 1 Parallel Printer

**Automatic Printer Switch** £39  
4 Computers to 1 Parallel Printer

**Automatic Printer Switch** £39  
1 Computers to 2 Parallel Printer - Bidirectional

**Automatic Printer Switch** £49  
1 Computers to 4 Parallel Printer - Bidirectional

**Automatic Printer Switch** £179  
8 Computers to 1 Parallel Printer

**Automatic Modem Sharer** £99  
4 Computers can share 1 Modem

**Genius Pocket LAN** £69  
Parallel Port Ethernet Adaptor

**Monitor Power Saver** £24  
For PS/2 or AT/Serial type computers

Please specify DB25 ports or 36 Centronics ports on Manual Printer Switches



## VOYAGER 150™ EXTENDER

The Voyager 150™ Keyboard, Monitor and Mouse Extender is extremely small and powerful. Protect your sensitive computers and data from unauthorised access, damage and theft. Extends your worksite up to 150 metres from your PC.

- Extends Keyboard Monitor & Mouse up to 150 metres
- VGA & SVGA Compatible
- Supports up to 1024 x 768 non-interlaced resolution
- Supports both AT or PS/2 Keyboards
- Serial RS232 or PS/2 Mouse support
- Independent to all operating systems



**Voyager 150™ Extender** £299

Postal, Facsimile & Telephone Orders Welcome. Cheque Visa, Access or AMEX



All Prices Exclude Cables, Carriage & VAT.

Delivery: £5.00 3 - 4 Days £10.00 Next Day Mainland UK

Please quote PCW-1195



## It's a bug that's going round...

**There's a prank macro virus on the loose which affects some Word 6.0 users. Tim Phillips tells you about it, how to spot it and outlines a few simple safeguards.**

**A**s I write, we've just emerged from a profoundly uncomfortable time for all enthusiastic WP power users. Microsoft's "prank macro" problem needs addressing.

In case you missed it, Microsoft recently admitted that many Word for Windows 6.0 users had been suffering from what it called a prank macro — a macro contained in a WinWord document, that changes the Normal template to include itself. The macro simply displays a dialogue box with one option: a button that you press, with "OK" on it.

This one's not destructive and it's a good job, too, because what Microsoft calls the "prank" is really a new type of virus. Imagine that instead of a harmless dialogue box, the command the macro was running was more serious: it could alter your files without your knowledge. It doesn't have to trash the hard disk — in fact, it's more damaging if it doesn't.

Anyone who opens a document containing this macro gets the new virus. Infected documents contain a set of Word-Basic macros, one of which is autoloaded when you load the document. The macros are then copied into the global environment and another macro is invoked when the document is saved. This allows the macros to attach themselves to clean documents. Finally, when you exit Word, the macros attach themselves to your global environment — it's immune to detection from most traditional virus-checkers.

### How to check for the virus

You can check to see if you have the virus: look under Tools/Macro, and see if you

have macros called AAAZAO, AAAZFS, AutoOpen, PayLoad and FileSaveAs. That's the virus. Delete these macros if you have them.

This virus is notable for several reasons, as follows:

- Viruses have so far only spread via exe-

cutable files and this has been a significant plank in company security policies. The virus affecting Microsoft spreads as part of a data file.

- Data files are shared more readily than executables. In fact, software companies have been telling us to share as much

### Changing default file formats

**A** couple of months ago I suggested a nasty bit of hackery for changing the default lookup file in the DOS EDIT program, so that it would look for \*.\* instead of looking for \*.TXT. As usual I've been out-hacked by a reader; in this case, Guy Simmons, who contacted me via CompuServe.

*"I did this a while ago but didn't use DEBUG, in fact I've never used it," he says. "If I recall, all I did (after backing up QBASIC.EXE) was to load it into WRITE, not converting it to WRITE format, and did a search and replace operation, substituting [space]\*.\* for \*.TXT. The space is important. I've similarly modified NOTEPAD and have several versions on my disk. It seems to be a lot easier than using DEBUG <g>."*

I've tried this, and it works. Remember to always back up your executables before modifying them. (I've carried this forward to Windows 95, just to check, and it doesn't work for WordPad.)

Furthermore, Tim Goldingham emailed me with the following query: *"Thanks for the edit to QBasic in the October issue Hands On column. I don't suppose you could manage the same thing for Works — to stop it looking for \*.w\*?"* Guy's quick and dirty fix doesn't do the trick here and I'm sure I don't know enough about DEBUG to consider helping, so I'll throw this one open to you readers. Do any of you possess the detailed knowledge to help out?

And, there is help for an Ami Pro user. Ami has always been a little erratic, and here's a problem that has a bug fix file available from tech support. James Mendlin of Southport has an erratic spell checker: *"In AmiPro 3.0, when Ami Pro finds a word and you choose to 'Skip All', my file occasionally gets corrupted. Is this something to do with the size of my document, or the hardware setup?"*

The happy answer is no, it isn't. This falls into the category of "known behaviour" — that is, call tech support and they've had this reported before. They'll send you a file. If you use CompuServe, then you can get the file from there. Actually, that's where I found the solution, as there were a couple of other users in exactly the same position as you. Of course, you might want to upgrade to Word Pro, because it's a big improvement. It's even quite good at stripping out carriage returns. Aaarrgh!

CLASSIFIED

## SMS SHAREWARE

### DOS PROGRAMS (1000's inc Games)

- ACCU Music System - Complete music writing program. £2.
- As-Easy-AS Spreadsheet - Looks/acts like Lotus 1-2-3. £3.
- Astro - Prepares and analyses astrological charts. £3.
- Bar Codes Set - Consist of 4 excellent bar-code programs. £3.
- Bookie Breaker - Helps prediction of horse racing results. £2.
- Brother's Keeper - Full-featured genealogy program. £5.
- Business Plan Master - Create a professional business plan. £2.
- DC-ROM of the Month - With over 3000 programs & games. £20.
- Easy Project - Extensive project management system. £2.
- Elementary Education Set - 34 excellent programs. CGA. £3.
- EnVision Publisher - Excellent WYSIWYG Desk Top Publisher. £3.
- F-Prot - Scans disks, hard drives and network drives. £3.
- Fast Typing Teacher - VGA, CGA, Mono (monitor). £2.
- Football Forecast - Pool prediction system. £2.
- FormGen/FormFill - Excellent form generator & form filler. £3.
- Herbaceous Plant Manager/Landscape Plant Manager. £2.
- High-School Set - 13 excellent programs. £3.
- JobHunt - The aggressive job hunter... organiser. Brilliant. £2.
- Looking for Work - Interactive guide to marketing yourself! £2.
- Marine Navigation - A whole raft of navigation programs. £3.
- McAfee Anti-virus toolkit - Includes VirusScan and Clean-Up. £3.
- MotelMAX - Complete Hotel Management System. £3.
- Noteworthy - WYSIWYG for editing & printing musical scores. £2.
- Odyssey - General purpose communications program. Viewdata. £3.
- PCX CLIP ART CD-ROM With 5000 Clip Art images. £21.
- PKZIP/PKUNZIP - To create/extract archives. Excellent. £2.
- Page Financial Controller. Excellent SAGE clone! £3.
- Pre-Education set - A collection of simple programs. CGA. £3.
- Property Master - Good Rental Property Database program. £3.
- ProCAD 3D - Is a fast 3D CAD/rendering program. £2.
- Q387 - Math Accelerator & Emulator. Great program. £2.
- Quotation Faster! - To assist in providing quotations. £2.
- Super Stock - Excellent menu-driven stock control system. £3.
- T-Square - Truly professional CAD package. £3.

### ENGINEERING (DOS)

- AC Analyses - Acana and PC-Erap. £2.
- Aciran - Linear AC circuit analysis system. £2.
- Acnet - Electronic circuit analysis system. £2.
- Angles - Measurements and angles for woodworkers. £2.
- Beam Stress Analysis - Pc Bridge, plans frame analysis. £2.
- CNC Talker - Direct numerical control software. £2.
- Ecut - A 2-D Finite element-based structural analysis. £3.
- Electronic Calculators - Electron, infrared and RFS. £2.
- FINEL - Finite element-based structural analysis. £2.
- Grape 3D Beam - Modeling and structural structure. £3.
- Hydroflo - Design and validation of hydraulic systems. £2.
- Hydronet - Hydraulic network analysis. £2.
- LAYO - Vector based PCB design program. £3.
- ES - Loads-energy simulation for HVAC engineers. £3.
- Lsystem - Universal digital logic simulator. £2.
- Metal Calculations - Bend, FlangVol, IndTemp. £2.
- Motorola Database - Entire discrete device list. £2.
- Oxy-Acetylene Welding tutor - £2.
- PC Trace - CAD program for printed circuit boards. £3.
- QuickRoute - Printed circuit board design system. £2.
- Reinforced Concrete Beam Design - £2.
- SCRL - Semiconductor cross-reference library of diode, transistor and IC devices. £3.

### OS/2 SOFTWARE (1000's inc Games)

- Boxer-OS/2 - Excellent full-featured text editor. £3.
- E-Teller - Is a bank and credit card accounts manager. £3.
- Galleria - Will display/edit/convert bitmap graphic files. £3.
- Hty-Bitty Black Book - Is a personal information manager. £3.
- OS/2-Commander - Norton Commander clone. £3.
- OS2Scan/Clean-Up - McAfee well known Anti-Virus programs. £3.
- PKZIP-OS/2 - Will create and extract ZIP files. £3.

### WINDOWS 3.1 (1000's inc Games)

- Above & Beyond - Brilliant Personal Information Manager. £2.
- Astro-World - Calculates/prints/horoscopes. £5.
- CD-ROM of the Month - With over 3000 programs & games. £20.
- Chartist - Flow charting & organisation charting program. £3.
- dBarcode - Barcode generation utility. £5.
- Design-A-Room - And put all the furniture in it. Good. £3.
- Drag & View Gold - To view WFW/WFWG files. £3.
- EZ FormMaster - To design and/or modify business forms. £2.
- FontSpect Pro - Powerful TTF viewer/printer/installer. £3.
- GAMES - 100's Windows games in stock.
- Genius - Family Tree and History Keeper program. £3.
- Graphic Workshop - To work on any bitmapped image file. £3.
- Hyperdisk - Make Windows run 2 to 10 times faster. £3.
- Icon Manager - Easily create/extract/organise/install icons. £2.
- KMS: People Management System. £2.
- MegEdit - handles ASCII, binary, UNIX & Mac formats. £2.
- Microlink - Powerful communications package. £2.
- Odyssey 4W - Excellent comms program with Viewdata. £3.
- Page Plus Intro - Excellent Desk Top Publishing program. £3.
- Paint Shop Pro - Display/convert/alter/print bitmapped files. £5.
- PC Project - Excellent PD project manager system. £2.
- Quiz Windows 3.1. Training - Excel tutorial. A must! £8.
- Rosenthal Uninstall - Removes unwanted installation additions. £2.
- Smart Accounts - Integrated bank account manager. £3.
- SmartCat Plus - Excellent disk disk catalogue system. £3.
- TEK Illustrator - Drafting, technical illustrator & graphics. £5.
- The Complete Icon Collection - Over 5000 of the best icons. £5.
- TransMac - Allows to access Macintosh HFS format disks. £2.
- True Type Fonts CD-ROM - Contains over 2000 fonts. Plus book. £21.
- Tommy Soft CAD/DRAW - Sensational CAD program. Brill! £3.
- Wallpaper Glamour Collection - Nice. £3.
- WinBatch - Is a powerful batch language interpreter. £3.
- Windows 95 for 3.x - A desktop taskbar that emulates Win95. £3.
- WinJammer - Full-featured MIDI sequencer/editor. £3.
- WinZip - Zip manager. Internet file support. £3.
- WordExpress - Is a full-featured WYSIWYG word processor. £3.

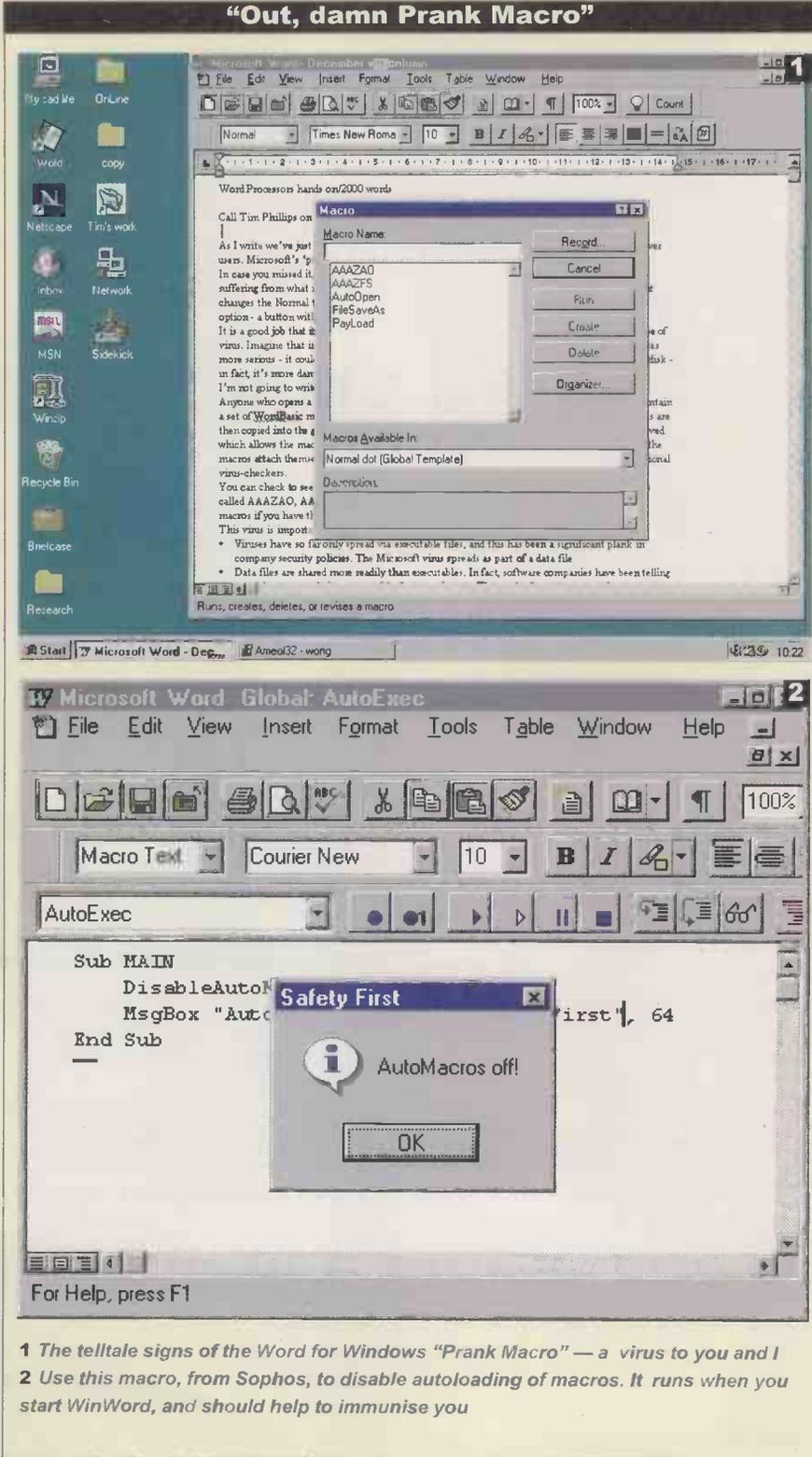
### WINDOWS 95/NT 32-bit versions

- Drag And File 95/NT - Powerful file management package. £3.
- The Psychedelic Screensaver Collection 95/NT. £2.
- WinZip 95/NT - Powerful Zip file management. £3.

**HARD DISK ESSENTIAL. £3 + programs come on 3.5" HD DISKS ONLY!**  
Handling Charge per Order: United Kingdom £2. Europe £4. Others £5.

Association of Shareware Professionals  
Approved Vendor  
Callers welcome at our shop at:  
3 Dean Parade,  
Camberley, Surrey

Post to SMS SHAREWARE, 19 Carshalton Road,  
Camberley, Surrey GU15 4AQ  
Tel: 01276 681864  
Fax: 01276 64382



data as possible for several years.

- Existing safeguards don't work.
- The viruses aren't hard to write...
- ...and now they can be passed on-line, and cross-platform to the Mac.

### Safeguards

So how do we stop the sky falling on our heads? There are a few simple safeguards:

1. The simplest way to avoid stray macros is to load all your documents that might be suspicious, in text format. This isn't practical on a network though, because you never know whether someone else has introduced the virus and, of course, because you'll keep losing your formatting.
2. Use a switch to load documents without their associated macros. To do this, you hold down shift while loading Word or

## Tim's macro club

Here's another bumper crop, but in future I will positively discriminate in favour of Ami Pro and WordPerfect macros — you Word Basic programmers are just too prolific.

● Jonathan Payne has the first good solution for scrolling two word processor windows: "This macro will scroll two windows for Word 6.0 together. This copy scrolls down a line and with a simple change to the 'vline 1' it could be made to scroll up a line, or lots of lines."

"It could also be modified to scroll down every few seconds — maybe by using the very useful On Time command to call itself (although this would require you to write a second macro to issue another OnTime call to stop it!)" he says, adding that "To make it usable, it's probably best to have a macro for up and a macro for down assigned to the keyboard, or on the Toolbar. To arrange the windows, I use the TileVertically macro from WINWORD\MACROS\LAYOUT.DOT."

(Send in your comments, please.)

```
Sub MAIN
ScreenUpdating 0
For Windows = 1 To CountWindows()
    VLine 1 'Change this line
    NextWindow
Next
End Sub
```

● Lee Curtis from the delightfully-named town of Idle, near Bradford, has a fine hint here:

"When using tables, pressing TAB takes you to the next cell. What if you want to put a TAB inside a cell? This macro does it." (I'd like versions of this for Ami Pro and WordPerfect, please. I could do them myself, but that's not the point, is it?)

```
Sub MAIN
Insert Chr$(9)
End Sub
```

● Another development from Storm Dunlop: "In your October column you give a macro to reverse letters. I find one to switch words as useful. Here's mine: 'TransposeWord'. You position the cursor in the second word, then run. I've assigned shortcut keys of

Ctrl+Shift+C to TransposeCharacter and Ctrl+Shift+W to TransposeWord."

```
Sub MAIN
WordLeft 1
ExtendSelection
ExtendSelection
EditCut
WordLeft 1
EditPaste
WordRight 1
```

End Sub

● I know I said no more carriage return stripping macros, but this one's an Ami Pro macro so it's an endangered species (joke). Thanks to Chris Wright of the Bradford Diocesan Computer Group, who will receive his reward in heaven: "As soon as you try stripping carriage returns on a bigish document, Ami Pro crashes out with a 'Maximum Paragraph Size Reached' message. Often a reboot is the only way out. Much angst. My solution is to write a pair of macros as follows:"

```
FUNCTION PARAS()
loop:
TYPE("[ctrldown]")
c=CurChar$()
TYPE("[RIGHT]")
IF(AteEOF())
EXIT FUNCTION
ELSEIF(c=CurChar$())
TYPE("[DEL]")
ENDIF
GOTO loop
END FUNCTION
```

```
FUNCTION PARAS1()
loop:
TYPE("[ctrldown]")
c=CurChar$()
TYPE("[RIGHT]")
IF(AteEOF())
EXIT FUNCTION
ELSEIF(c<>CurChar$())
TYPE("[LEFT] [DEL]")
ENDIF
GOTO loop
END FUNCTION
```

PARAS.SMM removes double returns, while PARAS1.SMM deals with the single ones.

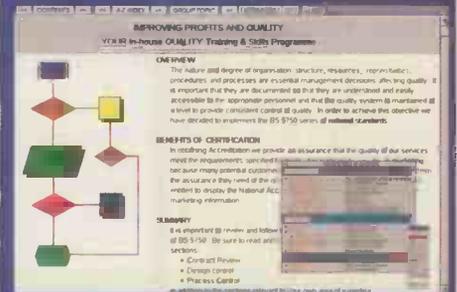
to Save Normal.dot".  
4. Word's AutoExecute macros can help too. Thanks go to virus protectors, Sophos, for this macro:

```
sub MAIN
DisableAutoMacros
```

when clicking on a document icon. Unfortunately, I tried this with the macro and it didn't work. The text equivalent is WINWORD\M as the command line.

3. A basic precaution is to go to Tools/Options/Save and enable "Prompt

## AN ALTERNATIVE to PAPER CREATE ONLINE, INTERACTIVE, HYPERTEXT CORPORATE DOCUMENTS with XGL Hypertext VOYAGER™ for Windows



FOR: ISO9000, Technical  
Manuals, Training, Policy,  
Procedures... etc.

### Features:

- Easy to use, Easy to Create
- Designed for Non-technical Users
- Automatic Contents, Index & Glossary
- Text, Pictures, Graphs, Diagrams
- Import Existing Files
- Up-to-date, Online
- Secure, Non-update, Simple Viewing
- Cross-references Automatically Hyperlinked

### AND NO PROGRAMMING!

Remove a topic and all its hyperlinks disappear.  
Add a topic and all existing references to it become hyperlinks, automatically!

Developed in the UK by

**XGL SOFTWARE**

For more information call  
**01992 638763 or FAX 643696**

I HAVE A SPELL CHEQUER IT CAME WITH MY PC  
IT PLAINLY MARKS FOUR MY REVUE MISS TAKES I CANNOT SEA I'VE RUN

How many errors did you spot in the poem?  
**COLLINS ELECTRONIC ENGLISH  
DICTIONARY & THESAURUS**  
A REAL DICTIONARY & THESAURUS FOR £49

- Instant access to 190,000 definitions containing 3.5 million words of text
- 16,000 encyclopedic entries including places plus 14,000 new and updated entries
- 275,000 synonyms linked to the dictionary
- Powerful anagram search facility
- Wildcard or fuzzy search feature (? and \*)
- Boolean search functions (AND, OR, NOT)
- Includes pronunciation and etymology
- DOS & Windows versions are supplied both on diskettes and CD-ROM in one box for IBM compatible PCs

Price excludes delivery at current Post Office rates & VAT  
We accept AMEX/Access/MasterCard/EuroCard/VISA

**HarperCollins  
Electronic Reference**

14 Steep Lane • Findon • Worthing • West Sussex • BN14 0UF  
Tel 01903 873 555 Fax 01903 873 633  
E-mail 100317.1372@compuserve.com

TOO NO ITS PERFECT IN ITS WEIGH MY CHEQUER TOLLE ME SEW  
THIS POEM THREEW IT I'M SHORE YOUR PLEASED

# Motion Picture



Put yourself in the picture with a Motion Picture video capture card at £49 (+VAT)

If you own a PC and a Camcorder, Motion Picture can put you in the picture! The Motion Picture pack contains a 16 bit ISA interface card and Windows software which, once installed in your PC gives you the power to grab a still picture or capture an AVI movie from any video source. Suitable video sources include; Camcorders, TV's, VCR's, Satellite Receivers, Canon Ion Cameras...etc.

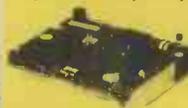
Once images or movies have been captured they can be used in DTP and multimedia authoring tools. This means you can produce work like this advert from your desktop without the need for a film camera and all the costs of processing and scanning. Call us now to receive a Motion Picture information pack and full stockists list.



HCCS Associates Ltd, 575-583 Durham Rd, Gateshead, Tyne & Wear NE9 5JJ  
Tel: (0191) 420 0425 Fax: (0191) 491 0431

# Voice/Fax/Modems

Solwise offer a full range of connectivity products for your PC all covered by our 30 day money back guarantee of satisfaction and a 12 month warranty. In addition to our selection of modems we stock a range of Telecoms and Network products including Telephone systems, fax-switches, scanners, bar-code readers, remote-node-servers and much more. Details of our full range can be found in our FREE CATALOGUE which is only a phone call away. Further information is also available from our fax-on-demand system 24 hrs per day. Just call 01482-444589 from your Touch-Tone phone or fax-



phone to get the latest information sent directly to your fax machine. Just follow the spoken instructions to get an index or a selection from the dozens of pages available.



Fax/Data & Voice	V22bis + Fax 2400bps Data 9600bps Fax	V32bis/MNP/Fax 14,400bps Data 14,400bps Fax <small>(Hardware MNP 2-5, V42bis)</small>	V34/MNP/Fax 28,800bps Data 14,400bps Fax
Internal	V9624A - £29	V1414A - £55	V1428A - £150 <small>Expected Mid October 95</small>
External	V9624E - £65	V1414E - £78	V1428E - £165 <small>Expected Early 96</small>
Pocket	—	V1414P - £85	—
PCMCIA	—	V1414C - £119	—

## Fax/Data Only

Internal	9624A - £20	1414A - £46	1428A - £94
Pocket	9624P - £45	1414P - £79	1428P - £139
External	—	1414E - £59	1428E - £119
PCMCIA	—	1414C - £89	—

16550 Serial Card £12 - MAC Software/Cable £20

# Solwise

All Modems non-BABT

Add £5.95 for next-day carrier & 17½% VAT Major Credit Cards taken with a 1½% surcharge. COD available.

PCWO, Princes Court, Princes Avenue, Hull, HU5 3QA.

Tel 01482-473899. Fax 01482-472245, Fax on demand 01482-444589.

# Glare/Guard<sup>®</sup> MAXIMUM PLUS



Stylish easy-fit wrap-around design

Glare/Guard MAXIMUM PLUS Filter offers the ultimate in screen comfort to all regular VDU users. High performance optical technology, tempered glass, static elimination & ELF/VLF reduction of 99.9% will cut your visual fatigue. Exceeds latest Health and Safety requirements. TAKE A LOOK FOR YOURSELF with our 30 DAY SALE or RETURN OFFER at just £69+VAT for 12 to 15" diagonal models.

FREE DELIVERY in UK. ACCESS/VISA or Fax Order.

☎ 01993-883277

FAX 01993-883333

Full range of sizes 9" to 24" diagonal. Quantity pricing upon request.

PCW11

**COMPUTING**  
Rookery Court Church Hanborough  
Oxford OX8 8AB 01993 881912 *plus*

# DR. SOLOMON'S

## Data Recovery Service

Crashed hard disk?

Unreadable floppy?

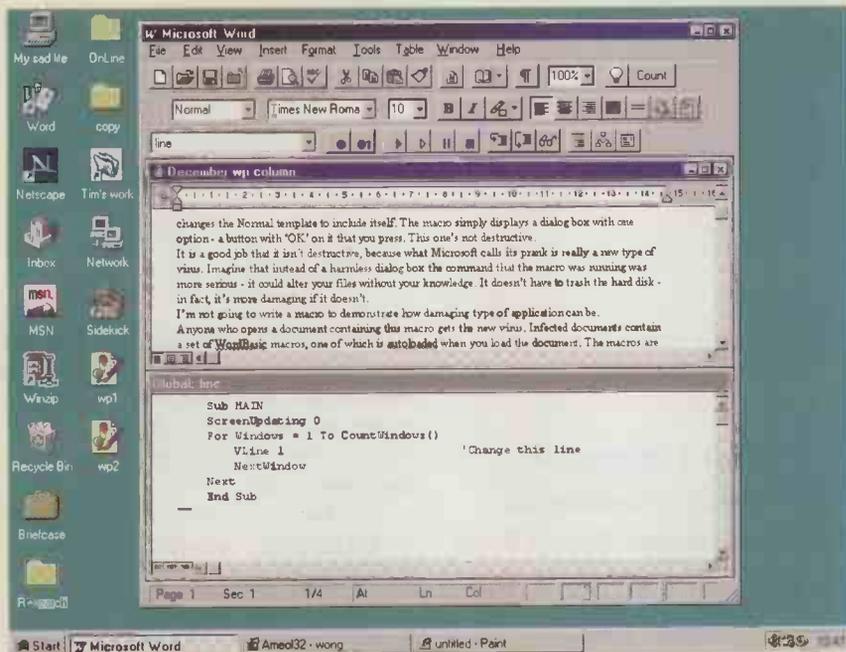
Dead fileserver?

**NO FIX - NO FEE**

DON'T PANIC - CALL

S & S INTERNATIONAL PLC

0800 581263



The scrolling macro may be simple but it works. Tile your two files manually first

### The upgrade question

As we wait with baited breath for 32-bit versions of our fave word processors, a question arrived, via CompuServe, from Kevin Fox: "I am at present using Windows 3.1 and SmartSuite. I can easily get around in Ami Pro 3 and it does most of the things I want. However, I am considering upgrading to Windows 95 and I like the look of WordPro, which will presumably be part of SmartSuite for Windows 95. However, the thing that concerns me is that as Microsoft Office is out first, is Lotus SmartSuite liable to become the poor relation, with poor take-up and poor support? My experience with Office, and particularly Word 6, is of a slow program that hogs system resources. Will the Win95 situation be the same?"

My opinion is yes. Word for Windows has a dominant market share, but this has been a problem for Microsoft in providing support since Windows 95 came out — the volume of calls has overwhelmed the company. WinWord 7.0 is mostly similar to 6.0; so for 6.0 users, don't upgrade your hardware and operating system because you think you are missing a great deal.

Word Pro does have an excellent set of group-working functions, which is great if you work on collaborative documents. Microsoft Office does hog system resources, but as Kevin is one of the Pentium rich with pots of RAM, this may not be an issue.

Apart from these considerations, word processors are becoming functionally very similar. If in doubt I'd go for WinWord because then, at least, all the helpful people who deluge me with WordBasic macros can help you out.

MsgBox "AutoMacros off!",  
"Safety First", 64  
End Sub

Call it AutoExec, and it will trigger when WinWord starts to disable AutoMacro loading.

Ami Pro and WordPerfect users shouldn't be smug — this is a potentially serious problem. Andy Campbell, managing director of virus specialist Reflex tells me he's seen another similar virus and is taking it seriously. And WordPerfect admitted its product was vulnerable too.



### PCW Contacts

And that's that for this month. Surface or airmail to PCW, otherwise I'm on email at [wong@cix.compulink.co.uk](mailto:wong@cix.compulink.co.uk) and CompuServe 100436,3616

**THE KEYBOARD COMPANY**

Keyboards ... we have them all ... large or small ... in almost every language ... English, every European, Russian, Arabic, Scandinavian, Polish, Japanese, whatever your requirement, we'll have it. Today's special ...

**KBC TRACKERBALL KEYBOARD - only £49.95**  
5-Pin DIN fitting - PS/2 adaptor £7.00 - Carr. £6.95

**WINDOWS '95 KEYBOARDS**  
Superb quality with the extra keys you need to make the most of your new operating system **£29.95**

Full details of our range are on Faxback: Dial 0374 50 21 50 from your fax machine and press Start when requested, or ring our sales department

**01453 88 55 22**  
Fax: 01453 88 66 33

### INKJET REFILLS

**EG: HP DESKJET £1.80  
HERE'S HOW**

FIRST KIT CONTAINS EVERYTHING NEEDED INCLUDING INK & REUSABLE INK INJECTORS  
AFTER THE FIRST KIT YOU ONLY NEED TO BUY BULK INK

	INITIAL KIT	NO REFILLS	BULK INK	NO. REFILLS
HP DESKJET	£15.85	5	£45.00	25
HP HI-CAPACITY	£19.95	4	£64.00	16
CANON B/J10/200	£12.99	3	£34.00	15
CANON B/C4000	£19.99	5	£45.00	20

OVER 170 PRINTERS SUPPORTED, CALL US FOR A PRICE ON YOUR PRINTER

#### REMANUFACTURED INKJET CARTRIDGES

TOP QUALITY AND PERFORMANCE GUARANTEED  
HP HI-CAPACITY £13.50 CANON BC01/02 £11.99  
PLUS CANON, EPSON, APPLE ETC

#### WANTED USED INKJET CARTRIDGES

#### PRINT REVIVAL

DEPT PCW,  
152 ENTERPRISE COURT  
WITHAM, ESSEX CM8 3YS  
TEL: 01376 511288/520628 FAX: 01376 511232  
\*ALL PRICES INCLUDE VAT AND FIRST CLASS POSTAGE\*

¿HABLA USTED ESPAÑOL? PARLEZ-VOUS FRANÇAIS? ¿HABLA USTED ESPAÑOL? PARLEZ-VOUS FRANÇAIS?  
¿HABLA USTED ESPAÑOL? PARLEZ-VOUS FRANÇAIS? ¿HABLA USTED ESPAÑOL? PARLEZ-VOUS FRANÇAIS?

Get it write right with ...

**Collins Bilingual Dictionaries**

- Accurate translations
- Quick and easy to use
- Compatible with most word processors
- Both DOS & Windows versions supplied on diskettes in the one box

**Collins On-Line (70,000 translations) £59**  
Add-on bilingual dictionaries £29 each  
Add-on COBUILD Student's Dictionary £39 (ie special dictionary for learners of English, containing over 30,000 examples showing typical uses of words and phrases)

**Collins Series 100 (110,000 translations) £69**  
Add-on bilingual dictionaries £39 each  
Languages available: French, German, Spanish or Italian  
Prices exclude delivery at current Post Office rates & VAT  
We accept AMEX/Access/MasterCard/EuroCard/VISA

**HarperCollins Electronic Reference**  
14 Steep Lane • Findon • Worthing • West Sussex • BN14 0UF  
Tel 01903 873 555 Fax 01903 873 633  
E-mail 100317.1372@compuserve.com

PARLEZ-VOUS FRANÇAIS? SPRECHEN SIE DEUTSCH?



## All change

**An increasing number of spreadsheet users are changing from DOS versions to Windows-based. Stephen Wells offers advice and comments on how to achieve a smooth changeover.**

One of the gratifying things as a result of writing this column, is the mail I receive. The hardest part is trying to decide whether a reader's problem is unique to that reader or common to all.

Lately, there have been more questions about the spreadsheet module of Microsoft Works: probably because at the moment it is so frequently packaged with new PCs. As Excel and its competitors grow bigger, Microsoft too has recognised Works' suitability for family and small business use by making it one of the first applications revised for Windows 95.

### Print Works

Dr E. Noy Trouson of Southam, Warwickshire, writes:

*"I use the spreadsheet in MS Works simply to maintain a list of stocks and shares. It updates prices and values in successive columns. But Works does not seem to select an area for printing and the print command results in many pages of obsolete material."*

You don't say which version you have. The earliest one I've got is MS Works for Windows 2.0 — in that, you just highlight the block you want to print, then choose File, Set Print Area. To change it later, choose Select, All, File, Set Print Area. Alternatively, when you click the Print button on the Toolbar, you can choose the page you want to print after the Number of Copies box.

If your version doesn't offer those options, you could always highlight the area you want, Copy it to the Clipboard, open a new file and Paste. The new file doesn't have to be in the spreadsheet

module as well — you can open a new Works database file and select View, List, Edit, Paste. Then you can use the database report building features.

### Excel fix

Here's a question I received via the Internet just signed "Nikos, Greece":

*"I use Excel 4.0 and didn't upgrade to 5.0 because I don't have time to learn its extra features, and it would only take more disk space. My problem is that when I write something like 2/4 in a cell, Excel automatically transforms it into a date. How can I avoid that?"*

One quick way is to precede it with an "equals" sign if you want a decimal entry; or a zero and a space to display your entry as a fraction.

### Changing spreadsheets

Several readers have asked me to comment on moving from a DOS spreadsheet to another publisher's Windows-based one. A common application is for a club, parish, or home budget, or small business book-keeping system.

For many years there was a bias towards DOS-based accounting systems as many people thought that a graphical interface was unnecessary and just slowed things down. But the times they are a-changin'. They do say that the successor to Windows 95 (probably to be code-named Memphis) may be the last Microsoft operating system which will recognise DOS software without special translation.

But let's concentrate on the present. A typical move would be to go from, say, SuperCalc to Excel. If your financial year

coincides with the calendar year, then this is a good time to consider making the change. You can't easily carry forward formulae but you can export and import labels (your account names) and values (last year's totals).

The file to translate might be called TOTAL95.CAL. For safety, I'd copy it into a directory like C:\windows\temp. Then, in SuperCalc 5.1 you just enter

```
//Export,DIF,c:\windows\temp\total95,Colwise,All
```

Open Excel. In the search box, select Data Interchange Format and c:\windows\temp. Now you can open your file and it will be headed TOTAL95.DIF. Choose File, Save As, and select the file type Normal. The extension will change from DIF to XLS. Now you can save it as a properly-named Excel file. You may now wish to choose Options, Display, and uncheck Zero Values.

When changing accounting software, it is a good idea to run both old and new versions until you're utterly confident in the new system. In Windows 95, you can do this by creating an icon for your SuperCalc file and running it (with SuperCalc) in a desktop window.

A typical SuperCalc setup might have five files: one for each quarter and another for the year. Each quarterly file has four pages: three of them have accounts down the rows, and days across the columns. The fourth page shows monthly totals for each category and totals for the quarter. The file for the year, which is completely comprised of linked formulae, shows the totals for every category for all four quarters, and annual totals.

In Excel this can best be arranged all in one workbook, with one worksheet for each month and another for the year's totals.

One advantage of Excel is that you can perform a Group Edit. Any changes to the January worksheet can (optionally) apply to every other month's worksheet, automatically.

And with Excel being Windows-based, you can outline levels to be displayed or printed. It is on the worksheet of annual

## EXCELlent shortcuts and longshots

- **SKIP 'EM** To make a list of dates which skip the weekends, enter a date in cell D1, then enter this formula in cell D2:  
 $=D1+(MOD(D1,7)=6)*2+(MOD(D1,7)=0)+1$   
 Now drag the fill handle down the column.
- **MARK 'EM** Highlight a range with Ctrl+Shift+appropriate Arrow keys.
- **ADD 'EM** Highlight a range as above. Then press Shift+F8. Then highlight a second range. Press Shift+F8. Highlight a third range. And so on.
- **COLOUR 'EM** Highlight as many areas of your worksheet as you like, as above. Then press Alt+T P Tab Alt+Down Arrow Up Arrow to colour of your choice.
- **HIDE 'EM** Hide columns quickly by highlighting them and pressing Ctrl+0. Restore them with Ctrl+Shift+0 when the columns either side are highlighted. Use Ctrl+9 to hide rows. Ctrl+Shift+9 restores them when the rows above and below are highlighted.
- **EXPLAIN 'EM** To switch from displaying values to displaying formulae (and back) press Ctrl+' (the key to the left of the top row numeral 1).

totals that this is most useful. You might have an account for each car expense like petrol, insurance and maintenance. Expanded, all this detail would be shown. Collapse the outline and only the subtotal Car Expenses would appear.

Similarly, you can outline across the columns: expanded, every month would be shown; collapsed, only the quarterly and year's totals would appear.

**Times total**

Geoff Dickinson of Wickford, Essex says he wants to total a list of times. These are entered in the range B1:B6 with colons, like this: 4:24, 12:18, 15:23, 1:06, 18:18, 6:36.

Geoff asks for a formula which will give him a total which reads: 2D 10H 05M.

All leading spreadsheets convert dates and times into a number. It is this number which the program stores. What is displayed or printed depends on the formatting you apply.

With Excel, a new worksheet uses the General number format as the default. But if you enter a number with a "h" in it, Excel initially displays it as a date, as Nikos discovered (see "Excel fix", opposite). If there

is a colon in it, Excel displays it as a time. If you add a bunch of times, like Geoff wants to, you would think the program (actually working in the underlying large numbers) would get confused. But Excel doesn't. So, Geoff, the only formula you need in cell B7 is

```
=SUM(B1:B6)
```

That will immediately display 10 05. But you'll get the result you want if you enter the custom format for the cell:

```
d"D" h"H" mm"M"
```

**Financial analysis**

Going back to the August issue, we ran out of space so there wasn't room for anything on financial analysis — readers who are entering the template from the listings (rather than receiving them on disk) will be interested in Fig 1 which is carried over from then. It's the balance of the definitions of the Names on the template.

Also intended for that column were the formulae for rows 24, 27, 30, 31 and 32. These are now provided at the top of the listing in Fig 2.

The second part of Fig 2 gives the listing for this month's subject: rows 53 to 58. These calculate the Activity Ratios which are usually recorded as percentages. Rows 52 and 59 are blank. The same Names in column B are copied across to columns C through F. Column G, as before, is for the company's industry averages if available. The first two ratios are collected for service businesses only. Salaries and staff benefits is the major expense for a service company. In the advertising agency example (which we have been using in this series) it has hovered between 60 and 65 percent of the company's income (see Figs 3 and 4). This is about normal for large advertising agencies, but because it outweighs any other item of expense it can directly affect

**Fig 1****Listing of remaining names in the service template**

Ave. Accounts Receivable	=B\$32:\$G\$32
Billings	=B\$21:\$G\$21
Commission Fees	=B\$22:\$G\$22
Compensation	=B\$23:\$G\$23
Income taxes	=B\$27:\$G\$27
Interest Expense	=B\$26:\$G\$26
Net Income	=B\$28:\$G\$28
Net Worth	=B\$31:\$G\$31
Operating Profit	=B\$25:\$G\$25
Overhead	=B\$24:\$G\$24
Working Capital	=B\$30:\$G\$30

**MONITOR MAN SAYS ....**

We do the business because we have the best value equipment at the right price and offer personal service too ... try us ...

**We like VisionMasters ...**

particularly the new E-types ... they really set the latest standards in out and out performance ... prices are down and the 17-inch screens usually start from £450, so do give us a ring for all the latest information ...

Buy your Iiyama VisionMaster from Monitor Man and if you are not delighted with it, you can return it within thirty days for a cash refund - no one can offer you a better deal.

**NOKIA MONITORS**

Nokia will always be on top because they set the highest standards in the business. If you want something really special then benefit from our unique one month cash back trial period - 17-inch models from £499, 21-inch from £1295

**ViewSonic**

Top quality from Matsushita, better known for Panasonics and Technics, we have unique deals running up until the end of the year. Payments can be spread over three months if you wish ...

**Of particular interest ...**

9-inch Mono	£95
10 inch Colour	£349
10.4-inch Flat LCD Mono	£399
10.4-inch Flat LCD Colour	£975
14-inch Hercules Mono	£75
14-inch VGA Mono	£85
A4 page Mono Samsung	£99
20-inch Sampo	£595
20-inch Hitachi HM 4820 prof.	£1099
21-inch Hitachi HM 4821 prof.	£1399
28-inch Display Screens	£1195
Tbird VL2 meg Graphics card	£149
14/15-inch Touch-Screen Kit	£210
Splitter - 4 screens	£99
Splitter - 8 screens	£139
VGA 9pin extn. cable 2m	£9
VGA 9pin extn. cable 5m	£15
HD - 15 Pin extn. cable 2m	£23
HD - 15 Pin extn. cable 5m	£35
5 BNC - HD 15 cable	£39
AppleMac Adaptor	£24
9 VGA <-> 15 HD Adaptors	£11
9 or 15 Gender Changers	£5

**Fax-U-Bak Information lines**

Just dial the number from your fax machine and press "start" when requested.

Monitor Man Report	0374 - 506333
All about Keyboards	0374 - 502150
Personal Tel. No's	0374 - 506222
ALL ABOUT MONITORS	0336 - 415671*
GRAPHICS CARDS	0336 - 415672*
USED & REFURB List	0336 - 415673*
TRADE PRICELIST	0336 - 415674*
FOR SALE & WANTED	0336 - 415675*



\*Calls charged at 39p per min cheap rate, 49p per min at all other times.



**Tel: 01453 88 55 99**

**Fax: 01453 88 66 33**

**Fax-Back: 0374 50 63 33**

The Studio - Middle Lypiatt - Stroud - Glos - GL6 7LW

	A	B	C	D	E	F	G
52							
53	<b>ACTIVITY RATIOS (%)</b>						
54	Compensation/Commission & Fees	61.00	80.07	65.01	64.95	64.02	
55	Overhead/Commission & Fees	23.07	23.96	25.05	24.95	24.06	
56	Fixed Assets to Net Worth	25.43	21.54	19.42	19.44	20.74	55.50
57	Asset Turnover	120.49	125.00	114.51	110.50	135.10	65.20
58	Accounts Payable to Billings	11.27	10.15	8.20	8.76	9.93	9.30
59							

an agency's profitability so agency managements watch it very carefully.

Clients want to see the best available talent working on their accounts, and top talent costs money. At the same time, some of the most creative advertising agencies often have a slightly lower ratio (compensation/commission and fees) than other companies in the industry — whose strength lies in, say, marketing — because younger creative people will often work for less money at an agency which will allow them to do their best work. That's because creative people, who get the largest piece of the salary pie, are measured by their portfolios and awards. They rise to the top of their profession by being recognised in their trade papers and shows, and by being able to present proof of their published work at interviews.

The next ratio compares overheads with commissions and fees. Service companies must also take firm control of their other expenses. The days are over when advertising agencies would buy houses adjacent to prospective clients, so that an account executive would become a neighbour. But office rents, phone bills, client entertainment and travel expenses soon mount up. In the example shown in Fig 3, it's running between 20 to 25 percent of real income. That's why this is a ratio which is carefully monitored by the experienced managements in profitable companies.

The Fixed Assets to Net Worth ratio measures the extent to which stockholders' funds are being used to buy plant and equipment. If these investments exceed the company owners' equity, it can restrict flexibility. That's why many companies

**Fig 3 Example results for the activity percent ratios on the template for service companies**

prefer to lease facilities and hardware.

To summarise: if this ratio is higher than desirable, a company can sometimes work its way out of the situation by speeding up collections, thus generating a higher profit and allowing it to carry the excess capacity.

A declining ratio, or a ratio lower than comparable businesses, is desirable. More funds are available for working capital. Depreciation charges are reduced, thereby enabling competitive fees and higher profits.

An Asset Turnover ratio of a higher percentage than the industry, or increasing percentages for the company, suggest poor sales management so a more aggressive sales policy is necessary.

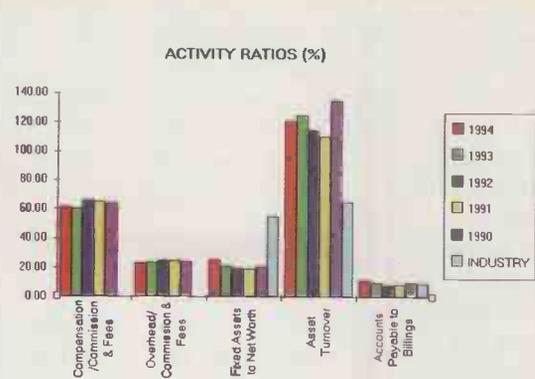
Significantly lower percentages than the industry can indicate over-trading, which can lead to financial difficulties.

To summarise: ideally, this ratio will stay fairly constant over the years, trending neither up nor down, and remaining in line with the industry.

If the Accounts Payable to Billings ratio is high for the industry, it indicates that the company may be using suppliers to help finance operations. This might be positive for a time but negative for short-term creditors, who would be concerned about the company's potential problems in paying suppliers. A low ratio indicates that the company is in a good position to pay its suppliers.

In the case of an advertising agency, the agency is

**Fig 4 Chart of the results for the activity percent ratios**



**Fig 2 Financial analysis template listing**

- A24 Overhead
- B24 =Commission\_\_Fees-Compensation-Operating\_Profit
- A27 Income taxes
- B27 =Operating\_Profit-Net\_Income-Interest\_Expense
- A30 Working Capital
- B30 =Current\_Assets-Current\_Liabilities
- A31 Net Worth
- B31 =Stockholders\_\_Equity
- A32 Ave. Accounts Receivable
- B32 =(Accounts\_Receivable+C4)/2
  
- A53 ACTIVITY RATIOS (%)
- A54 Compensation/Commission & Fees
- B54 =Compensation/Commission & Fees\*100
- A55 Overhead/Commission & Fees
- B55 =Overhead/Commission & Fees\*100
- A56 Fixed Assets to Net Worth
- B56 =Net\_Plant\_Equipment/Net\_Worth\*100
- A57 Asset Turnover
- B57 =Total\_Assets/Commission & Fees\*100
- A58 Accounts Payable to Billings
- B58 =Accounts\_Payable/Billings\*100

liable for all of its clients' media bills. Naturally, it invoices its clients in advance of the month and pays the media after the end of the month. If all goes well, the agency can earn short-term interest on the money. If their clients are slow payers then the agency won't be in a position to pay the media and can get a bad reputation.

To summarise: This ratio is simply a restatement of the Payables Turnover. That ratio is expressed in days. The Accounts Payable to Billings ratio gives the same result as a percentage. Both ratios measure how the company is paying its suppliers in relation to the volume transacted. Some industries use one version, some use the other. Service companies differ from stock companies here. Stock companies compare Accounts Payable with Purchases of stock for their Payables Turnover, and with Net Sales for the other ratio.

Next month, in the last instalment of the series, we'll consider the four most commonly monitored Profitability ratios.

**PCW Contacts**

Stephen Wells welcomes comments on spreadsheets and solutions to be shared. Send them to PCW Editorial at the usual address or to [stephen\\_wells@pcw.cmail.com](mailto:stephen_wells@pcw.cmail.com). For the financial analysis Excel templates for service companies and those which carry stock, send a formatted 3.5in disk and a stamped, self-addressed envelope.

# The easy way to start using



S

Are you in need of local UK support? Looking for easy ways to Bar Code?  
Looking for HELP with your system? You've found it!



## Bar Code Readers

- Wand Scanners
- CCD Scanners
- Laser Scanners
- Slot Readers
- Portable Units
- Fixed Position
- Flat-bed Units
- Conveyor Laser
- Hands Free
- Memory Units

The Bar Code Specialists



## Bar Code Printing

- What you see is what you get
- Using the fonts of your office printer

FREE

## Bar Code Basics

From the Bar Code Specialists

With every scanner / program sold, our introductory booklet.

- Bar Code verification service
- Supplied with the connector of your choice
- 12 months R-to-D warranty - 2nd and 3rd Year Option
- Custom configured before shipment
- 48 hour repair turnaround
- Massive stocks held in the UK
- No Custom or Shipping worries
- Trade enquiries welcome
- Products are repaired by our own engineers
- 30 day money back guarantee on all hardware products

Call today for our FREE

UK Sales & Service

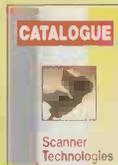
Order on 01734-770808

## Scanner Technologies

Unit 1, The Sapphire Centre, Fishponds Rd, Wokingham,  
Berkshire RG11 2QJ, UK.



Prices subject to change  
Prices ex-VAT



## Disklite

- 3 1/4" x 5" x 1 1/4" - weighs only 1 1/2 lb
  - 250Kb/s transfer rate - up to 700Kb/s when your PC has an EPP (Enhanced Parallel Port)
- alone - fit your own spare 2 1/2" disk ... £85
- with 250Mb 2 1/2" IDE disk ..... £175
  - with 340Mb 2 1/2" IDE disk ..... £229
  - with 510Mb 2 1/2" IDE disk ..... £349
  - with 810Mb 2 1/2" IDE disk ..... £495
  - with 1.3Gb 2 1/2" IDE disk ..... £675

## Diskplus

- 2 1/4" x 8 3/4" x 6 1/2" - inc built-in power supply
  - 250Kb/s transfer rate - up to 700Kb/s when your PC has an EPP (Enhanced Parallel Port)
- alone - fit your own spare 3 1/2" disk ... £105
- with 540Mb 3 1/2" IDE disk ..... £229
  - with 1.27Gb 3 1/2" IDE disk ..... £325
  - with 1.6Gb 3 1/2" IDE disk ..... £475

## CDplus4

- 6 1/4" x 11 1/2" x 2 1/4" - inc built-in power supply
  - 600 Kb/s transfer when your PC has an EPP
  - 190mS avg access time, 256k buffer
  - Supports MPC-2, Photo-CD Multi-session, Video CD White Book, CD-I, CD-XA, CD-DA
  - Headphone socket with volume control
  - Audio output to sound card
- CDplus4 4-speed CD drive ..... £229  
also CDplus2 - Double speed ..... £155

## complete with...

- Every device comes with
- a built-in through-port to print at the same time
- all cables, installation diskette and guide
- a full one year parts-&-labour Warranty

Delivery - overnight, mainland UK .... £10

Prices exclude VAT @ 17.5%.  
MarkTech acknowledges all trademarks and reserves right to change specifications and prices without notice. E. & O.E.

# Squeeze even more out of all your PCs.

"An idea so simple, ingenious and useful that I wonder why it hasn't been invented before."  
- CD-ROM NOW, Nov'94

**D**ISKLITE, like all our parallel port devices, brings you the ultimate in Convenience. At a price you can afford.

### How you benefit

Parallel port drives are ideal for:

- **extending all your PCs** - even when your PC has no space inside
- **backup** - move data between all your PCs - parallel port drives are much faster than tape-streamers
- **availability** - use your data anywhere - without taking your PC with you
- **security** - lock away confidential data and files vital to your work
- **speed** - fast-install big programs like MS Office, SmartSuite, CorelDraw

### and ...

- they're versatile - use them with both your notebook and desktop PCs
- they're convenient - e.g. a Disklite

now stores as much as 900 slower, less reliable diskettes

- they're economical - you need only one device for several PCs
- they're so easy to install - and you don't have to be technical to do it
- they're so easy to use - you run DOS and Windows like on any other drive

### Portable storage

Disklite is about the size of a video cassette and gets its power from your PC's keyboard port - we can also supply you a low-cost worldwide AC adaptor if your PC cannot power it

The 3 1/2" Diskplus has a built-in power supply and plugs into the mains. You can also get an 'empty' Disklite or Diskplus to insert your spare disk.

### Portable 4-speed CD

With CDplus4, you can now add a Quad-speed CD-ROM drive and full Multimedia to your entire office.



And for computers without an EPP (Enhanced Parallel Port), the double-speed CDplus2 gives you an even more cost-effective solution.

### Your Money Back Guarantee

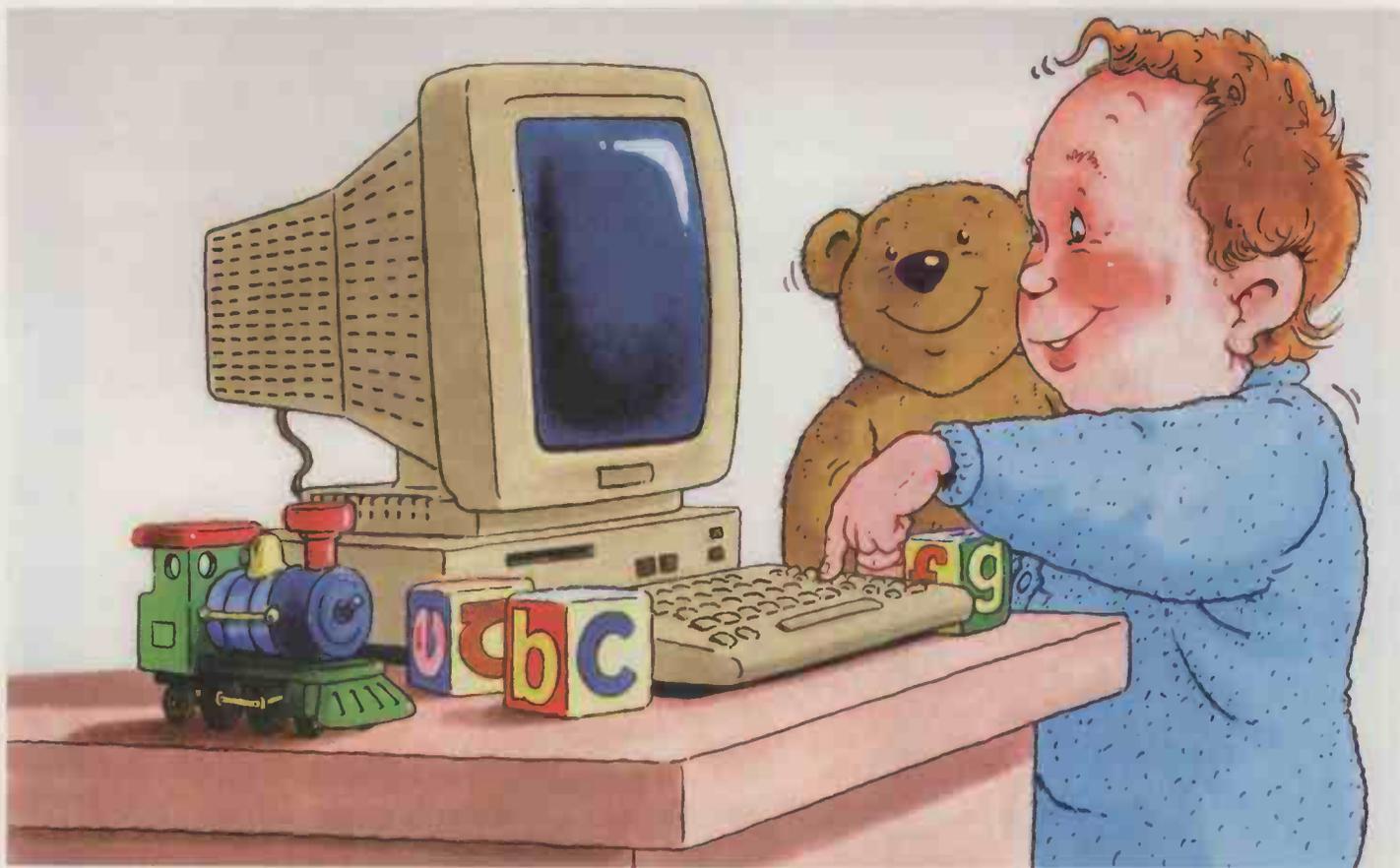
Get any of our devices today and we'll give you a full refund if you're not totally satisfied within 14 days of your purchase.

Find out more, call us now on

**0181-841 6711**  
fax 0181-841 7133

**MarkTech**  
SYSTEMS LTD

1 Belvue Business Centre, Belvue Rd  
Northolt, Middlesex UB5 5QQ



## Software protection is child's play with DESlock.

Parallel/  
Serial



PCMCIA



Millions of pounds is lost every year through the mis-use of software and even piracy. Policing of the industry is difficult, and sometimes ineffective or non-existent abroad. Therefore the emphasis falls on you to protect your own investment. You need to create and distribute more secure software products.

Thankfully now the whole process of software protection is made easy with the latest range of security products from Data Encryption Systems, the UK's leading software protection specialists.



### Data Encryption Systems Limited

Silver Street House,  
Silver Street, Taunton,  
Somerset. TA1 3DL

Telephone 01823 352357

Fax 01823 352358

BBS 01823 352259

deskey@silvercityscape.co.uk

DESlock and DESkey are the easy way to implement software protection, combining to create an impenetrable level of protection against illegal use of in-house and third party software. And it's so much quicker.

Until the advent of DESlock, you would have spent hours implementing software protection. But now it's as easy as typing a one

line command or clicking on a windows icon. It will take you seconds not hours. And you don't even need to access any source or .OBJ files.

It really is child's play.

DESlock is designed for DOS and Windows software and can also protect networked applications using only one DESkey.

All DESkeys are transparent in use and therefore do not interfere with the normal operation of the computer and its peripherals. This leaves your customer free to legitimately use your protected software any way they choose.

DESkeys are available in a variety of low-cost high-speed models which include the standard DK12, the DK37 PCMCIA device, the DK8 Mac DESkey and the immensely sophisticated and versatile DK2 and DK96.

Member of  
**FAST**  
Promoting the legal  
use of software

# FREE WITH EVERY MODEM

- ★ FREE Netscape Browser with 30 days free access to the World WideWeb
- ★ FREE Compuserve access software and WWW software plus 30 day trial
- ★ FREE and friendly technical support
- ★ FREE 14 day money back guarantee

## INTERNET SUBSCRIPTION SPECIAL OFFER

With every purchase of a faxmodem you may take advantage of our special arrangement with Unipalm PIPEX - the UK's leading Internet provider. One month unlimited access to the WWW (but no e-mail) followed by 3 months full and unlimited access to the Internet incl. E-Mail, FTP and WWW for only £70 + vat and thereafter at £15 + vat per month.

With all faxmodems we offer at an **exceptional price** either:

DIAMOND 1*	Eclipse Fax 6 Professional fax software (instead of LITE software)	<b>£12</b>
DIAMOND 2*	Eclipse Fax 6 + 16550 serial port + High Speed Serial cable	<b>£29</b>

### ECLIPSE FAX 6.0 FEATURES

- OCR support
  - Auto fax forwarding
  - Unique Fax Assistant
  - Fax Broadcasting
  - Superb Phonebook
  - Scanner support
  - Image enhancement
  - Numerous pre-designed coversheets
- \*only available at time of purchase

## FAX PHONE SWITCHES

### FAXLINK FDS 3500



Our Faxlink faxswitch ensures that 100% of all your faxes are received and routed to your fax device. No need for an expensive second line costing £459 over three years.

The top selling fax switch, ideal for the home and small business. Connects up to 4 phones, an answerphone and either a modem or fax for foolproof reception of faxes or voice calls.

### FRONTIER TRIOLINE

The fax switch for the busy office or where data as well as fax calls are expected. It automatically answers the phone and determines the type of call. Four different modes of operation cover most domestic and business situations.



only **£119** +vat

Full ordering and product details from our Web Server on <http://www.electron.com>

## ORDER NOW!

To place your order or request a FREE 32 PAGE CATALOGUE:

**TEL: 01734 810600**  
**FAX: 01734 811600**

We are now open  
Mon-Fri 8.45am - 5.45pm  
and Saturday 9.30-1.30

PERSONAL CALLERS  
MON - FRI ONLY

The Electronic Frontier Ltd,  
6 Vulcan House, Calleva Park,  
Aldermaston Berkshire, RG7 8PA

Prices subject to change without notice. All prices exclude VAT and delivery. Gov & Educ. POs accepted. All trademarks acknowledged. Courier Delivery £9. E&OE.

DEALER AND VOLUME ENQUIRIES WELCOME

# ELECTRONIC Frontier

## THE Frontier VIPER

INTERNET  
PIPEX

STUNNING DESIGN,  
GREAT PERFORMANCE  
& A LOW LOW PRICE

V34 from  
**£135**

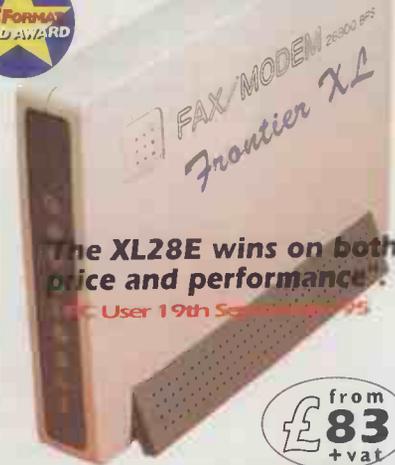
- UK built and BABT approved
- Full compatibility with all standards V34 or V32bis and V22bis, V22, V21 and V23
- Hardware error correction and compression (V42, V42bis)
- Telephone socket for easy automatic telephone dialing
- Rugged metal case on external models, 16550 UART on internal models
- Group 3 fax operation at speeds up to 14,400 bps

	V32bis Model	V34 Model
Frontier Viper Internal	<b>£75</b>	<b>£135</b>
Frontier Viper External	<b>£85</b>	<b>£137</b>
FAX SOFTWARE INCLUDED - SERIAL CABLE £9.50		



Internet  
ready

## THE AWARD WINNING Frontier XL RANGE PERFORMANCE & STYLE AT VERY DISTINCTIVE PRICES



The XL28E wins on both price and performance.

from **£83** +vat

- V34 & V.F.C. 28,800 or V32bis 14,400 bps
- V42 error correction and V42bis compression
- Group 3 fax operation with Class 1 & 2
- 16550 UART on internal models
- Winfax/Dosfax & COMIT LITE software
- Speeds also V32, V22bis, V22, V21
- Also MNP 2-5 and V.17 14,400 fax speeds
- Leased line and Sync capability (Ext models only)
- BABT approved plus most European countries
- 16550 card available for external models £23.95

"Frontier XL14E is easily .NETs best buy".

■ NETS Magazine April '95

	V32bis Models	V34 Models
Internal Faxmodem	<b>£83</b>	<b>£145</b>
External faxmodem	<b>£85</b>	<b>£149</b>
Apple Mac Faxmodem	<b>£89</b>	<b>£159</b>
SERIAL CABLES FOR PC & MACS £9.50		

## MICROFAX 144/288

A POCKET FAXMODEM THAT LETS YOU RECEIVE FAXES EVEN WITH THE PC OFF!

- Uploads stored faxes from its memory to your PC
- Receives faxes on your printer...turn it into a plain paper fax machine
- Remote retrieval of fax messages
- Send faxes without PC software - ideal for palm tops and PDAs
- Incoming faxes can be redirected to another number
- And its either a V32bis or V34 modem
- Optional battery pack
- Made in the UK and BABT approved



V34 model now available

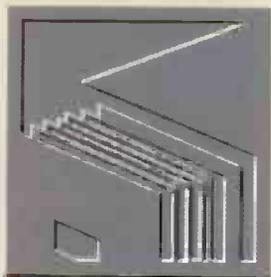
	144 Model	288 Model
	<b>£199</b>	<b>£299</b>
CLIP ON BATTERY PACK (needs 4 x AA Alkaline batteries) £22		



from **£85** +vat

voted the UK's best Zoom reseller by readers of PC Direct Magazine in June '95

	14,400	28,800
Internal	<b>£85</b>	<b>£149</b>
External	<b>£89</b>	<b>£165</b>
MAC	<b>£99</b>	<b>£179</b>
SERIAL CABLE £9.50		



## This Codd be the last time

**Mark Whitehorn wraps up the last of the list of suggested rules for modern, PC-based RDBMSs. There's Postcode, too, in shareware and full versions to help you get addressed correctly.**

**R**ule 10. The RDBMS must have a comprehensive control language (for example, SQL).

In order to act as a front-end to a database server, PC-based RDBMSs must have a control language and SQL is the obvious choice. Yes, I know SQL is flawed and that it is incomplete; I know it has many variations; but at least it is well established.

In addition, an RDBMS which has any pretensions towards use for serious work needs its own internal control language. While SQL can be squirted to remote database servers, the internal language is used to drive the interface, link forms and performing data validation. Whether this language is based on Basic, Pascal, C or any other reasonably common language doesn't matter too much as long as it is reasonably comprehensive. Support for macros is not, in my opinion, an acceptable substitute unless the DBMS is going to be used only for very simple databases.

### Simple tasks

11. In addition, it must have a GUI interface which allows end-users to perform simple tasks like querying, reporting, etc.

The underlying language is essential for serious work, but who wants to code the bread and butter work (forms, queries and so on) by hand? GUIs have proved themselves remarkably well-suited to the task. I must admit to a personal liking for systems (like dBase for Windows) which allow you to use a GUI to build a form, say, but can then use your work to generate a code description of the form which you can then hand-tweak.

### Results

12. The results of queries (answer tables) should, whenever possible, be editable.

This is, essentially, as Codd's Rule 6: "All views that are theoretically updatable are also updatable by the system". A "view" is essentially the same as an answer table.

As discussed in an earlier issue, actually determining whether each and every view is updatable has been shown to be impossible. However, it is easy to decide about most views and the RDBMS should allow us to update all of those views where it is clearly safe to do this. Of the current

crop of RDBMSs, only Access and Paradox provide editable answer tables and of these Access has the more extensive implementation.

### Multiple records

13. It must be possible to alter multiple records with a single command.

And this is essentially Codd's Rule 7: the "High-level insert, update and delete" rule. Most of today's PC-based RDBMSs provide this facility though some of the more simple DBMSs don't.

### Cascade

14. The RDBMS must support referential integrity, with cascade update, cascade delete, etc.

Primary keys help to ensure that the data within tables is internally consistent. By something of the same token, Referential Integrity is a way of ensuring that the logical relationships between tables are maintained.

Given the two tables in Fig 1, it is clear that the numbers in PATIENTS.[Gp No]

Table: GP			
GP No	GP First Name	GP Last Name	GP Tel No
1	Frank	White	01382 34578
2	Jimmy	Page	01382 12356
3	Pete	Brown	01382 56798
4	Peter	Smith	01382 23564
5	Sarah	Jones	01382 23467
6	Sarah	Smith	01382 65421

Table: Patients				
CHI	First Name	Last Name	DOB	Gp No
23224	Sally	Harrison	6/8/34	2
23421	Fred	Smith	12/6/78	3
2346234	Fred	Burrige	12/7/89	5
3644	Mark	Wellington	4/6/78	6
54334	Tom	Jones	6/8/56	6
54376	Simon	Smith	5/7/68	6
54555	Jenny	Jones	3/6/78	3

Fig 1 Showing the association between GP.[GP No] and Patients.[Gp No]

refer to those in GP.[GP No]. So both Fred Burrige and Tom Jones share Sarah Jones (no relation, at least in the kinship sense) as their GP. Considering that the GP table only contains six GPs, numbered one to six, it would be meaningless to place the number seven in the PATIENTS.[Gp No] field; unless of course we added another GP with that number to the GP table. Referential Integrity provides this check, and refuses to allow an entry in PATIENTS.[Gp No] unless there is a corresponding value in GP.[GP No]. Referential Integrity will also forbid the deletion of a GP record if it refers to one or more PATIENT records which exist. To allow this deletion would leave "orphaned" records pointing to a non-existent GP.

#### • Cascade Delete

So, what of cascade delete? This is an option for referential integrity, an add-on if you like, which says that if you do delete an existing GP record, referential integrity is maintained by deleting all of the PATIENT records which refer to that GP record. Typically, if cascade delete had been set for this join, when you tried to delete the GP record the system would warn you that Patient records would be deleted as well, and offer you the choice to proceed or abort the process.

You, as the database designer, may decide that cascade delete is inappropriate in this case (which it clearly is) but it can be really useful in other circumstances: in order/sub-order systems, for instance. RDBMSs should offer it to us as an option so that we can decide if and when to apply it.

#### • Cascade Update

"Standard" Referential Integrity will also not allow you to delete or change the value in GP.[GP No] when that value is referenced by records in PATIENTS. Cascade Update, like Cascade Delete, is an optional extra which can be added to Referential Integrity. It will allow you to change the value in GP.[GP No] and it will then seek out and update all the values in PATIENTS.[Gp No]. This will be entirely inappropriate for some applications while for others it will be an essential requirement. On those occasions, you will be pleased that you chose an RDBMS which supports it, and so will your employers when you casually let them know all about the excellent choice you made.

#### Support and sort

15. *The RDBMS must support the maintenance of indices as well as sorting.* Human beings like their data to be sorted

### Postcode — an interesting new toy

Postcode, from AFD Software, is a system which looks up addresses from postcodes. Suppose that you are developing an application in, say, Delphi. Your client wants to be able to type in a postcode and have the address magically appear on screen (great for telesales operations). As the programmer, you could, over the next three years or so, dutifully type in all of the known addresses and postcodes... or you can simply plug the Delphi version of Postcode into your application. Sample code is already provided for Visual Basic (for DOS or Windows), MS Access, Delphi, Paradox and others. If you want Postcode for other, less well known systems, AFD says it will write sample code for you. The datafile is about 18Mb, which includes the indices which reduce typical search times to less than one second.

Nildram Software has been appointed as distributor for the shareware release of Postcode. It ships with a DOS TSR version, a Windows version supporting DDE and direct pasting into applications, plus programming interfaces for the languages described above. Due to licensing restrictions the shareware version of Postcode doesn't supply addresses down to street-level detail — just towns and counties. Happily, for those intending to download it via a modem, this also reduces the size of the data file to about 600Kb. This version can be registered for just £42.50 (plus VAT) with no other licensing costs. If you want the full version which works down to the street level, it is still only a modest £99 (plus VAT) for the software and an annual licence fee of £55.

A Unix version of Postcode is currently under joint development between Nildram Software and AFD, and is expected to ship in the early Autumn. Pricing has yet to be announced but should be as competitive as the DOS and Windows version.

You can try out Postcode on-line at <http://www.nildram.co.uk/nildram/postcode.html>. On this Web page you can test out the Unix version of the software while on-line, download a copy of the shareware version, and even register it there and then. For users who only have FTP access, a shareware version of Postcode can be obtained from <ftp://ftp.nildram.co.uk/pub/nildram/afdpost.zip>. Nildram also runs a BBS where users can download the software for free, on 01442 891109 with your modem for access.

SERIES 3a

<b>256K £189</b>	<b>512K £219</b>
<i>1mb Ver £259</i>	<i>2mb Ver £305</i>
<i>All with Free Software</i>	

Software	Accessories	
New Autoroute	£54 Fax Modem	£149
Games Deluxe	£32 3 Fax Software	£39
Act for Psion	£79 Mains Adaptor	£12
Account & Exp	£27 Print Link	£24
Psion Money-3a	£39 Psi Win Link	£62
Banker	£34 Mac Link Plus	£62
Chess - New 3a	£29 Leather Case	£12
Spell Checker	£28 Exec Case	£18
Games Pack 3a	£29 SSD Wallet	£15
Berlitz Interpreter	£28 Desk Stand	£14
Berlitz Phrase	£30 Disk Drive	£195
Games Packs	£24 Books	
New Toolkit 1	£38 First Step Prog	£13
Timebase Solo	£72 Serious Prog S3a	£15
Contact Edge	£72 Serious Prog S3	£15
Data DeLuxe	£49 Graphic Prog	£13
Data View	£44 100 Questions 3a	£10

SSD'S		128K Flash	£28
256K Flash	£45	128K RAM	£39
512K Flash	£69	512K RAM	£99
1mb Flash	£92	1mb RAM	£189
2mb Flash	£149	4mb Flash	£259

**PHONE FOR FULL PRICE LIST**

**☎: 01202 302796**

**FAX: 01202 300419**

EMail(CS) 100255, 3642

<http://intertrader.com/computers/clove/>



43 Springbank Rd, Bournemouth BH7 7EL

Prices exclude delivery and VAT. Subject to availability.

## THEMIS THE SPECIALIST SUPPLIERS FOR:

INKJET & BUBBLEJET REFILL KITS

LASER TONER REMANUFACTURED CARTRIDGES

PRINTER RIBBON RE-INKING MACHINES

WANT TO SAVE MONEY?  
THEN CALL NOW FOR OUR LOW, LOW PRICES  
OR SEND FOR OUR FREE BROCHURES!



01883 330333

fax 01883 330888



# Where other databases leave you with questions...

**At the security company:**  
What other equipment have these cowboys sold us?

**At the recruitment agency:**  
How long will it take us to see who we've got with experience in VB, security and comms?

**In the research section:**  
You mean we can't just look for everything in the database that mentions it?

**In the MD's office:** What do you mean "we don't know how many fault calls relate to this" - it's on the computer isn't it?

**In the library:**  
Have you got any background on [fill in pet hate]?

... Blackwell

# Idealist

has the answers

## Just think of it.

a database that's flexible enough to store and retrieve all your information in the way that you want.

a database that delivers your search results in less than a second, however large the database

a database that automatically indexes every bit of your information so that it can find it again, wherever it is stored.

Blackwell **Idealist** has all of these features and a lot more besides.

**Idealist** gives you fast and genuinely flexible access to your information: at your desktop, to your colleagues on a network, or to your customers via CD-ROM. Every word is indexed so that all your information can be stored, not just the bits that 'fit'. In an **Idealist** database, your information can be searched for and retrieved by any word, number or date, wherever it appears in the database. Variable field length and multiple record types per file also allow you to design your database to fit your information, rather than the other way round.

**Idealist** will display graphics within your databases - such as in a library-style catalogue with links to documents in an image archive. It will allow you to import information from disparate sources, like bibliographic records from online services and word-processed documents, store them alongside one another, and lets you search them simultaneously. It also lets you mailmerge, print labels, or to link into other packages such as spreadsheets via DDE.

*The applications are innumerable, but the principle is simple: if you have information that you need to retrieve, but can't be sure what you'll need to find, Blackwell*

*Idealist has the answer.*

**It finds everything.**

**Blackwell  
Science**

## Version 4 upgrade now available!

Please send me a free **Idealist** demo disk and information pack.

Please send me \_\_\_\_\_ copies of **Idealist** (16 bit for Windows 3.1) @ £99.50 + VAT/ **Idealist** (32 bit for Windows 95/32S/NT) @ £149.50 + VAT

I enclose a cheque for £ \_\_\_\_\_

Please debit my credit card for £ \_\_\_\_\_

Visa/Access/AMEX \_\_\_\_\_

expiry date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Organisation \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Postcode \_\_\_\_\_

Tel/fax \_\_\_\_\_

Blackwell Science Ltd,

Osney Mead, Oxford OX2 0EL, UK

Tel: (01865) 206206 Fax: (01865) 791738

e-mail: idealist@blacksci.co.uk

PCW 12/95

Download a working copy of the demo at  
URL: <http://www.blacksci.co.uk>

All trademarks acknowledged

either numerically or alphabetically. But records in a table are rarely entered in alphabetical order so if we look at the table "in the raw" the records are usually not in the order we want. The answer is to get the RDBMS to order them for us.

One way in which the RDBMS can do this is to sort the records by physically moving them around in the table — that is, by changing their position within the file on disk. Given a file of any size this process is horribly slow because of the disk I/O involved. In addition, as soon as more records are added, the entire process has to be redone. Worse, what happens if you want to see the data sorted in different ways? You might sometimes, for instance, want the data sorted alphabetically by name, yet at other times by telephone number. If this is done by physical sorting on the disk, the RDBMS will have to maintain two tables, each sorted by a different field. Clearly this is wildly inefficient.

In the light of this problem, indexing was born. An index is essentially a list of numerical values which gives the order of

The screenshot shows three tables in Microsoft Access. The top table is 'Table: GP' with columns GP No, GP First, GP Last, and GP Tel No. The middle table is 'Table: Last Name Index' with columns Index on LastName and GP No. The bottom table is 'Table: Tel No Index' with columns Index on Tel No and GP No.

GP No	GP First	GP Last	GP Tel No
1	Frank	White	01382 34678
2	Jimmy	Page	01382 12366
3	Pete	Brown	01382 66798
4	Peter	Smith	01382 23664
5	Sarah	Jones	01382 23467
6	Sarah	Smith	01382 66421

Index on LastName	GP No
1	6
2	5
3	4
4	3
5	2
6	1

Index on Tel No	GP No
1	4
2	5
3	6
4	3
5	2
6	1

**Fig 2** On the right are two tables mimicking the way in which indices work. The upper one shows how an index based on how [GP Last Name] would look; the lower one represents an index based on [GP Tel No]

the records when they are sorted on a particular field. For example, in Fig 2 you can see the GP table in its original state: the records are in "entry" order. If we generated an index on the [GP Last Name] field, it might look like the table on the right called Last Name Index. This shows that given the required sort, the last record would be [GP No] = 1, Frank White. To save you the trouble of verifying this, the table shown lower left contains the same

records actually sorted by last name. Another "index" is also shown (bottom right) for Tel. No — if you are feeling dedicated you can check to see whether it is correct.

Compared to physically moving records around on disk, indices are much easier and faster to generate and maintain. In addition, you can have as many indices as there are fields in your table without wasting too much disk space.

### Quick queries

Indices are really useful for sorting data for human consumption but they are also invaluable for speeding up processes like querying. A word of caution however: despite their efficiency, indices do take some processing power to maintain and shouldn't be used indiscriminately.

So how do you know which fields you need to index? The answer to this question comes under a more general heading, namely "How do I speed up my database?" Readers have asked me to discuss this more general topic, so I will return to the subject of indices in a couple of issues' time.

For the moment, the bottom line is that any RDBMS worth its salt must allow you to mark one or more fields as indexed. This is usually done during table design, and once you have done that, the RDBMS should construct and maintain the indices transparently.

## Tips & Tricks

Tips and tricks are proving popular, so let's have some more — I'll supply the ones I find and if you have any good ones, for whatever RDBMS, please send them in.

### Grid tip

From Shane Devenshire, Walnut Creek, California: "Access uses a Snap to Grid feature to help align controls on forms and reports. Unfortunately, it may appear not to have any effect when you first begin to use Access because the default is 64 gridlines per inch. At this resolution Access chooses not to display the grid on screen (even if you have selected "Show Grid" to be on); and the impact of this very fine grid on the positioning controls is negligible.

The spacing of the gridlines are Form Properties. You can set the spacing to less than 64 but you will find that you still can't see the grid until the Grid X and Grid Y properties are set to less than 18."

The screenshot alongside shows the property setting for a form and the relevant grid settings are visible. It also shows (on the right) the place where you can see and alter the "Show Grid" option. This is a property for the entire database so you set it by popping down the View menu, selecting Options and highlighting Form & Report Design. If you don't want the controls to line up with the grid, set the "Snap to Grid" option (found in the Format menu) to Off.

In my experience, Access 1.1 defaults to Grid X = 5 Grid Y = 5 for blank forms,

and Grid X = 64 and Grid Y = 64 for wizard-generated forms. My copy of 2.0 defaults to Grid X = 10, Grid Y = 12 for both, but I haven't examined this extensively, so "your mileage may vary".

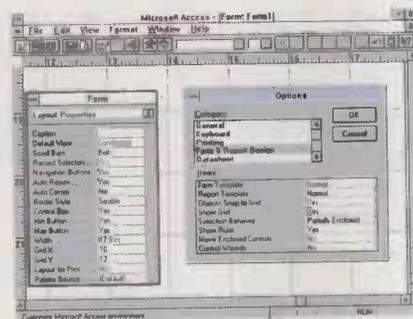
This take-home tip is excellent. Whichever version of Access you are using, be aware that you can alter the grid size, which in turn affects how controls line up on the form.

### Broad search

In the very simple DBMS called Q&A you can use the search facility to find data in fields, but the search, by default, is exact. To find, say, all data containing the word "Penguin" use:

..Penguin..

which should find entries such as: "The Adventures of Penguin Penguinsson".



Setting the Form Properties in Access so that objects snap to grid

## PCW Contacts

Mark Whitehorn welcomes readers' correspondence and ideas for the Databases column. He's on [m.whitehorn@dundee.ac.uk](mailto:m.whitehorn@dundee.ac.uk)

Nildram Software 01442 891331.  
Fax 01442 890303.  
Email [sales@nildram.co.uk](mailto:sales@nildram.co.uk)



**NEW  
LOWER PRICES**

# They're the



## Estima SONATA

### VERSATILITY - AT WORK AND AT HOME

WHEN HOME IS OFTEN YOUR PLACE OF WORK, IT'S NO WONDER SO MANY PEOPLE LIKE YOU CHOOSE THE BEST-SELLING SONATA 486 MULTIMEDIA NOTEBOOK WITH ITS PROVEN TRACK RECORD FOR HIGH PERFORMANCE, QUALITY AND AFFORDABILITY. THE SONATA HAS THE POTENTIAL FOR UNLIMITED POSSIBILITIES FROM PERSONAL HOME COMPUTING, BUSINESS APPLICATIONS RIGHT THROUGH TO A LITTLE LIGHT ENTERTAINMENT - FOR YOU OR THE KIDS.

Slim and stylish the Sonata features an ergonomically designed centrally located 19mm trackball for easy and accurate fingertip control and utilises 32 bit VESA Local Bus, coupled with a windows accelerator chip to display 256 vivid colours on either the 10.4" DualScan or 9.5" TFT Screen. For the added dimension and excitement of sound, the internal speaker and microphone provide all the high quality sound you need to enhance your multimedia presentations or computer games. The PC Card Slots offer unlimited expansion via two Type II slots or a single Type III and when you want to go on working, replace the floppy disk drive with a second battery that provides for up to six hours non stop use. The Sonata, quite simply, is the most affordable high speed Multimedia 486 Notebook that fits comfortably within your lifestyle at work or at home.

ROCK SONATA - PRICE GUIDE			
75MHz 486DX4 DualScan (4Mb)	<b>£1,299</b>	75MHz 486DX4 TFT (4Mb)	<b>£1,699</b>
100MHz 486DX4 DualScan (8Mb)	<b>£1,449</b>	100MHz 486DX4 TFT (8Mb)	<b>£1,849</b>
OPTIONS			
510Mb HDD Upgrade	<b>£100</b>	20/32Mb RAM Upgrade	<b>£Call</b>
4 to 8Mb RAM Upgrade	<b>£Call</b>	Docking Station	<b>£349</b>
8 to 16Mb RAM Upgrade	<b>£398</b>	FAX / LAN PC Cards	<b>£Call</b>

ROCK COMPUTERS IS ONE OF THE LARGEST SUPPLIERS OF NOTEBOOK COMPUTERS IN THE UK AND AS A FOUNDER MEMBER OF THE PERSONAL COMPUTER ASSOCIATION WE ADHERE TO A PROFESSIONAL CODE OF PRACTICE. PERSONAL BUYERS PAYING BY CHEQUE ARE ASSURED OF FINANCIAL SECURITY THROUGH THE PCDMA PAYMENT PROTECTION SCHEME.

- Intel 486 SL Enhanced processor
- 4/8Mb RAM (Exp to 16/20/32Mb)
- VESA Local Bus Windows Accelerator
- 1Mb Video RAM (Ext. CRT 1024x768x256 Cols)
- 10.4" DualScan or 9.5" TFT Screen
- Simultaneous LCD / External Monitor Support
- VESA Local Bus 340Mb or 510Mb HDD
- 3.5" 1.44Mb FDD (Interchangeable with 2nd Battery)
- 2 x PC Card 2.0 Type II Slots or 1 x Type III
- Soundblaster Compatible Sound System
- Digital Status LCD Indicator with Graphical Icons
- In-Built Logitech 2-button Trackball
- High Power NiMH Battery Pack
- Serial, Parallel, VGA & Keyboard Ports
- Optional Multi-Media Docking Station
- 285mm x 230mm x 48mm & 2.8Kg
- High Quality Carry Case
- Windows 95 or DOS v6.22 & Win v3.11

**0% INTEREST  
FREE  
CREDIT**  
On selected models



Typical Example  
Cash Price **£2348.83**  
10% Deposit **£164.30**  
6 Installments **£352.32**

\* Subject to availability. \*\* Notebook Only, Excludes Delivery Charges & must be returned in "as new" condition. Specifications may be subject to change without notice. All Trademarks acknowledged E & OE. Pentium® is a registered trademark of Intel Corporation. All Prices Exclude VAT, Finance available subject to status

### To Order Call Rock Computers Direct

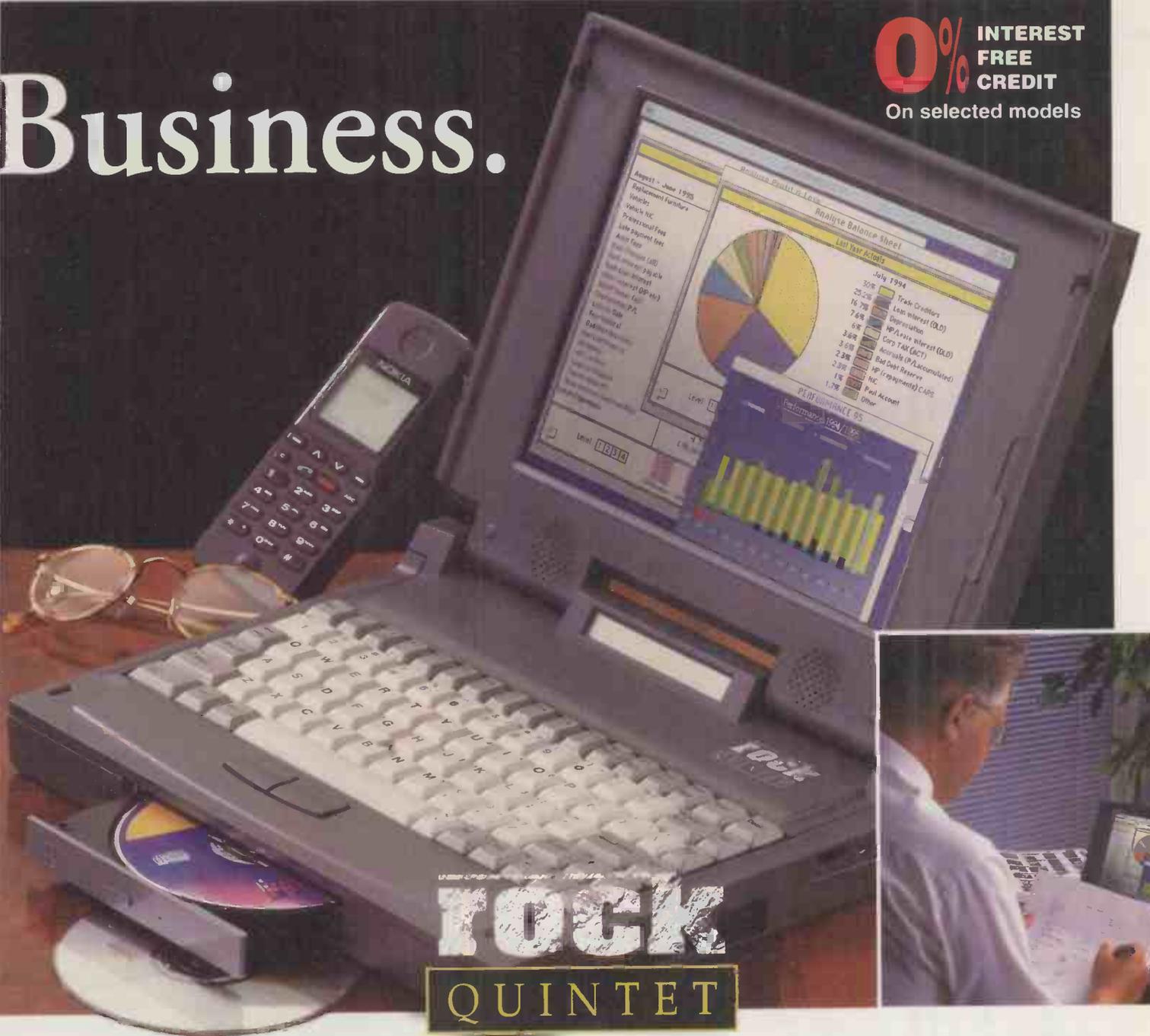
875 Plymouth Road Slough Berkshire SL1 4LP  
**Tel: 01753 567899**  
Fax: 01753 567007

121 Regent Street, Leamington Spa Warks CV32 4NU  
**Tel: 01926 832291**  
Fax: 01926 832279

Authorised Dealer P.C.P Ltd. - Preston, Lancs Tel: 01706 861101

# Business.

**0% INTEREST FREE CREDIT**  
On selected models



## THE ULTIMATE BUSINESS NOTEBOOK

**BUSINESS IS GETTING FASTER AND THE EXPECTATIONS YOU INCREASINGLY HAVE TO MEET ARE NEVER ANYTHING LESS THAN SKY HIGH. WE KNOW THAT - THAT'S WHY OUR NEW QUINTET IS THE ULTIMATE BUSINESS NOTEBOOK WITH THE PERFORMANCE TO DELIVER ALL THE SPEED AND POWER YOU NEED YET CONTAINED IN A LIGHTWEIGHT AND STYLISH PACKAGE.**

The compact Quintet is Pentium® processor based and offers full-size CD-Rom capability with a built-in 5.25" Dual Speed Drive, 16 bit Soundblaster Pro compatible sound system and the ability to play MPEG movie CD's. The Quintet is able to bring a stimulating new quality to business presentations, seminars or sales opportunities. Naturally The Quintet can be linked into other peripheral equipment including monitors, printers and modems to offer an exciting world of audio/visual possibilities. Utilising either the 10.4" DualScan or 10.4" TFT Colour Display for crystal clear imagery to bring your multimedia information brilliantly alive, The Quintet becomes a persuasive communicator of the ideas and information that you wish to convey. When you're constantly on the move, but expected to deliver the ultimate business presentations which count for so much, you'll be surprised at how affordable the Quintet Multimedia Notebook Computer is - and how much it can do for you.

- Intel Low Power Pentium® processor
- 8Mb RAM (Exp to 16 or 32Mb)
- PCI Local Bus Windows Accelerator
- 1Mb Video RAM (Ext. CRT 1024x768x256 Cols)
- 10.4" DualScan or 10.4" TFT Screen
- Simultaneous LCD / External Monitor Support
- Internal Full Size Dual Spin CD-ROM Drive
- Removable PCI Bus 540 / 810Mb or 1.08Gb HDD
- 3.5" 1.44Mb FDD (Interchangeable with 2nd Battery or MPEG Full Screen Movie Video Module)
- 2 x PC Card 2.0 Type II Slots or 1 x Type III
- 16-bit Soundblaster Pro Compatible Sound System & Stereo Speakers
- Digital Status LCD Indicator with Graphical Icons
- Keyboard Embedded 2-Button Trackpoint Device
- Infrared Transceiver (IrDA Compliant)
- Optional Mini Docking Station
- 299mm x 236mm x 55mm & 3.2Kg
- Windows 95 or DOS v6.22 & Win v3.11

ROCK QUINTET - PRICE GUIDE			
75MHz Pentium® Processor 10.4" DualScan	<b>£1,999</b>	75MHz Pentium® Processor 10.4" TFT	<b>£2,599</b>
90MHz Pentium® Processor 10.4" DualScan	<b>£2,099</b>	90MHz Pentium® Processor 10.4" TFT	<b>£2,699</b>
100MHz Pentium® Processor 10.4" DualScan	<b>£2,199</b>	100MHz Pentium® Processor 10.4" TFT	<b>£2,799</b>
OPTIONS			
Upgrade to 16Mb RAM	<b>£398</b>	1.08Gb HDD Upgrade	<b>£400</b>
Upgrade to 32Mb RAM	<b>£Call</b>	MPEG Module	<b>£Call</b>
810Mb HDD Upgrade	<b>£200</b>	Mini Docking Station	<b>£199</b>

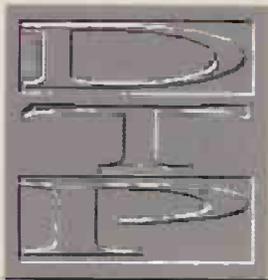
THE 'ROCK SOLID' SUPPORT PROGRAMME IS AVAILABLE WITH ALL MODELS AND MEANS \*24 HOUR DELIVERY \*7 DAY MONEY BACK GUARANTEE \*3 YEAR LABOUR WARRANTY \*LIFETIME TECHNICAL SUPPORT \*BRITISH COMPANY

**SEE US AT THE COMPUTER SHOPPER SHOW FROM 30TH NOVEMBER**

**SPECIAL TERMS**  
GOVERNMENT, EDUCATIONAL & FTSE100



**ROCK**  
COMPUTERS



## Layering it on a bit thick

**Gordon Laing looks at what layering can do for paint and photo retouching applications, and finds some funky fonts, too.**

**T**his month I'm going to look at a technique that can be used in layout, vector drawing and even some bitmap paint packages. The layering facility is apparently universal and extremely useful.

Like many other well-programmed electronic publishing tools, layers are best understood and used if you imagine you're working with conventional art materials. Each layer acts like a sheet of transparent acetate onto which various items may be placed. The cunning part is that layers can be reordered (placing certain elements over or behind others), moved, or even deleted altogether without affecting the layers above and below — experimentation without commitment.

Layers have been a staple part of vector drawing and DTP packages like FreeHand, Illustrator and CorelDraw since day one. Who could consider PageMaker

or Quark XPress without the facility to place pictures over text or vice versa? Many thought that's where it would end, and while layers would be nice on bitmapped packages they would probably remain a pipe dream.

In the past year or so innovative programmers have incorporated layers into such bitmapped paint and photo retouching applications as Fauve Matisse, which inspired Micrografx and Adobe to include the facility in Picture Publisher 5 and Photoshop 3.0. Incidentally, MacroMedia (the company which took up the FreeHand reins following the Adobe/Aldus merger) has recently acquired Fauve. This expands MacroMedia's portfolio substantially with two excellent bitmap packages, Matisse and, particularly, Xres.

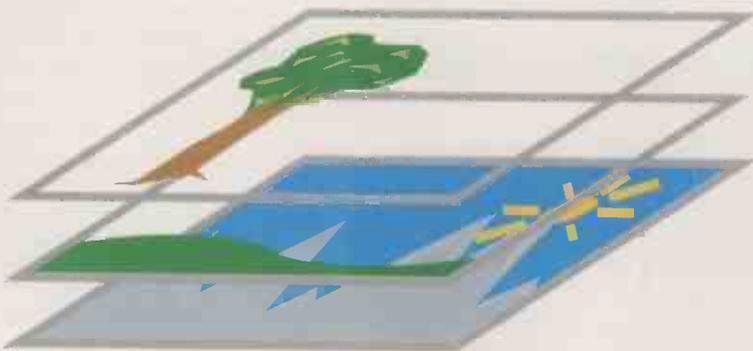
Layers in bitmap packages work in exactly the same way, allowing you to

manipulate layers to create the desired effect. Most packages also allow you to temporarily "switch off" one or more layers, in order to get a clearer view.

Prior to layers, any modifications made to bitmapped images were permanent and rarely reversible beyond a few levels of undo. This could be a real problem when you pasted an element on to the image which, once deselected, became a permanent fixture. If you'd wanted to move it a bit to the left, you could forget it. You could experiment to a certain extent with channels, but it wasn't an ideal situation.

So that's the theory; what about the practice? With bitmaps still in mind we'll begin with the ubiquitous Photoshop 3.0, although as usual any techniques discussed will be applicable with little modification to any other layer-equipped bitmapped package.

### How layers work



Separate Layers



Merged Layers

## Layers In Photoshop 3.0

1



2



3



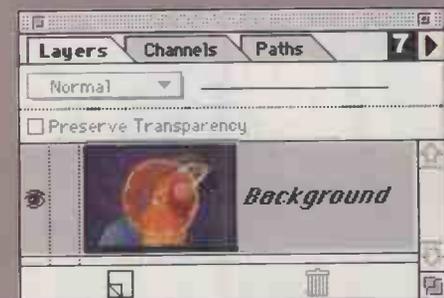
5



This montage was assembled in Adobe Photoshop 3.0 for Windows running on a P90 with 16Mb. Layers are memory hungry, so I switched to my Mac 8100/80 with 32Mb to take the palette screenshots; this configuration was much faster.

When creating a layered document, it's handy to have elements without backgrounds. The parrot originated on a dark background (1). I removed the background using the magic wand tool, resulting in the cut-out (2).

Starting with a textured asphalt background, I added two new layers: orange first, followed by the parrot (3), and palette (4). Above is the orange over the parrot (5) but set with 60 percent opacity; see palette (6). After playing around, merge the layers together; see palette (7).



### Layers in Photoshop 3.0

Three options are presented at the bottom of Photoshop 3.0's new document dialogue box, referring to the background of that new image. Background colour, not surprisingly, returns the background to the colour that existed prior to the new document command. White colours the background white but the really interesting new option, exclusive to version 3.0 and upwards, is Transparent.

Transparent backgrounds are just that — they act as sheets of acetate. You can draw or place images on these transparent backgrounds as you would a solid coloured background, with the advantage that if it's used as a layer you'll be able to see through unoccupied areas.

Layered documents are often best started with a background, which could be a picture, a solid colour, or perhaps a blend. Opening the layers palette shows just one layer, labelled background, with a thumbnail of your image. The arrow in the

top right corner of the palette presents all layer options.

Adding a new layer prompts for a name, after which a new thumbnail appears above the original background. Since there's nothing on this layer as yet, the thumbnail is blank. Each new additional layer appears above the one that is currently selected in the palette.

The layers palette arranges each layer from top to bottom — the first thumbnail is the top layer. You can rearrange the layers by dragging them around the palette.

To the left of each layer's thumbnail is a little eye. When the eye is there, the layer is being displayed. Clicking it hides that layer, which can help when things get a little complicated.

Double-clicking a layer in the palette brings up a dialogue box including options to vary the opacity of that layer. At 100 percent opacity nothing will be visible below the layer, while zero percent renders it invisible. Unless you want to

place images on top of each other as a montage you'll probably opt for, say, 40 percent opacity where the layer is clearly visible but whatever is below shows through.

So you'll have a whale of a time merrily adding new layers for pure experimentation, until at some point your system grinds to a halt. The reason is that each layer is effectively a new document at the same resolution and in the same mode as the first. If your background is a 4Mb CMYK document, each new layer will be 4Mb in size, so four layers would then be 16Mb. Layers in bitmap packages may be fun, but they're more than a little demanding on your system. Photoshop 3.0 shows both the size of the layered file and what it would be, post-merge, at the foot of the screen.

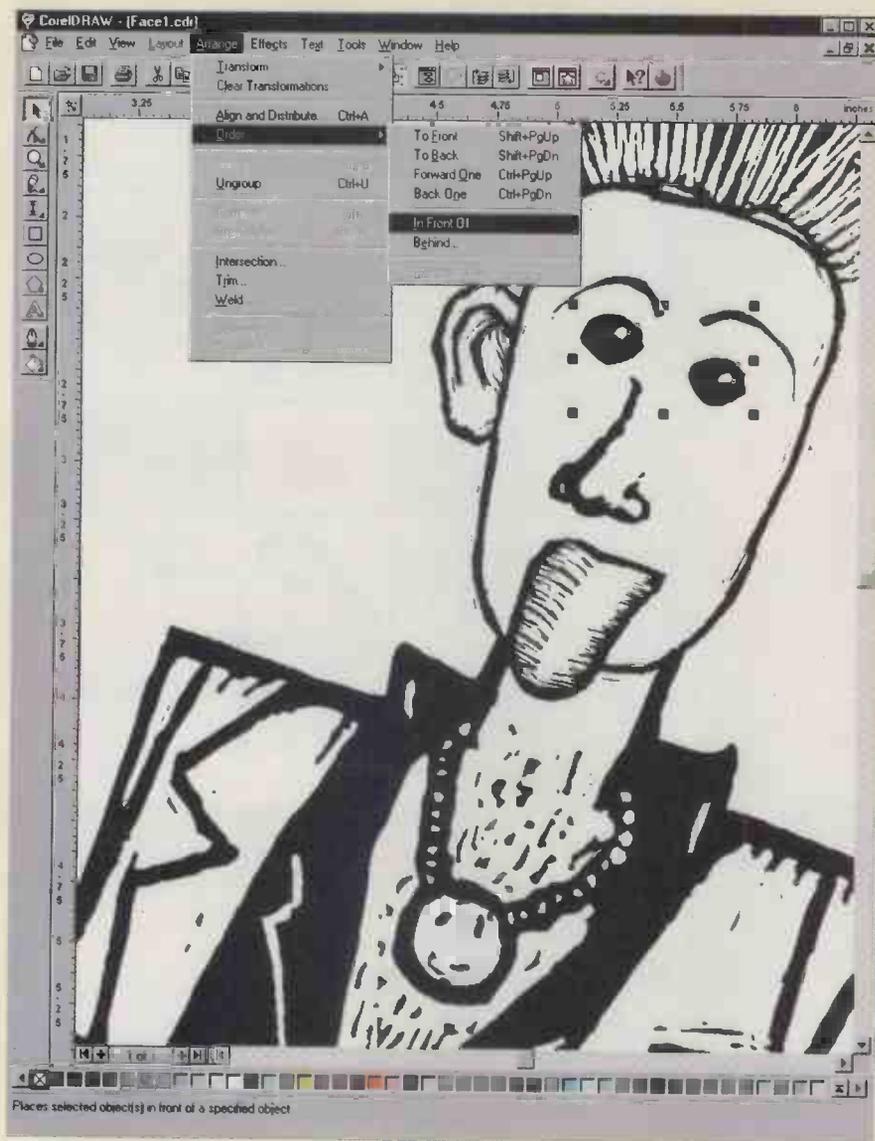
Layers are also proprietary to that application. Photoshop 3.0 can only save its layered documents in .PSD format, which can only be reopened in Photoshop 3.0. You won't want to keep them in this format for long however. Once all your work is done and you've finished switching layers on and off and moving them around, select the merge command to combine all the layers into one standard bitmap. In our earlier example, the four-layer 16Mb file will be reduced to a 4Mb document, exportable as a bog-standard TIFF. Much more manageable in size and compatibility.

### Layers in DTP and drawing packages

When working on a layout, you'll unintentionally be adding a new layer for every element you place on the page. Unlike bitmapped packages, multiple layers in DTP applications are a standard way of working and don't result in huge files.

The way to understand them is to consider each new element, be it text or a picture, as being on its own layer. As you place them on the page they sit on top, obscuring everything below: imagine a block of text on one layer, then placing a picture on the top (effectively on another layer).

As it stands, the picture would be



*Left There's no such thing as a free lunch, or a layers palette in a drawing package for that matter. Just select the desired element, then send it forward or backward a level, or all the way to the back or front*  
**Right CorelDraw 3D; the latest module in CorelDraw version 6 for Windows 95. Who knows what'll be in version 7...?**

obscuring the text below. This may or may not be the effect you would want.

Some layouts would place the text on top of the picture, particularly if it's a large type heading. It's not uncommon to place white or lightly coloured text over a predominantly dark picture. With text over picture, or picture over text, you are dealing with two separate layers.

But then there's the third option of wrapping one element around another; usually text around a picture. In this instance the two layers are merged, with one element repelling the other. There's usually an option to set the space around the edges of both elements. This is called the "runaround" and could typically, taking PCW as an example, be 8mm.

Runarounds aren't just useful for visible objects in DTP. Usually text is fitted in square boxes with vertical columns. Sometimes you want the edges to be anything but vertically straight. How about a diagonal or a wavy line? These effects can be effective. Unless you have the facility to create irregularly-shaped text boxes, you'll have to force the text to runaround in the direction and manner you desire by plonking a suitable shape in the way.

In most cases you won't want this shape to be visible. All you do is draw the line or shape you desire, force the text to runaround it, then give it the colour of the background (or no colour at all). The line disappears from view but still forces the text to flow as desired.

There's no such thing as a layers palette to navigate in DTP or drawing

## Font of the Month

# Flo Motion

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz 1234567890

applications. Instead you have to click on the desired element, then from an Item or Element menu choose to send that selected object one layer forward, one layer back, all the way to the front, or all the way to the back.

Sometimes it's difficult to select the element you require if loads are popped on top, so some applications allow you to cycle through stacked items while mouse clicking with a key held down.

It's very easy to find yourself just doing layout with a DTP package, but some fairly sophisticated shapes can be made using layers and basic tools. Remember that almost every package will be able to do squares, rectangles, circles and lines — experiment and you may not need that drawing package after all. Try placing rotated white squares over part of a filled-in circle and hey presto, you've got a cheese, or a Pacman character. Okay — not spectacular, but perhaps sufficient for some people's needs.

### Just my type

Some of you may have come across *FUSE*, FontWorks' quarterly typographic promotional pack. Each costs £30 and contains a selection of fonts, posters and information. It's all great fun and highly recommended. So far it's Macintosh only, but plans are afoot for Windows versions.

*FUSE* is over 15 issues old, but back issues are available. We recently got hold of *FUSE* 5, which includes Flo Motion by Peter Saville, Spherize by Lo Breier, Alphabet by Paul Elliman, and Scratched Out by Pierre Di Sciuolo.

This issue's font of the month is Peter Saville's Flo Motion. After graduating from the faculty of Art and Design at Manchester Polytechnic in 1978, Peter Saville was co-founder of Factory Communications. He worked there as art director for 14 years, working with New Order, a band on the Factory label.

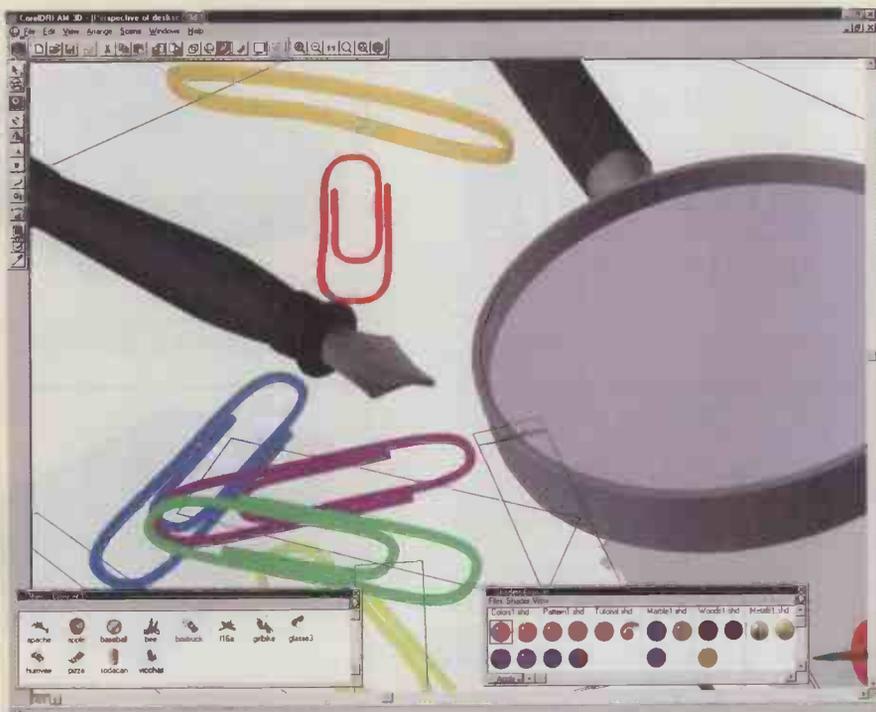
*FUSE* 5's theme was virtual reality (VR), and Flo Motion was inspired by the unresolved shapes that may be found in a low-resolution VR scenario. Saville took a traditional serif typeface, put each character through a gaussian blur, then adjusted the contrast to create Flo Motion. In fact, I think I might take an existing face and muck about with it in Photoshop and export the results into Fontographer. You never know; you may even see my work on sale one day. But it's not quite that easy: Saville's work is excellent and *FUSE* is an essential purchase for type fanatics. Let's hope FontWorks sorts out a Windows version soon.

### PCW Contacts

Next month it's our Christmas issue and I'm already polishing my baubles. If you've any festive thoughts, write to the usual PCW address or email me as [gordon\\_laing@pcw.ccmil.com](mailto:gordon_laing@pcw.ccmil.com).

Faces 01276 38888  
 FontWorks 0171 490 5390  
 Adobe 0181 606 4000

PCW



# Get tomorrow's PC today:

The outstanding new multimedia notebook PC, the Notino P75M, from Hi-Grade Computers, has just about every up-to-date feature you can think of plus a few more. And, with a Pentium processor and PCI bus, it also gives wonderfully good performance at a very competitive price.

Its CPU card contains two DIMM memory sockets and a Pentium 75MHz processor. This can be replaced with a faster 90MHz, 100MHz, 120MHz or even 133MHz chip.

The P75M comes equipped with full multimedia facilities including CD-ROM drive, stereo sound system, two built-in speakers and microphone. The floppy drive can be replaced with an MPEG module, enabling the machine to display full motion video images.

The 11.3" dual scan colour LCD display is, by notebook standards, big and easy on the eye. A 10.4" TFT display is available for an extra £470.

The infra-red port lets the Notino drive a printer or transfer data to another PC

without plugs and wires, provided those devices are similarly equipped.

Other features include built-in joystick controls for games, a MIDI port for music, a removable battery with a capacity gauge and an AC adaptor that recharges the battery while the machine is in use.

Instead of a mouse the Notino has a trackpad. This, located at the front, is a miniature screen which responds to the touch of a finger to perform pointer functions. Because it has no moving parts it is less delicate than a mouse, which can easily be affected by dirt.

Optional extras include a mini docking station, a CCD camera module, a back-up battery pack and a special AC adaptor that fits snugly into the battery slot.

Our Notino LBC2-100 was received with acclaim. It was editor's choice in a *Personal Computer World* review of 27 notebook PCs. Notinos were also picked by the Joint Services Expedition to the Andes to record its findings. We think the P75M will do equally well.

**HI-GRADE**  
**COMPUTERS PLC**

*Technology with a human face*

Unit 1, Cromwell Centre, 32 Thames Road,  
Barking, Essex IG11 0HZ  
Fax: 0181 591 1586

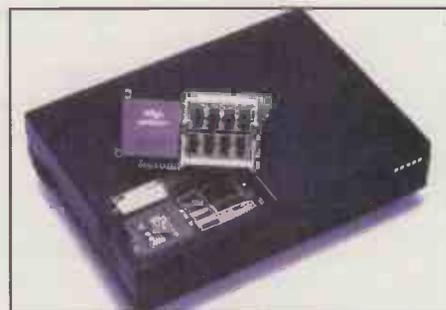
**Tel: 0181 591 9040**

2F Northern House, 6 Broughton Place, Edin-  
burgh EH1 3RX  
Fax: 0131 557 9997

**Tel: 0131 557 5999**

Britannia Suite, Royal Mail House, Terminus Tce,  
Southampton SO15 1FD  
Fax: 01703 231621

**Tel: 01703 315151**



CPU card with chip and memory



Mini docking station



Back-up battery pack, alone...



...and plugged into the Notino



Special AC adaptor, can replace removable battery.

To Hi-Grade Computers PLC,  
FREEPOST,  
Barking, Essex IG11 0BR  
Please send me an information pack

Name.....

Position.....

Company.....

Address.....

.....

.....

Tel.....

Fax.....

# the Hi-Grade Notino P75M

**Intel Pentium processor**

**75MHz clock speed, upgradable to 133MHz**

**8Mb RAM, expandable to 32Mb**

**256K write-back cache memory**

**500Mb 2.5" removable hard disk**

**11.3" dual scan colour LCD display**

**PCI SVGA graphics card (1Mb VRAM, expandable to 2MB)**

**Removable 1.44Mb 3.5" floppy disk drive (can be replaced with MPEG module)**

**CD-ROM drive (tray-loading)**

**FM synthesiser  
16-bit stereo  
sound card (compatible  
with Microsoft sound  
system and Sound  
Blaster)**

**Built-in twin speakers and  
microphone**

**Infra-red communication port  
(IrDA-compliant SIR file transfer)**

**Built-in trackpad and joystick**

**Enhanced IDE/EPP/ECP controller**

**Removable, rechargeable NiMH 23W  
battery**

**Auto-switching 50W AC/DC adaptor  
(charges battery while system is on)**

**PCMCIA type 3 slot**

**Dimensions: 300mm wide x 227mm  
deep x 54mm high, 3.5kg (7.7lb)**

**£2,125 (plus VAT)**



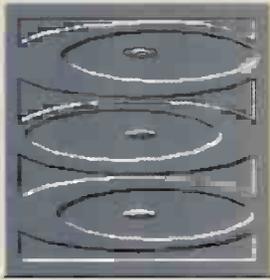
**Interest-free credit**  
(incl. VAT): £249.68 down  
12 months x £187.27

**Lease rental**  
(excl. VAT): £210.63 down  
33 months x £70.21

*Finance available subject to status.  
Written quotations on request.  
Hi-Grade is a licensed credit broker.*



Intel, Intel Inside and Pentium are trademarks of the Intel Corporation. MS-DOS and Windows are trademarks of Microsoft Corporation. Prices exclude delivery. Prices and specifications may be changed without notice.



## Authors, directors and fast movers

**Choosing an authoring package can be confusing; for instance, should you use Authorware, or Director, or both? Panicos Georghiades and Gabriel Jacobs help you make the right decision.**

Andy Tinton (<andy@dcomms.demon.co.uk>) writes: "I read with interest your article about Authorware and Fast products (Hands On, August issue). I have been toying with the idea of buying both of these products, and have managed to get a quote from a Scottish supplier for Authorware for £3,280 — about £500 cheaper than all the other dealers. But I don't know whether I can really justify the cost of Authorware, and instead just go for Director."

He goes on to raise a couple of queries which we think will be likely to interest a number of other readers too: "I have commercial programming skills (C, Basic, Assembler language when I was a youth writing Commodore 64 games commercially), but I may feel more at home with Director rather than stick to the stringent programming of Authorware. And by the way, Authorware is not for non-programmers. For basic multimedia applications, yes; but I have seen some quite complex code in Authorware programming too.

"Is there anything that can be done in Authorware that cannot be achieved in Director? It is clear that for large-scale projects (e.g. an interactive encyclopedia or visual glossary) it's much better to plan a project and maintain the code and elements in Authorware. Largish projects will tend to get lost in marker headings and hidden scripts with Director. I have also been trying to get out of Macromedia the cost of calling Director Movies from Authorware in terms of memory, and start-up time for movies.

"And I have another query: I hope to

buy a Fast board quite soon, but I cannot get a straight answer from the Fast UK office about which is the best (MMII + MJPEG board, or FPS60) at capturing AVIs. MJPEG AVIs can be captured, but what about normal AVIs that I can give to other people on CD-ROM? To make normal AVIs, I will have to first transfer the MJPEG AVIs in Premiere, which I suppose will be a time-consuming process."

Macromedia's views on the two products are (and we agree) that you can do just about everything you want with both of them. It's really a matter of how easy it is to do particular things with one as opposed to the other. So, what you have to decide is what type of applications you'll be developing. That's true with almost every type of multimedia development

scenario, but in this case even more so.

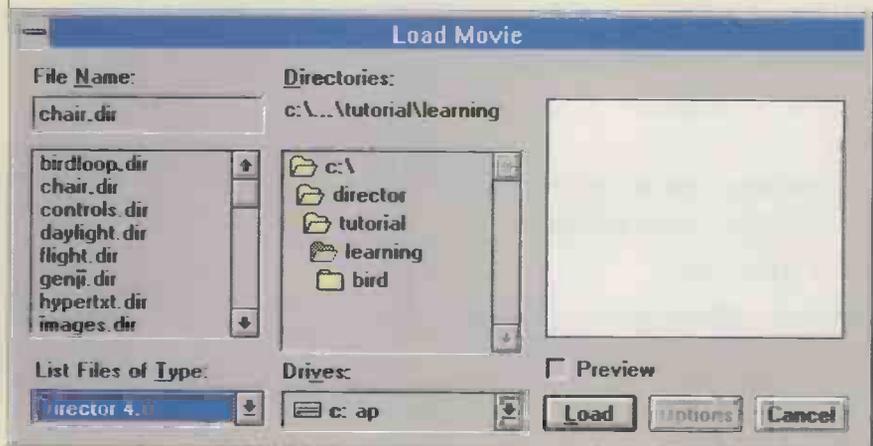
Director is certainly better for creating visual impact and is one of the best products on the market for this purpose. It's also very strong on animation, so we would suggest using it when power of presentation is an important requirement.

With its enhanced hypertext facilities Authorware is very good for reference applications, especially those that require interactivity such as education and training. You can design carefully structured courses with more sophisticated logic and branching than in Director, and there are built-in facilities for measuring student performance. This is probably part of the reason why some universities, colleges and training agencies have standardised around it, although Toolbook still seems to be holding its first place in the world of home-grown computer-assisted learning.

As for importing Director movies into Authorware, the cost in memory is more dependent on the size of the movies than anything else. The cost in time depends on the performance of the computer as well as the size of the Director movie you're importing.

If the Director movies you want to import [into Authorware] don't have any interaction, you can first export them to a series of bitmaps, then import them directly into Authorware. But we should mention that there are some specific things which Authorware will do and Director won't, such as accessing database information via ODBC. If such things

*Director movies imported into Authorware have a serious memory overhead*



are important for the work you intend to do, then the other considerations become secondary.

Regarding your second question on the Fast video capture cards, both models use the same Zoran compression chip (the FPS60 has it built-in, while for the Movie Machine II it comes as an add-on extra), so really there's no difference in the quality of the captured video.

There are differences in the facilities offered by the two boards: notably, the Movie Machine includes a TV tuner and a video mixer. However, both include an overlay facility and an add-on to play MPEG-1 video files.

Finally, to the point you make about grabbing "normal" AVI files (for distribution) in one go. Firstly, there's no such thing as a normal AVI file: even the Motion JPEG files captured by the Fast boards you mention — as well as by many other boards using this type of compression — have an AVI extension. AVI is a generic file extension for Video for Windows files.

There are many types of compression methods used with Video for Windows. Some are based on hardware methods, some on software, others on both. They're listed in the Drivers icon in the Control Panel (Win 3.x), and in the Multimedia icon of the Control Panel (Win95).

What you're clearly referring to are AVI files using software-only decompression methods distributed freely with the runtime version of Video for Windows (for instance, MS Video 1, Cinepak, and Indeo).

None of these provide such good qual-

ity as M-JPEG at low compression ratios (up to about 20:1). Additionally, M-JPEG is an editable video format (it's what's used in professional hard disk-based video studios) and you may well need to do some editing work before getting your video clips to the finished state, even if you don't mean commercial distribution when you talk of giving CD-ROMs to other people. The idea is to carry out any editing work at the best available quality, which means keeping as much as possible of the original information content (i.e. less so-called lossy compression, where some of the information is inevitably lost), and compressing down to the levels required for distribution only at the very end.

If your material has already been edited using analogue methods (and no further editing will be done after capturing) you could consider boards offering Indeo 3.2, such as the Creative Labs Video Blaster RT300. These compress in real time using hardware during capture, and the results can be played using software-only drivers freely distributed with Video for Windows. The quality is pretty good.

The compression method you choose for your final results once again depends a great deal on your application. Here we're thinking about such things as transfer rate, frame size, frame rate, whether your material is fast moving (action) or slow moving (talking-head type), whether you want the best picture quality for the smallest file size or the fastest turnaround.

However, your choice to go for a board

### Aimtech/IconAuthor news

One of the main advantages applicable to both Authorware and Director is their platform compatibility — you can develop applications that will work on different platforms using the same code (typically, Mac and PC).

Another program that does this well is Authorware's main competitor, IconAuthor (made by Aimtech), which works on Windows, Windows NT, Mac, OS/2 and Unix. In the past few years we've heard comparatively little about Unix in the world of the personal computer. But recently, with all the fuss about the Internet where Unix servers are the kings, a number of companies are beginning to add Unix machines to their existing range of platforms.

Not long ago we talked to Leo Lucas, Aimtech's chief technology officer. He told us that as part of a new initiative funded by the US government — the National Information Infrastructure Education and Training project — IconAuthor will be available on the Internet to deliver multimedia training and authoring on demand.

A new version of IconAuthor (with Internet access) will be available next year which will include HTML (HyperText Mark-up Language — the programming language used for creating pages on the World Wide Web). The new IconAuthor will, we're told, enable training-course developers to access Internet resources, and it's aimed at providing training facilities at remote sites all over the world. And the good news for developers is that there will be transferability of applications from other existing IconAuthor platforms to the Internet, so that programming effort can be saved.

**BIRDCGUIDES**

JUST  
RELEASED

## Birds on CD-ROM

THE ULTIMATE MULTIMEDIA REFERENCE  
WORK FOR BIRDWATCHERS



over 1000 recordings of songs and calls  
over 1000 high quality video clips  
over 1000 superb illustrations  
expert commentary for every species

- The CD ROM Guide to British Birds covers 250 species on one CD - price £39.95
- The CD-ROM Guide to Northern European Birds covers 340 species on five CDs - price £129.95

compatible with Windows 95, Windows 3.1 and Apple Macintosh.  
8MB RAM and double speed CD drive recommended.

### SPECIAL LIMITED OFFER!

- QUAD SPEED CD JUKE BOX Holds 7 CD-ROMs - £399.95  
2.5 second autochange, comes with drivers for Windows and Macintosh  
Prices plus VAT and carriage at cost, money refunded if not satisfied

### CREDIT CARD HOTLINE:

011 4285 4085



BirdGuides Ltd, 109 Hammerton Road, Sheffield S6 2NE



"BrainMaker is the most fascinating software I've ever seen." — John Dvorak, PC Magazine

Teach your computer to think without programming using neural networks!

BrainMaker mimics your brain's most powerful abilities — learning patterns and trends by observing the past. Over 18,000 sold for financial forecasting, scientific & medical work, sports handicapping, and more. BrainMaker is the #1 selling neural network training system, here's why:

- Windows, DOS, or Macintosh versions.
- Fastest neural network algorithms — up to 750,000 CPS on a 486/50 PC, generalizes well for new cases.
- Unconditional money-back 30-day guarantee.
- The most complete documentation — includes the acclaimed *Introduction to Neural Networks* free.
- Data preprocessing utility included free. Reads Excel, Lotus 123, dBASE, ASCII and binary files. Professional also reads CSI, MetaStock and CompuTrac files.
- Free technical support.

Find out what BrainMaker can do for you!

0101 916 478-9040 / fax 0101 916 478-9041

California Scientific Software

10024 Newtown Rd, Nevada City, CA 95959 USA

## BEAUTIFUL COLOUR DESIGNS

### 2 DISK SET

Paper designs/invites/notices etc. For use with Microsoft Publisher which cannot produce these alone. Using colour paper you will have

**360 combinations.**

ALL DESIGNS ARE IN FULL COLOUR

### OUR OFFERS AT CHRISTMAS AND NEW YEAR

Not only the prettiest and practical papers around but a digital mobile phone for £2.50. You can't let an offer like that go by — use one and give one as a present.

**ONLY £19.99 INCLUSIVE**

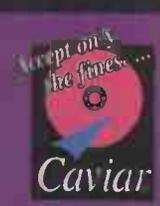
A-Z Services, Hodson Avenue,  
Willenhall, West Midlands WV13 2HS

Tel/Fax: 01902 601423

# Driving test

LESSON 4:

*thinking outside the box.*



## Here's something to think about:

What does it take for a company to engineer hard drives so reliable they can operate for 34 years before failing? Or for a company to more than triple the capacity of its 3 1/2" drive in under two years?

*It takes a different way of thinking*

It takes the ability to anticipate the limitations of existing manufacturing processes and the determination to develop new methods. To do this, a manufacturer must be willing to step back and conceptualise bold, new solutions.

Western Digital already knows this. It's the kind of thinking that enables us to build so much quality, reliability and performance into our entire range of high-capacity drives and still keep them competitively priced.

We realise you don't spend as much time thinking about hard drives as we do. And we plan to keep it that way.

Put our drives to the test.

For your local dealer, call:

Ideal Hardware  
New Malden, Surrey  
Tel: 0181 286 5000  
Fax: 0181 286 5046

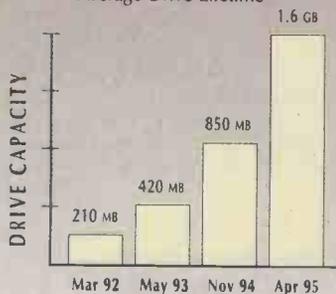
Ingram Micro (UK) Ltd  
Milton Keynes, Bucks  
Tel: 01908 260 160  
Fax: 01908 265 526

Osmosis Technologies Ltd  
Isleworth, Middx  
Tel: 0181 568 0077  
Fax: 0181 758 2760

Ambyte  
Windsor, Berks  
Tel: 01753 655 477  
Fax: 01753 655 864

34  
YEARS

Average Drive Lifetime



Storage capacity increase  
of Western Digital 3 1/2" drives

WESTERN DIGITAL

that uses M-JPEG compression (such as the Fast boards) is a good one. It's flexible, and will provide you with good-quality

video. We haven't come across better for the money. And last month in *Hands On Multimedia*, we looked at Spea's Crunch

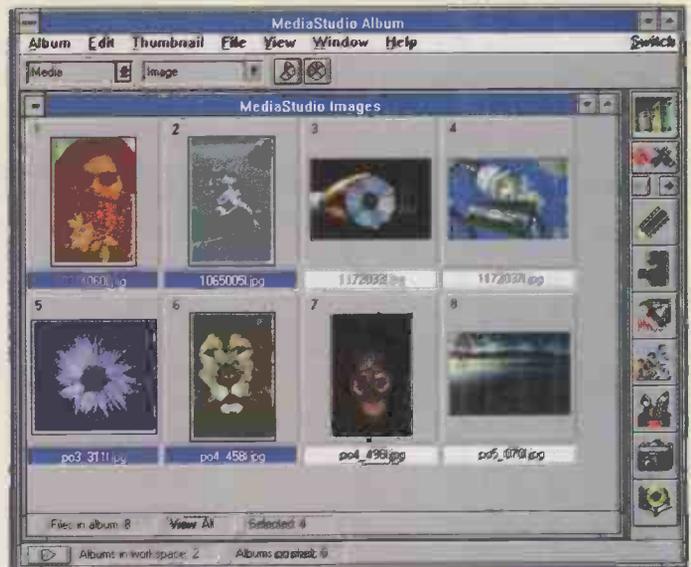
It, which uses the same Zoran chip as the FPS60 and the Movie Machine II.

## ULead Media Studio Pro 2

The "multi" in the word multimedia is what makes applications interesting, but it's also the cause of the developer's nightmare. Handling more media requires faster and bigger machines, more development time and effort, and thus higher costs. It also requires more computer hardware and programs for editing and preparing the different media — you need at least a word processor, a sound capture and editor program, a bitmap scanning and retouching/painting program, a video capture and editing program, and an animation program. And then there's the multimedia authoring program you need in order to put the stuff together. Some programs may offer a few of the facilities found in dedicated utilities, but there are always limitations. In any event, we're talking thousands of pounds.

Recently we've had the opportunity to evaluate one of the very few (and probably the most affordable) bundles of programs you need for capturing and editing all the different types of media you're likely to use in a multimedia application. This is ULead Systems Media Studio Pro. It includes screen capture, batch-file conversion, image cataloguing, audio editing, image

*ULead: one of the few bundles of utilities for capturing and editing multimedia file formats*



and video capture and editing, and a module to carry out morphing effects.

The video editor is on the lines of Adobe Premiere and supports 101 video and audio tracks, 2D and 3D moving paths which allow images and text to be mapped to spheres and cylinders, anti-aliasing of fonts, and titling. There are 50 video filters and over 100 transitions (more than what you get in either Premiere or Asymetrix' Digital Video Producer). An Album module enables you to visually catalogue video, animation and image files, and even audio files (by using thumbnails).

The batch-file conversion program works on video, audio and animation files as well as image files, and can handle attribute changes such as compression formats, colour depth, size, and data and frame rates.

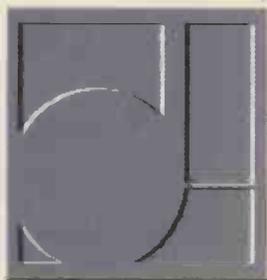
Media Studio costs £279. And although it's marketed as a video editing package, it does provide a complete solution.



### PCW Contacts

**Panicos Georghiadis and Gabriel Jacobs** will be glad to answer your questions. Either write to PCW, or email [g.c.jacobs@swan.ac.uk](mailto:g.c.jacobs@swan.ac.uk)

**Authorware** (Peritas) 01753 604057  
**Director 4.0** (Computers Unlimited) 0181 200 8282  
**Macromedia** 01344 761111  
**Fast Electronic** 0171 221 8024  
**Creative Labs** 01734 344322  
**Aimtech** 0171 702 1575  
**ULead Media Studio (BIT)** 01420 83811



# Keeping Score

**...it's 2.0 to Cubase – Steven Helstrip gives you a sneak preview. Plus more tips for programming percussion tracks, and the New York sessions...**

## Programming Percussion Tracks (Part 2)

Last month we looked at sequencing rhythm tracks using a standard kit consisting of kick, snare, hi-hats and tambourine. This month we'll be introducing more

percussion elements including cabassa, ride cymbal, bongos and congas to add more texture and rhythmic interest.

Before programming percussion, or any other sequenced part, it's worth setting up a metronome, or click track, to help

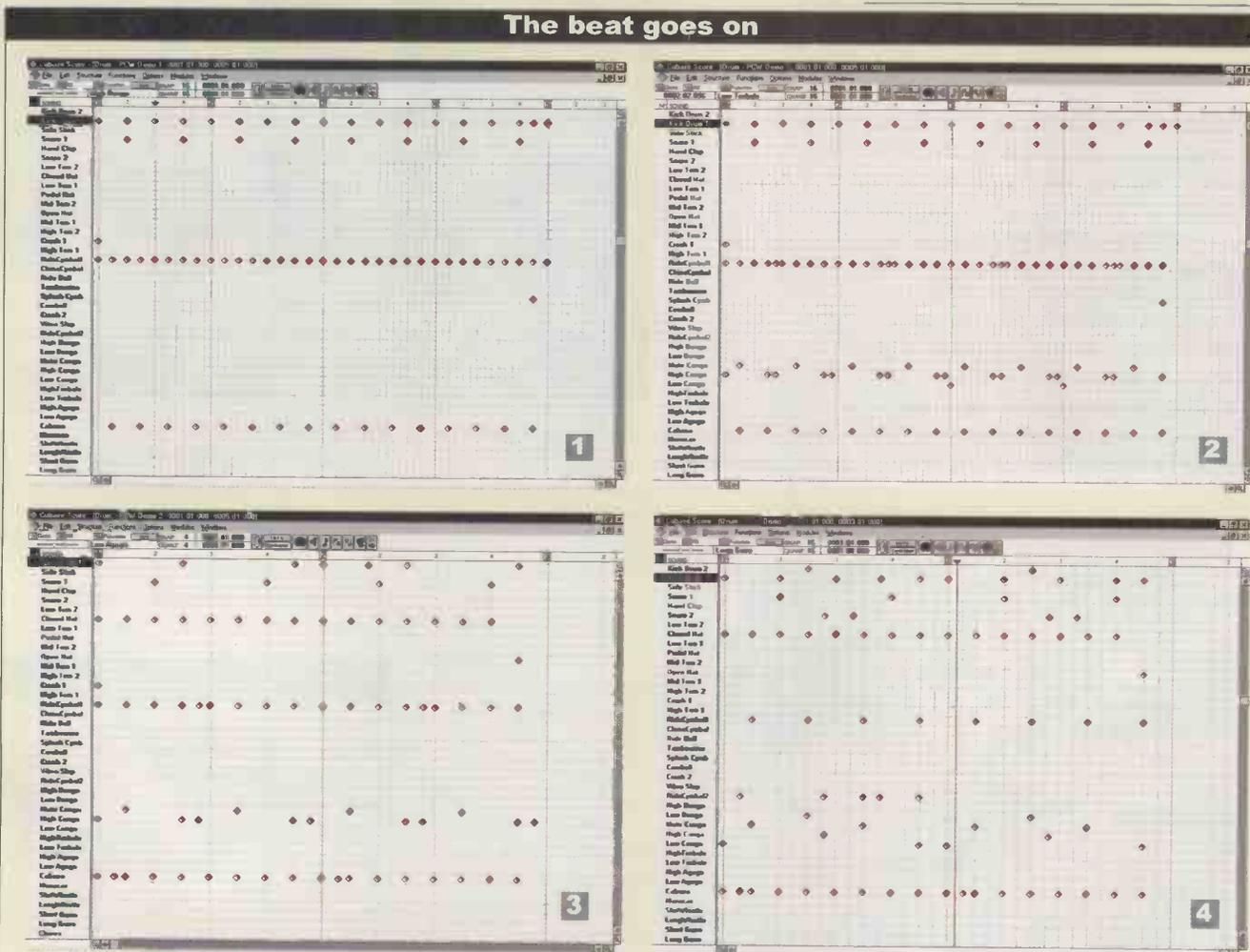
you keep in time. Every sequencer has a metronome with several options allowing you to choose which instrument plays the click (usually a side stick on C sharp 1), how many bars count-in you want, and whether or not you want the sequencer to play a few bars of the arrangement before you start to record – called "pre-roll".

Fig 1 shows a simple four-bar pattern based on last month's examples. This time round, instead of playing quavers or eighths on a closed hi-hat, quavers are being played on a ride cymbal giving the track a different feel. To add further interest, the ride cymbal is accented on the off beat. Off beat simply means not playing on beats one, two, three and four. A cabassa is also playing on the off beat.

Towards the end of the four-bar section (bar four, beat four, second quaver) there's a splash cymbal with a kick drum underneath. This helps to set up the next four-bar phrase which has a crash cymbal on beat one.

Congas can be used in most styles of

### The beat goes on



**Fig 1** A variation on last month's examples using a basic kit with ride cymbal. **Fig 2** A simple conga pattern can add rhythmic interest to a percussion section. **Fig 3** The kick drum in this example is playing a different rhythm, and there's a simple hi-hat pattern. **Fig 4** Don't be afraid to have two snares and two kick drums, so long as they don't clutter up the track and their levels are mixed well

**Cubase Update**

Users of Cubase Score will be chuffed to know that version 2.0 is now in a shop nearby, or on the end of a telephone line should you have access to a modem. This first major PC upgrade has full-colour interface allowing tracks and parts to be coloured separately; guitar tablature and 200 new symbols in the score editor; support for Video for Windows, and plenty more.

Not only does the colour interface look better, it has some serious benefits. Percussion tracks can be coloured red, string arrangements maybe in yellow, vocal triggers in a nice purple, making the Arrange window much easier to work with. The transport bar has been revamped and now looks identical to the Mac. If you work with tape, or even tapeless tape (disk-based recorders, etc) the new SMPTE reader will be welcomed as it can be displayed in two sizes, large and extra large. Your PC could be sitting at the opposite side of the studio and you'll still be able to read the timing references.

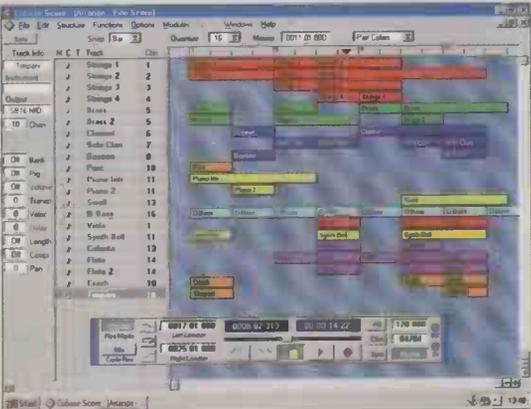
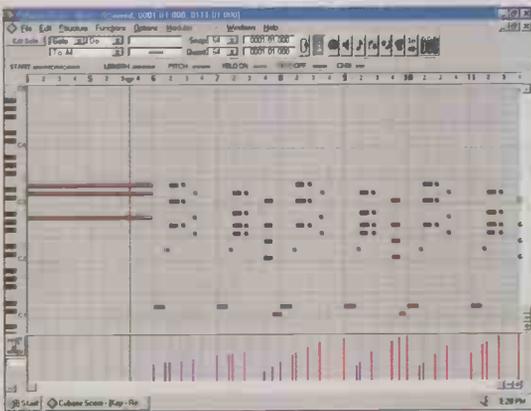
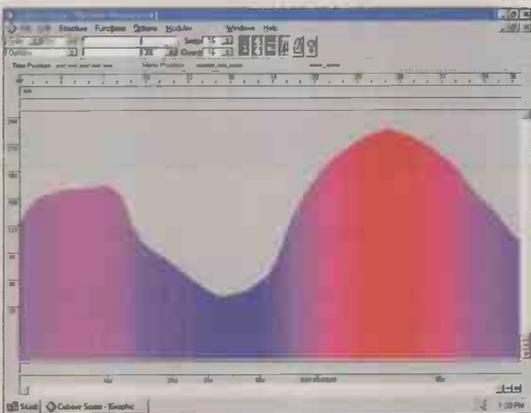
One area where Cubase has fallen behind is the tempo map, or master track editor. Version 2.0, however, fixes this. The master track now has a graphical interface, enabling changes in tempo to be drawn in the same way as controller information in the piano role editor. Alternatively, arrangements can now be recorded without a metronome, allowing you to work out changes in tempo later. That said, it does need a little help – first you have to mark the start of each bar, then the software makes its calculations.

Score 2.0 is available on disk and CD-ROM, the latter

*Cubase 2.0 is now available for the PC. Seen here running under Windows 95*

contains a video tutorial and costs £499. Upgrade prices have not yet been set.

Contact Harman Audio (see "PCW Details", page 321) for more information.



**tech-mate uk**  
 215 Harwich Rd, Colchester, Essex, CO4 3DF

**MIDI KEYBOARDS**

Casio GZ5	£64	Studio 49	£99
Yamaha CBXK1	£125	Goldstar GMK49	£159

ALL PRICES INCLUDE VAT.

**MUSIC SOFTWARE**

Cakewalk Home Studio	£99
Cakewalk Pro3	£199
Cubasis	£149
Cubase Score	£399
Band in 9 Box	£89
Cubasis Audio	£249
Personal Composer Notation	£99

**SPEAKERS**

Yamaha YST-M10	£59
Yamaha YST-MS	£49
Yamaha Sub Bass	£99

EXCLUSIVE! Steinberg music card and 16 bit record playback midi leads. ONLY £129!

**CARDS/INTERFACES**

Internal Midi Interface	from £75
Parallel Port Interfaces	from £99
Soundcard Midi Lead	£24

Yamaha QY8 Sound module, sequencer use anywhere, great fun was £249 NOW £99

FREE INFO PACK - CALL 01235 830932  
 Tel: 01206 793355  
 Fax: 01206 791371

**FOR PC MUSIC THIS BEATS ANY SOUND CARD!**

RRP £399  
**£119 EX VAT**

The Yamaha "Hello Music" package is a no-nonsense alternative for people who want a thoroughly professional sounding General MIDI synthesizer for playing and recording Music. It connects simply via the serial-port (cable included): No screw-drivers, no IRQ conflicts, no DMA problems. Most modern sound-cards offer poor quality WaveTable sounds. The CBX-T3 synth (pictured) contains 192 different musical instrument sounds recreated with 16 bit quality, processed through breathtaking reverb-to-give you the "recording studio sound". Also included is a special version of Steinberg's famous Cubase software for recording your own musical ideas, and a Yamaha Song-Disk featuring 20 hits including West End Girls, New York New York etc... R.R.P. £399. Demand will greatly outstrip supply, and orders will be filled on a first-come, first-served basis.

Why not try our PC Music Encyclopedia vol. 2 on CD-ROM? Only £6.99. It contains brochures, movies and audio to help you decide what to buy.

**GoldStar GSC-X21**  
 STUDIO QUALITY SOUND CARD  
 BELOW HALF PRICE  
**ONLY £59!**

Turnkey is the UK's largest outlet for Pro MIDI equipment to the music industry. In our judgement the GSC-X21 is on a par with today's professional synthesizers and the most realistic sound cards costing 4 times as much. There is no comparison with the average £200 multimedia card. Built-in MPU401 MIDI interface (cable included), 250 x 16 bit stereo sounds • 16 part multi-timbral • 32 note polyphonic • General MIDI • We have a limited quantity at a ridiculous price. RRP £199. 7 day money-back if not satisfied.

**MUSIC TIME**

PC or Mac MusicTime is the most entertaining way to make music with your sound card or MIDI instrument. You can compose, play and learn music on your computer. MusicTime displays the actual notes you play from your computer's QWERTY keyboard or from a MIDI instrument. Watch as MusicTime instantly creates beautiful, publisher-quality sheet music right before your eyes. CD-ROM also available. Rated 94% by Keyboard Review (PC version). Rated 90% by MacFormat.

MusicTime was recently number 21 in the US top 100 productivity programs of any description. No other music packages were in the top 100. **£129**

**Pianist**

The Pianist is an exciting and educational music program containing a huge collection of over 200 of the World's most popular classical piano pieces, performed by world-renowned concert pianists! Also included is a music trivia game "Guess the Song", program notes, biographies of famous musicians, a music dictionary (all on disk) and much more! All the pieces have been recorded in "real time" by concert pianists on an 88 note weighted MIDI piano keyboard. You'll hear the music playing with CD-quality through your sound card or MIDI system, just as if the pianist was performing in your home. Now available in Jazz, Ragtime and New Orleans versions **£49**

Soundcard MIDI cable £25 Windows95? No Problem!  
 Internet? We're now on <http://www.demon.co.uk/turnkey>

SOHO SOUNDHOUSE / TURNKEY  
 114 CHARING CROSS RD.  
 LONDON WC2H 0DT  
**0171 379 5148**

EC residents add 17.5% VAT  
 24 hour delivery from £9  
 Please check system requirements when ordering  
 100 yards from Tottenham Court Road Tube

**Personal  
Computer  
World**  
**EDITOR'S  
CHOICE**

**PC Plus  
VALUE FOR  
MONEY**

**Best Sound Card  
Sound Galaxy WaveRider 32+  
April 1995**



## Feel The Power of Multimedia.

If you want to feel the maximum impact and get the most power out of your multimedia, there's only one way to go. With the high-performance, high-technology products from the force in multimedia excitement, Aztech.

### AZTECH SOUND BOARDS, A MULTIMEDIA ADRENALINE RUSH.

From starter boards to the top end, we've got a sound board that will work for you. Take our Nova 16 Extra, for example. It gives you the crystal-clear, CD quality 16-bit sound you want, at a price you can afford. And like all Aztech sound cards, it's upgradeable to wave-table synthesis.

If you crave the ultimate in PC sound, check out the new WaveRider 32+ with CD-quality 16-bit, wave-table synthesis sound, 32 simultaneous voice playback capability and 128 instrument and 69 drum sound effects.

### SOUND GALAXY MULTIMEDIA UPGRADE KITS, TOTAL MULTIMEDIA EXCITEMENT.

Aztech has over 10 options to turn your PC into a multimedia excitement machine. Our Voyager multimedia upgrade kit comes loaded with a Nova 16 sound board, a double speed CD-ROM drive and great bundled software like award-winning Outpost, New Grolier Encyclopedia, Indiana Jones and more.

For even higher performance, try the Explorer Personal Multimedia System that comes with a double-speed external CD-ROM system, incredible bundled software and the intense multimedia sound of wave-table synthesis. It's even easy to install—just plug in the cable, install the software and go!

### TAKE MULTIMEDIA TO THE OUTER LIMITS WITH AZTECH VIDEO.

In business, the cutting edge is video. If you want high quality video for your presentations, training programs and more, Video Galaxy boards offer sharp VGA resolution up to 16 million colors, multiple-source audio and video capture, even a tuner for TV while you work.

What it all comes down to is that Aztech has the products and the prices to take you to the extreme edge of multimedia. Check out the technology. Feel the excitement. Aztech is more than multimedia. It's full power multimedia.



**Sound Galaxy**



**Video Galaxy**

**AZTECH**  
Full Power Multimedia

Manufactured By:  
**AZTECH SYSTEMS LTD**  
31 Ubi Road 1, Aztech Building,  
Singapore 1440.  
Tel: (65) 741-7211  
Fax: (65) 741-8678/9  
Tlx: RS 36560 AZTECH

UK Office:  
**AZTECH UK LTD**  
2 Midas House, Calleva Park,  
Aldermaston Berks,  
RG7 4QZ UK  
Tel: (0734) 814-121  
Fax: (0734) 819-951

**For more information call  
Aztech 0734-814121 NOW!**

©Copyright Aztech Systems Ltd. All rights reserved. Windows and MS-DOS are trademarks of Microsoft Corporation. All trade names and marks are registered trademarks of respective companies. Specifications subject to change without prior notice.

music, from chilled-out jazz tunes through to dance. *Fig 2* shows a typical pattern playing yet another off beat-ish rhythm. A low conga plays on beat one, followed by a mute conga on beats one and a half, and high congas on the last two semiquavers of beat two. Although this sounds daunting, it's fairly straightforward: hear how it sounds by loading the MIDI files on this month's cover CD-ROM. The files can be found in *hands\sound*.

The ride cymbal is boosted here, as a skip, or push, has been introduced just after the third beat of the bar. Try different rhythms on the ride to create different feels. Quantising to 16 triplets, or a slow shuffle, will give the part further interest. Try adding a clap to beats two and four, or simply replace the snare drum with a side stick to slow down the pace.

When placed in context with your music, it should become obvious whether this pattern works. If it doesn't, play around with each element until it sounds right. As I mentioned last month, the kick drum needs to work with the bassline. Also, if you quantise the percussion track to a slow shuffle, do this for each other part.

*Fig 3* is a variation on the previous examples. Although the conga pattern is the same, the track has a different feel as the kick drum is playing a different rhythm. A hi-hat track has been introduced that simply plays quavers, and an open hat on the second quaver of beat four adds more interest. In this example, the cabassa is playing the same rhythm as the ride cymbal, only the skip comes after beat one as opposed to beat three.

## New York City Drumworks

Six of New York's top session drummers play 146 minutes of inspiring rhythm. Miles, Sting, Luther Vandross and Manhattan Transfer are just a few of the credits. There are over 730 loops (copyright free) each played with a New York vibe. Styles covered include funk, rock, house, hip-hop, Latin, Cajun, R&B ... the list goes on. Not only are all these styles covered, but at every tempo you could wish for and with six different drum kits from vintage Ludvig up to the current Yamaha Recording Series.

This two-CD set kicks off with Kenwood Dennard playing rock, reggae, Brazilian and African styles. Tempos here range from 72 to 156bpm. Not only have "full kit" loops

been recorded, there are hi-hat loops, loops without the kick drum, and so on. Each percussion instrument in the kit has been sampled separately, both dry and with effects. This way you can loop a four section and add, for example, your own snare pattern. At the end of each drummer's section there are several tracks of fills, an invaluable production tool.

This is the best live drum CD I have heard in a long time, covering every contemporary style. Three of the tracks are on this month's cover CD as .WAV files in the *hands\sound* folder.



It's important to match the instrument levels to get the best possible balance. In a live situation each instrument would have its own input on a mixing desk, with a fader to enable you to get a decent mix. When sequencing, however, there are no faders for each instrument – just numbers, or velocities.

Although it's important to hear what each part is playing, no one instrument should stand out. If you find that the congas and ride are too prominent, reduce their velocities; in Cubase, this can be done in several ways. The quickest is to use the drum editor to highlight the notes you need to "turn down" by dragging across them with the mouse, then hold down Ctrl H and type "- 10" in the velocity box. Do this again if they're still too loud.

The rhythm track now has some good

patterns, but you can spice it up even more. In *Fig 4* there is a second kick and snare giving the track a hip hop/acid jazz feel. The levels of the second kick and snare are quite low compared to the original idea. Try changing them, as this will allow you to create different feels. Also, have a go at changing individual velocities and try different quantisation grooves.

## PCW Contacts

Readers' contributions to the Sound column are music to our ears. If you have any hints or tips, any MIDI-related items or general comments, send them in to the usual PCW address, or to [shelstrip@cix.compulink.co.uk](mailto:shelstrip@cix.compulink.co.uk)

Time + Space 01442 870 681  
Harman Audio 0181 207 5050

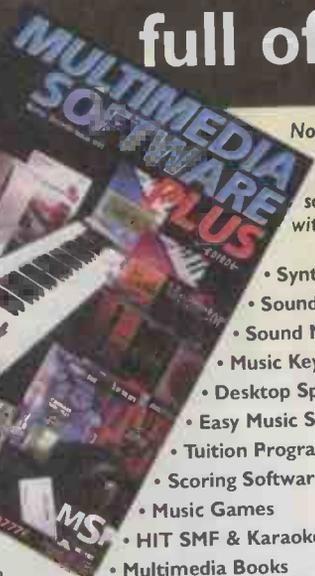
PCW

# We're full of it!

**FREE!**  
20 Page  
Colour  
Catalogue

Lo-call  
**0345  
697776**

for your FREE MSP catalogue  
or fill in the coupon...



Now you can  
make  
professional  
sounding music  
with your PC...

- Synthesizers
- Sound Cards
- Sound Modules
- Music Keyboards
- Desktop Speakers
- Easy Music Software
- Tuition Programmes
- Scoring Software
- Music Games
- HIT SMF & Karaoke Songs
- Multimedia Books

Name  
Address

Postcode

Send to MSP, The Water Mill, Broughton Hall Business Park,  
Broughton, Skipton, North Yorkshire, BD23 3AG PCW

## UNIX products at discounted prices

We specialise in personal service, support and advice in the installation or upgrade of complete UNIX systems:

A few pricing examples:-	£
SCO Unix 16 user	685
Specialix SI 8 Port	475
Wyse 55 terminal	240
Digital 510 16 emulation terminal (3 year warranty)	270
Ice Ten plus terminal emulation	310
Solaris Desktop inc. Dev kit, C++	495
Unix fax software	310
Interactive Unix 2 User	330
SCO Microsoft Word, unlimited users	630

We also specialise in barcoding & shopfloor data capture.

**JJA**  
LIMITED



Prices plus V.A.T. and delivery at cost  
For Quotations phone/fax - 01257 452237 - 9am-6pm  
JJA Ltd., 38 Beechfields, Ecclestone, Chorley PR7 5RE

MICROWART  
CLASSIFIED

Stunning

# TRITON PERFORMANCE ON BASED SYSTEMS

"The OPUS P75 performed extraordinarily well. It ranked third fastest out of the 18 in our group test and it outperformed many Pentium/90 machines with the same amount of RAM. With the high-performance Triton chipset and ultrafast EDO RAM behind it, the OPUS P75 is a machine to be remembered"



PC Pro June 1995

### PRESTIGE Triton P75

- Intel® Pentium® 75Mhz Processor
- Triton Performance PCI Motherboard, Windows 95 & Plug 'n' Play Ready
- 8MB EDO RAM
- 540MB Hard Disk Drive
- PCI Enhanced IDE Controller
- 1.44MB 3.5" FDD
- 14" SVGA Colour Monitor, .28 dot & Energy Star Compliant
- 1MB PCI S3 64-bit Graphics Accelerator Card
- 105 Key Windows 95 UK Keyboard
- Serial Mouse
- Desktop Case Style
- MS DOS6.22/MS Windows 3.11 (Windows 95 available)
- Free Diagnostic Utilities
- 12 Months ON-SITE, Parts & Labour Warranty
- Lifetime Telephone Technical Support
- Express Delivery

Intel Pentium® 90,100,120&133Mhz processor options available

**P75**      **£899**  
Exc Carr & VAT

**BUSINESS LEASING OPTION\***  
£4.99 per week over 5 years

### PRESTIGE Plus Triton P90

- Intel® Pentium® 90Mhz Processor
- Triton Performance PCI Motherboard, Windows 95 & Plug 'n' Play Ready
- 8MB EDO RAM
- 540MB Hard Disk Drive
- PCI Enhanced IDE Controller
- 1.44MB 3.5" Floppy Disk Drive
- 14" SVGA Colour Monitor, .28 dot & Energy Star Compliant
- 1MB PCI S3 64-bit Graphics Accelerator Card
- 105 Key Windows 95 UK Keyboard
- Serial Mouse
- Desktop Case Style
- MS DOS6.22/MS Windows 3.11 (Windows 95 available)
- Free Diagnostic Utilities
- 12 Months ON-SITE, Parts & Labour Warranty
- Lifetime Telephone Technical Support
- Express Delivery

Intel Pentium® 100,120&133Mhz processor options available

**P90**      **£979**  
Exc Carr & VAT

**BUSINESS LEASING OPTION\***  
£5.43 per week over 5 years

### PRESTIGE Plus Triton P100

- Intel® Pentium® 100Mhz Processor
- Triton Performance PCI Motherboard, Windows 95 & Plug 'n' Play Ready
- 8MB RAM
- 1Gb IDE Hard Disk Drive
- PCI Enhanced IDE Controller
- 1.44MB 3.5" Floppy Disk Drive
- 15" SVGA Colour Monitor, Microprocessor Controlled, Low Rad, Non Interlaced & Energy Star Compliant
- 2MB GrafixStar 500 S3 64-bit Graphics Accelerator Card
- 105 Key Windows 95 UK Keyboard
- Serial Mouse
- Desktop Case Style
- MS DOS6.22/MS Windows 3.11 (Windows 95 available)
- Free Diagnostic Utilities
- 12 Months ON-SITE, Parts & Labour Warranty
- Lifetime Telephone Technical Support
- Express Delivery

Intel Pentium® 120 & 133Mhz processor options available

**P100**      **£1299**  
Exc Carr & VAT

**BUSINESS LEASING OPTION\***  
£7.18 per week over 5 years

OPUS Technology's superb motherboard allows all processor upgrades through to 133Mhz and beyond, supporting EDO RAM for maximum performance.

## Optional Upgrade Extras for the System of Your Choice

### MULTI-MEDIA UPGRADE

- Quad Speed, Multi Session CD ROM drive
- 16 Bit Sound Card
- Separate Stereo Speakers

**£135**  
Exc Carr & VAT

### MULTI-MEDIA PLUS

- As Multi-Media Upgrade above PLUS Microsoft Family Pack.
- Including: Works, Encarta 95, Dangerous Creatures, MS Money, Scenes & Entertainment Pack

**£169**  
Exc Carr & VAT

### WINDOWS 95

Unlock the power of your PC with Microsoft's Windows 95 and everything you do on your PC will be...

**FASTER, EASIER & MORE FUN**

CALL FOR DETAILS NOW

### COMMUNICATIONS UPGRADE

- Internet Fax/Modem Card 14,400 bps/v32 bis, Hayes compatible & BAPT approved

**£69**  
Exc Carr & VAT

FREE COMPUSERVE MEMBERSHIP TO A WORLDWIDE WEB

### GRAPHIC CARD UPGRADES

- 1MB S3 64-Bit (DRAM) Graphics Accelerator Card      **£20**
- 2MB S3 64-Bit (DRAM) Graphics Accelerator Card      **£95**

Optional Upgrades only available at price shown when purchasing a complete system

**\*BUSINESS LEASING**  
Monthly or Quarterly Payments by Direct Debit. All leasing agreements subject to acceptance. All prices are exclusive of VAT.  
PLEASE CALL FOR DETAILS.

**ORDER RIGHT NOW**

**TEL: 01293-821555**

**FAX: 01293-782663**



**OPUS**  
technology

PC'S NOTEBOOKS & NETWORKS DIRECT

OPUS Technology PLC., Redhill Business Park, Bonehurst Road, Salfords, Redhill, Surrey RH1 5YB

# ALL OUR PENTIUM® PROCESSOR AS STANDARD

**NEW!** Triton performance at no extra cost

**NEW!** Windows 95 keyboard with every system

**Prices under constant review - Please call for latest details**



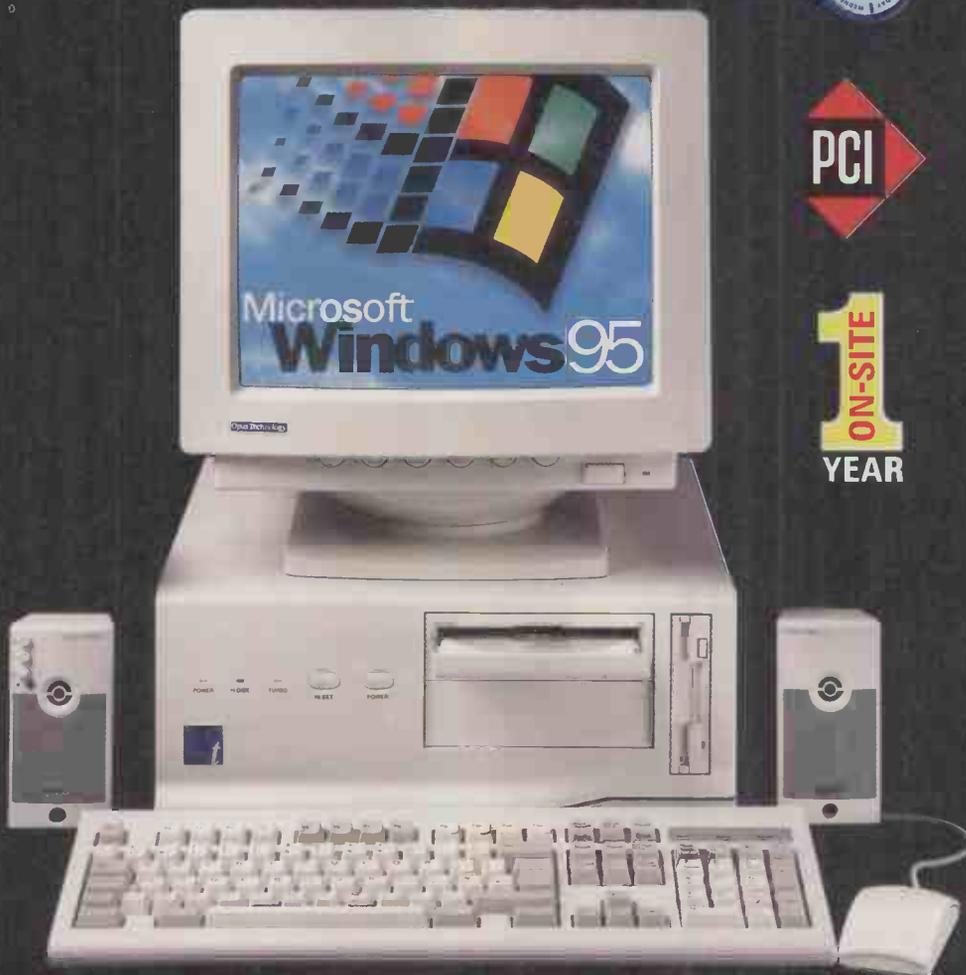
**PRESTIGE HOME OFFICE**

- Intel® Pentium® 75Mhz Processor
- Triton Performance PCI Motherboard, Windows 95 & Plug 'n' Play Ready
- 8MB EDO RAM
- 540MB Hard Disk Drive
- PCI Enhanced IDE Controller
- 1.44MB 3.5" Floppy Disk Drive
- 15" SVGA Colour Monitor, 28 dot & Energy Star Compliant
- 1MB PCI S3 64-bit Graphics Accelerator Card
- 105 Key Windows 95 UK Keyboard
- Serial Mouse • Desktop Case Style
- Quad-Speed CD ROM Drive
- 16-Bit Sound Card
- Separate Stereo Speakers
- Windows 95 operating system
- MS Family Pack - Works, Encarta 95, Dangerous Creatures, MS Money, Scenes and Entertainment Pack
- Free Diagnostic Utilities
- 12 Months ON-SITE, Parts & Labour Warranty
- Lifetime Telephone Technical Support
- Express Delivery

Intel Pentium® 90,100,120&133Mhz processor options available

**P75** **£1199** **0%**  
Exc Carr & VAT FINANCE

Also available on EASY PLAN Finance (APR19.9%) call for details



Speakers may differ from those illustrated.

**PRESTIGE HOME OFFICE PLUS**

Specification as above Plus:

- Intel® Pentium® 90Mhz Processor
- 1Gb IDE Hard Disk Drive
- 2MB GrafixStar 500 S3 64-bit Graphics Accelerator Card
- Fax/Modem card with Free CompuServe Membership for Internet access

Also available on EASY PLAN Finance (APR19.9%) call for details

**P90** **£1499** **0%**  
Exc Carr & VAT FINANCE

Intel Pentium® 100,120 & 133Mhz processor options available

*"OPUS - Best of Class..." and "OPUS - the shape of Pentiums® (processor based systems) to come, great performance and great value for money"* Computer Buyer

For quality, performance and power OPUS Technology's advanced range of Pentium® processor based systems are unbeatable. Every system is covered by a FREE one year ON-SITE warranty and is fully upgradeable. Our choice of payment methods allows you to select the best way to purchase your system and our Express Delivery service means it is delivered to your door in days.

0% Finance Example (Home Office)	
Total cash price (incl. Carr. & VAT)	£1,485.20
Less 25% deposit	£371.30
10 Monthly payments	£111.39
Total credit price	£1,485.20

Easy Plan Payment Example (Home Office)	
Total cash price (incl. Carr. & VAT)	£1,485.20
Less 10% deposit	£148.52
24 Monthly payments (incPPP)	£72.36
Total Amount Payable (APR 19.9%)	£1,885.16

## PAYMENT OPTIONS

CREDIT ACCOUNTS



CREDIT CARDS



EASY PAYMENT PLAN



BUSINESS LEASING

**ORDER RIGHT NOW**

**TEL: 01293-821555**

**FAX: 01293-782663**



**OPUS**  
technology

PC'S NOTEBOOKS & NETWORKS DIRECT

OPUS Technology PLC., Redhill Business Park, Bonehurst Road, Salfords, Redhill, Surrey RH1 5YB

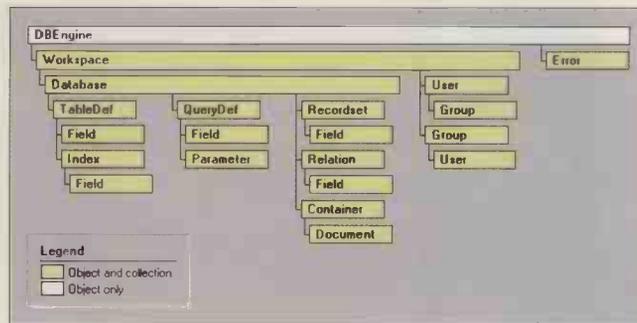
Prices and specifications subject to change without notice. E. & O.E. OT is a registered trademark of OPUS Technology PLC. Pentium and Intel Inside are registered trademarks of Intel Corporation. Credit subject to Status, available to private purchasers only. OPUS Technology PLC is a licensed credit broker. Written quotations available on request from Chartered Trust. Payment Protection Plan available for redundancy and sickness protection, with Merchandise Insurance. All trademarks acknowledged.



## Dealing with data

**Tim Anderson explores data access in Excel 7.0, why Designer Widgets was released full of bugs, and how to access text properties in VBXs within Delphi. Plus, seven tips for visual programming.**

Version 5.0 of Excel introduced Visual Basic for Applications, the common macro language that is intended to unify the programming of Microsoft applications. VBA's migration to the main Office components is slow. Access 7.0 now includes it, but unbelievably Word 7.0 remains stuck with WordBasic. The WordBasic language is not so bad, although there are annoying differences; but more seriously Word is not an OLE automation client. It works as an OLE automation server but



*The hierarchy of data access object classes; essential information for database programming in Visual Basic for Applications*

does so crudely, compared with Excel or Access. The only object made available is WordBasic, through which you can call WordBasic routines.

While we wait for Word to catch up, there's plenty to do with VBA in Excel. In particular, the new Data Access Objects (DAO) open up the JET database engine for OLE automation, giving Excel excellent database features and, without the use of the old ODBC add-in, XLODBC.XLA.

There is a natural synergy between spreadsheets and databases. Spreadsheets are well suited to analysing and modelling temporary data, while databases are ideal for robust, permanent storage. Using DAO you can easily write programs that transfer data between Excel and database tables. For example, an Excel application could obtain a customer's order history, feeding the details into a spreadsheet for charting or sales projections. Here's how you might go about it.

The first step is to insert a macro module into an Excel 7.0 workbook. Then, from the Tools menu, choose References and check DAO 3.0 Object Library. This enables Excel to use all the DAO classes and constants. The procedure to retrieve order details might look like *Fig 1*.

This simple example returns a query result as a snapshot and enters the results into a worksheet. The data access code works exactly as it would in Visual Basic 4.0. But DAO will do more than just execute queries: using the data definition language you can create databases with security, encryption and referential integrity. The workspaces collection lets you set up simultaneous data access sessions, with support for transactions. Data can be written as well as read, either by opening an editable recordset (a table or dynaset) or by executing SQL statements. VBA and DAO, combined with a good knowledge of SQL, gives Excel full-blown data management features. All we need now is VBA in Word to open up the same possibilities there.

### Designer Widgets

The migration of VBX add-ons to OCX components continues with the arrival of 32-bit Designer Widgets from Sheridan. Version 1.0 of this product is widely used to add dockable toolbars and tabbed dialogues to VB applications. Evaluating this new version, which comes in triplicate (VBX, 16-bit OCX, 32-bit OCX), proved

### Seven tips for VB and Delphi

#### Visual Basic

1. JET loves SQL. If you can use SQL Select or an Execute method, rather than navigational database code, performance is almost always better.
2. There are experienced VB programmers who do not realise that the code window can be split: place the mouse just above the thin grey line at the top of the window, and drag down to obtain two separate scrolling sections.
3. Avoid variants by declaring all variables. Set Require Variable Declaration to Yes in Environment Options to ensure that Option Explicit appears at the top of all modules.

#### Delphi

4. Windows 3.x uses co-operative multitasking, which means your application must regularly yield control back to Windows to avoid locking the user out of other tasks. In Delphi you can use Application.ProcessMessages to give processing time to other applications.
5. Re-use your code by developing your own utility functions for frequent tasks. Place these in one Pascal unit, and add it to the Uses clause of any other units that call these functions.
6. Use Inc and Dec to generate tightly optimised code, instead of statements like  
iVar := iVar + 1;
7. Delphi has no direct equivalent to VB's useful App.Path. You can obtain the same information (the location of the application) by parsing Application.Exename. This returns the application name with its full path. Search the string for the last occurrence of "\" to find the path alone.

frustrating. This was the release version, not a beta.

The Readme informed me that the product did not work quite as documented. Two major problems were that the tab and notebook VBXs did not work data-bound, and that the FormFX control did not work under Windows 95. Then I tried some of the controls using a late beta of VB 4.0, 32-bit version. Using the tab control first, I noticed that the property page took an age to appear. When it did, I found that altering one of the properties caused an obscure error message, followed by a complete shutdown of Visual Basic 4.0. Presuming this to be a problem with the VB 4.0 beta, I reverted to VB 3.0 and tried the VBX controls. Performance was improved; but I soon managed to crash VB 3.0 as well.

Guessing something was up, I logged on to Sheridan's forum on CompuServe. There I found a host of angry messages from attempted users of Designer Widgets 2.0, a 1.2Mb patch file in the library, and a further string of messages claiming that the patched version was little better. The concerns were mainly to do with stability (as I had discovered), but also

Date	Product	Quantity	Price	Total
04/01/93	Megagame	8	19.5	156.00
05/01/93	War in the air	7	19.35	135.45
12/04/93	Cheese	7	16.39	114.73
06/05/93	Pacific Wars	1	19.5	19.50
03/09/93	Simon's Quest	5	9.8	49.00
12/08/94	Widgets	10	11.5	115.00
10/11/94	Land of York	6	19.8	118.80
10/11/94	Sim Football	3	15.5	46.50
10/06/95	Villains	6	19.75	118.50
				1977.05

**Above** Using Excel 7.0 and data access objects, data can be extracted from database tables as easily as in Visual Basic itself. **Right** Designer Widgets 2.0: good when it works. The toolbar designer is a neat way to assemble your own dockable toolbar.

incompatibility with projects built using Designer Widgets 1.0.

To be a supplier of third-party tools is a difficult and dangerous game. Just at this moment it is

more difficult than ever. Windows 3.x is dying, and Windows users are moving to some combination of Windows 95, NT, or OS/2. On top of that, the main VBX container environment, Visual Basic itself, has just been released in several new versions. Until recently, long delays in Windows 95 and VB 4.0 have made it hard to release new products.

Finally, companies like Sheridan are in the ridiculous



**Fig 1 Procedure to retrieve order details**

```

Sub GetOrders()
Dim db As Database
Dim snOrders As Recordset
Dim sSql As String

Dim sCustNo As String
Dim iOrderCount As Integer
Dim iCountVar As Integer

Clear sheet
Worksheets("sheet1").Cells.ClearContents

'Get a customer reference number
sCustNo = InputBox("Enter customer number")

'Construct SQL query
sSql = "Select * from customer, orders, products "
sSql = sSql & "where customer.cust_no = orders.cust_no "
sSql = sSql & "and orders.prod_no = products.prod_no "
sSql = sSql & "and customer.cust_no = " & sCustNo & " "
sSql = sSql & "order by orders.date_rcd"

' Open the database
Set db =
DBEngine.OpenDatabase("C:\TESTDATA\MAINDB.MDB")

'Create a snapshot based on the required customer number
Set sn = db.OpenRecordset(sSql, dbOpenSnapshot)

' Check for no results, find record count

```

```

If Not sn.EOF Then
sn.MoveLast
iOrderCount = sn.RecordCount
sn.MoveFirst
End If

' Enter customer name into worksheet
If iOrderCount <> 0 Then
MsgBox "There are " & Str$(iOrderCount) & " orders for this customer"
Worksheets("sheet1").Cells(3, 7).Value = "" & sn!CustNo
Else
MsgBox "There are no orders for this customer"
End If

' Enter order details into worksheet
For iCountVar = 0 To iOrderCount - 1
With Worksheets("sheet1")
.Cells(7 + iCountVar, 1).Value =
DateValue(sn!Date_rcd)
.Cells(7 + iCountVar, 3).Value = "" & sn!Product
.Cells(7 + iCountVar, 5).Value = Val(sn!Quantity)
.Cells(7 + iCountVar, 6).Value = Val(sn!price)
.Cells(7 + iCountVar, 8).Value = .Cells(7 + iCountVar, 5).Value * .Cells(7 + iCountVar, 6).Value
End With

sn.MoveNext
Next

' Close database
db.Close

```

position of having to support three component standards — VBX, 16-bit OCX and 32-bit OCX, and these are meant to work in a variety of different and not completely compatible environments. Sheridan's president Bob Wolf had the grace to post an apology on Compuserve, and pointed out that, "The permutations between versions (VBX, 16- and 32-bit OCX), host environments (VB 3.0, VB 4.0, Access, etc.) and operating systems (Win 3.x, WFWG, NT, Windows 95) turn out to be 71 separate test environments." Sheridan therefore deserves some sympathy, although it remains extraordinary that a product as unsteady on its feet as Designer Widgets 2.0 should acquire shrinkwrap status.

And what about the product? Presuming Sheridan soon delivers a solid release, and improves performance, it has good potential. There are many small improvements: the index tab control can be data-bound to give an instant card-file database; and a new notebook tab control allows creation of a comforting spiral-bound interface. Its appeal is a little reduced for users of VB 4.0 and Windows 95, since toolbar and tabbed dialogue controls come as standard, but the Designer Widgets 2.0 versions offer many extra features. Just make sure you get one that works.

### Delphi, VBXs and strings

If you have used VBX controls in Delphi, you may have come across a problem when trying to use string properties. When you set up Delphi to use a VBX, using the Install Components dialogue, it creates a Pascal wrapper unit in your Windows System directory. Among other things this wrapper converts VB property types into Delphi types. In the case of VB strings, properties are converted to Pascal strings limited to 256 characters in length. For example, the TX Text control, which is supplied by Borland in the Delphi RAD pack, has several string properties such as

### Fig 2 Determining buffer size

```
procedure TForm1.Button1Click(Sender: TObject);
var
  lpzTextString: PChar;
  lSize: Longint;
begin
  lSize := TextControl1.GetTextLen;
  {allocate memory allowing for null character}
  GetMem(lpzTextString, lSize + 1);
  TextControl1.GetTextBuf(lpzTextString, lSize);
  {...do what you want with lpzTextString}
  FreeMem(lpzTextString, lSize);
end;
```

### Fig 3 SelText property in TX Text control

```
procedure TForm1.Button1Click(Sender: TObject);

var
  ptrText: ^HSZ; {defined in BIVBX as ^char}
  lpzString: pchar;

begin
  new(ptrText); {initialise the pointer}
  {then get value of property by name}
  VBXGetPropByName(TextControl1.ct1, 'SelText', ptrText);
  lpzString:= VBXGetCStringPtr(ptrText^); {convert to pchar}
  {... do something with the pchar}
  dispose(ptrText); {free the pointer}

end;
```

Text and SelText. The Pro version of the same control has an RTFSelText property, needed for programmatic access to formatted text. Delphi exposes these properties, but helpfully truncates them to fit into a Pascal string, rendering them useless.

There are solutions. First, note that all Delphi controls support two methods, SetTextBuf and GetTextBuf. These methods work with pchars, solving the 256-character limit. Internally they work with the API messages WM\_SETTEXT and WM\_GETTEXT. These are straightforward to use, although before calling GetTextBuf you must first determine the size of buffer required with GetTextLen. (Fig 2.)

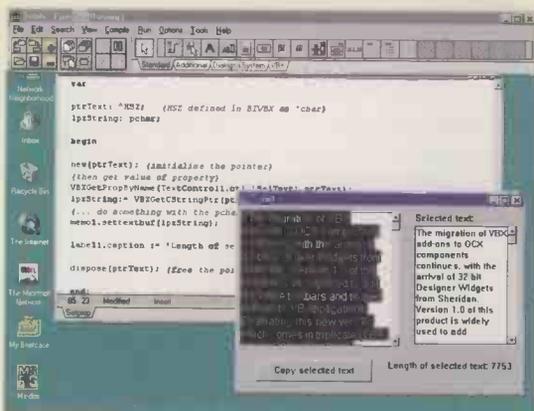
This works fine if it is simply a text property which you need to obtain. But what text you set or obtain depends entirely on how the control has implemented the WM\_SETTEXT and WM\_GETTEXT messages. If there is more than one text property, as with the TX Text control, this solution is not enough. There is

another way. A number of functions in the BIVBX unit give lower-level access to VBX properties. Two of these are declared in BIVBX.INT, as follows:

```
function VBXGetPropByName(Ct1: HCTL;
  lpzName: PChar; lpValue: Pointer):
  Err;
function VBXSetPropByName(Ct1: HCTL;
  lpzName: PChar; lVal: Longint):
  Err;
```

These functions enable you to get and set properties using pointers. You will need to put BIVBX in the Uses clause of any unit which calls them. For example, to retrieve the SelText property of a TX Text control, use the code in Fig 3.

Be warned that calling functions in BIVBX is uncharted territory, not documented by Borland. You should also note that the code will need amending according to the type of property you are accessing.



*Obtaining the value of the seltext property in a VBX is not straightforward, but it can be done*

### PCW Contacts

Tim Anderson welcomes your Visual Programming comments and tips. He can be contacted via PCW at the usual address, or  
freer@cix.compulink.co.uk

Designer Widgets costs £99 from Contemporary Software on 01727 811999.

## Windows Development

Doc-To-Help - Int. ver	£259
Robo-HELP - help authoring	£345
Tools.h++, Linpack.h++, Math.h++	£call
SmallTalk/V Visual - <i>new</i>	£1075
Zinc new 4.0 for Win & NT	£call
Graphics Server SDK new version	£195
Heap Agent & SmartHeap Win	£575
TCP/IP Development tools	£call
CodeBase or CodeBase++	£229
Greenleaf Commlib 5.2 Prof	£345
C-Tree Plus - with source	£595

## VB Value

Disctinct TCP/IP Visual Ed	£225
Spyworks by Desaware	£110
Spread/VBx	£165
TrueGrid Pro	£99
Crescent PowerPak Pro	£745
Designer Widgets or Data Widgets	£95
QuickPak Professional for Windows	£139
PinPoint/VB Rig Pro	£135/£89
Grid/VBx, Tab/VBx, and Tab/Pro - <i>new</i>	£call
Visual Components Suite	£235
Gantt/VBX, Schedule/VBX	£call
Formula 1/ First Impressions OCXs	£195
Crystal Reports 4.5 OCX & VBX	£call

## Windows 32

SmartHeap Win/32	£525
WinMaker Pro 6.0 - Win & NT	£349
Win Widgets/32	£295
VtoolsD for Device Drivers	£call
InstallShield for Win95 & NT	£call

## Mathematics & Science

- Mathematica - DOS, Win, Mac, Workstations, Education & Student pricing.
- Derive - version 3 •Gauss 386i
- Origin windows scientific plotting.
- Lindo & What's Best Linear Programming  
...many more for maths & stats.

## UNIX

- SCO OpenServer 5.0 - new release
- SCO Dev. Systems. •WordPerfect for UNIX.
- TCP/IP, NFS & X Window Servers

## For FORTRAN

Lahey FORTRAN 90 - new	£625
NAG Fortran Library - PC/Unix	£call
MS FORTRAN-77 5.1 - DOS	£145
MS FORTRAN PowerStation -DOS/Win	£259
MS FORTRAN PowerStation 32 - <i>New</i>	£call
IMSL Exponent Graphics for NT	£595

## Cross Development

Hi-Tech C Cross - many targets	£call
Introl C Cross - many targets	£call
2500AD Cross Asm & Simulators	£call

## Phar Lap

TNTIDOS Extender SDK - 32 bit	£329
286IDOS Extender SDK - 16 bit	£329

## SOFTWARE DEVELOPMENT TOOLS FOR WINDOWS, DOS, UNIX, & OS/2

Call for our new Sept/Nov  
CATALOGUE

## Microsoft

Visual C++ 4.0 CD - Win 95 & NT	£call
Visual C++ 4.0 upg - with subscription	£call
Windows 95 & Win 95 Resource Kit	£call
Visual SourceSafe 4.0 <i>New</i>	£call

Visual Basic 4.0 PE upg from VB PE	£119
Visual C++ 4.0 Ent. upg from PE	£375
Visual Basic Prof Ed. upg from SE	£225

Visual FoxPro <i>New</i>	£call
Macro Assembler	£110
SQL Server 6.0 <i>New</i>	£call
Windows NT 3.51 Server & Workstation	£call

## Editors and Tools

CodeWright Prog Editor Win or NT	£159
Fusion-drop in editor for VC++ 1.x & 2	£99
InstallShield Windows or Win NT	£call
PC Lint C/C++ - Lint code checking	£145
System Commander-multi-boot loader	£69
PC-Install-Win/Win32 Combo <i>New</i>	£call
DemoShield - Build Windows Demos	£call
Winstall MultiPlatform - Install Tool	£325
DemoQuick-Win and now Win NT & 95	£call

## MKS

MKS Toolkit of Unix tools	£195
Source Integrity Multi-Platform <i>New</i>	£359
MKS Lex & Yacc for C, C++ & TP	£215
<i>For Windows/Dos, OS/2 &amp; NT, call for multi-user licences on all MKS products.</i>	

QUALITY IN CUSTOMER  
SERVICE AND SUPPORT

0171 833 1022

FAX 0171 837 6411

I-6 BRADLEY'S CLOSE,  
WHITE LION STREET, LONDON N1 9PN



Your first  
choice for  
better  
development  
tools

## Watcom

Watcom C/C++ 10.5 CD <i>New</i>	£139
Watcom Fortran 77 - new ver 10.5 CD	£345
Watcom SQL - DOS, Win, OS/2	£195
<i>SQL Servers for Win, Netware, NT or DOS</i>	
VX.REXX/VX.REXX Client Server-OS/2	£call

## Borland

Borland C++ 4.5 - Win, NT & 95	£285
Borland C++4.5 & Dbase Frameworks	£415
Turbo C++ 4.5 Windows - <i>New</i>	£69
CodeGuard for Borland C++	£69
Delphi/Delphi Client Server	£295/795
Delphi RAD Pack	£129
Visual Solutions Pack of Vbxs	£69
Turbo Assembler	£69
Borland Pascal & Turbo Pascal	£call

## Nu-Mega

BoundsChecker Standard Ed - Win 95 or Win NT	£235
BoundsChecker Prof Ed - Win 95 or Win NT	£395
BoundsChecker Prof Ed Pack - both Win 95 & NT	£625
BoundsChecker Win 3.1, Win32s or DOS	£195
Soft-ICE - Win 95 (beta), Win 3.1, or DOS	£295

*Call for savings on Nu-Mega bundles*

## PVCS Specialists

- PVCS Version Manager is available for Win, Win NT, OS/2 and many Unix platforms in single user and work-group configurations for all development teams. *Now new ver 5.2*

## OS/2

OS/2 Warp Connect - p2p network	£115
OS/2 Warp Win-OS/2 - CD/3.5"	£99/£115
VisualAge C++ - comp upgrade	£call
DB/2 for OS/2 - Single or client/server	£call

## CLIENT/SERVER

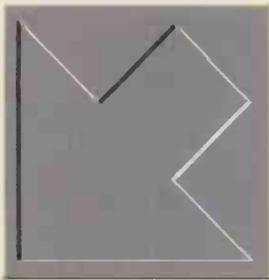
Btrieve Dev Kit - Win, NT, DOS, or OS/2	£395
Scalable SQL for Netware	£call
PowerBuilder Portfolio - <i>NEW</i>	£329
Component PowerPack for PB4 <i>New</i>	£199

## CASE

EasyCASE Professional Win 4.2	£645
EasyCASE DataBase Eng for SQL	£call
InfoModeller Desktop	£call
Star Designer for Windows	£259

## NEWS

- BoundsChecker NEW Standard & Professional Editions** - SE has new GUI, new helpfile with full explanations and sample code for each exception and integration into VC++ 2.1 + IDE. PE has new **Compile Time Instrumentation** for more thorough testing, including C++ usage checking.
- Visual Basic 4.0 Enterprise Edition** - with 16- and 32-bit compilers, OCX and OLE server capability, plus direct drivers for Oracle and SQL server - upgrades from VB Prof. Ed. are available.
- Visual C++ 4.0 (DC)** - new for Windows 95 & NT, with MFC 4.0, and all new GUI. Upgrades are available.
- Delphi** - VCL components from TurboPower: Orpheus for extra controls and validated data-entry. Asynch Professional for serial communications within Delphi.
- PowerBuilder Portfolio** - great value bundle for good database design with PowerBuilder Desktop, Watcom SQL server (3 user) and Star Designer - all Win 95 compatible.



## Scratching the surface

**With a little know-how, Visual Basic can give the programmer more control over Windows' behind-the-scenes operations. Mike Liardet looks at ways to access DLL files, the backbone of Windows, through a Visual Basic program called VBAPI.**

Visual Basic shields the programmer from many of the complexities of Windows programming. This is both a strength and a weakness in the language — a strength because it makes Windows application development comparatively easy, and a weakness because it prevents the programmer from controlling what happens beneath the surface of the programming environment. Or does it?

### Anything to Declare?

The VB "Declare" statement is the escape clause that allows a program to get to grips with Windows internals. It provides a great way to extend Visual Basic's functionality. In essence, "Declare" can be used to specify a linkage to the routines in any Dynamic Link Library (DLL) file, so that the

DLL routines can then be called from the VB program in the usual way. "So what?" I hear you say. The point is that virtually the whole of Windows is implemented on the back of a handful of DLLs. Knowing how to use them opens doors.

There lies the catch. Ideally, to make full use of the DLLs you should have a good understanding of the way Windows works beneath the surface, and have access to some good supporting documentation for reference and guidance. Visual Basic (Professional's API (Application Programming Interface) Help file contains all the common Declares and provides a valuable tool. There is also a useful SDK (Software Development Kit) Help file that gives a description of how the routines can be used from within a C

programming environment.

To get a better picture of what to do with these routines, the *Visual Basic Programmer's Guide to Windows API* (Daniel Appleman, Ziff-Davis Press) makes for ideal bedtime reading. The Microsoft Developers Network (MSDN) CD-ROM is another option. It is packed with hints on useful API calls for the Visual Basic programmer, alongside a lot of other information on C, Access, FoxPro and other Microsoft development tools. In an inspired move, Microsoft has extracted the VB-specific material from the MSDN and made it available directly to VB programmers by including the material on the VB 4.0 CD-ROM. Unfortunately it has been excluded from the Standard Edition, but Professional and Enterprise users get it.

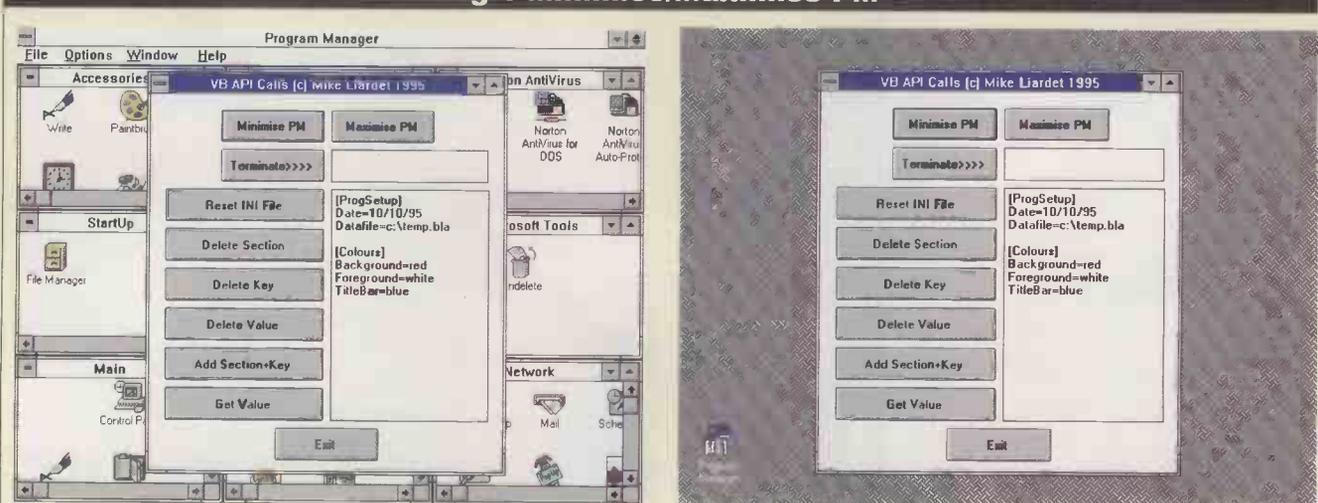
### Back to Basics

This month we will pick up on some of the hints given on the MSDN/VB 4.0 and show how they can be applied to a plain and simple Visual Basic program, called VBAPI. It is worth mentioning that there is no need to upgrade to VB 4.0 in order to try out these techniques. They will work quite happily with version 3.0.

Figs 1 to 3 illustrate VBAPI in action. Fig 1 shows how it can be used to minimise the Program Manager. This is something that might be required just after a program is loaded, as it gets rid of distracting background clutter. In a real application the code to do this would probably be put in the Form\_Load event handler.

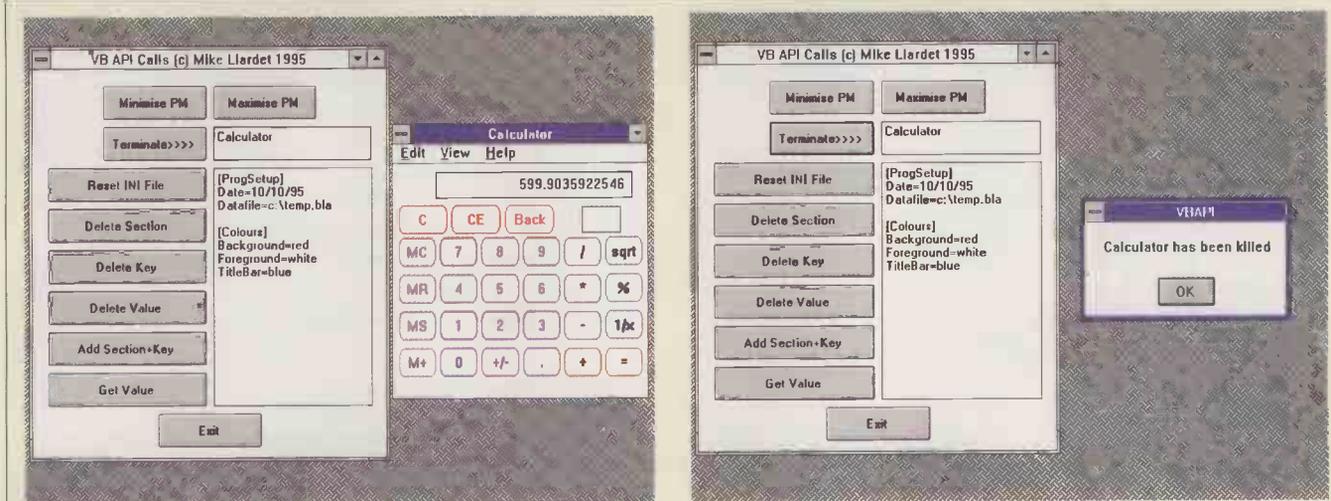
Fig 2 shows how another application can be terminated under VB control. In a real application this could be a useful trick for freeing up memory, or for preventing an application from running alongside some

**Fig 1 Minimise/Maximise PM**



"Minimise PM" minimises Program Manager to an icon, and "Maximise PM" brings it back to full size. The code behind the "Minimise PM" button would normally be put into an application's Form\_Load

Fig 2 The "Terminate" button



Now you see it, now you don't! The "Terminate" button can terminate any application — just give it the window title

other incompatible task — such as a Backup application. Fig 3 shows the manipulation of an INI initialisation file. Just about every VB application could make good use of an INI facility. Although it could be implemented by using standard VB file I/O, it is much simpler and more elegant to use the standard Windows APIs instead.

In pure VB terms there is nothing fancy going on behind the scenes in VBAPI. We just have a number of Declare statements to provide access to the necessary API calls, and each command button is implemented with a few lines of code making

the necessary calls. Figs 4 to 6 give the details of the API calls needed. These show a few of the possibilities, once you get to grips with the Windows API. The major Windows DLLs offer around 1,000 others, then there are other supporting DLLs, DLLs from third-party suppliers, and so on — thousands of calls which are just a declaration away.

Unfortunately, information on DLLs is usually directed at the C programmer, so the VB coder needs to read between the lines when figuring out a DLL's declaration and use. C is richer in types than VB, so a 16-bit quantity in C might be typed as

"hWnd", "int", "UINT" or "BOOL", and so on. Visual Basic has to make do with just "integer" for all of these types, but in practice this does not cause major problems. There is a similar variety of C types for "strings" and "longs", but in all cases the API call can still be made to work in VB if plain old "string" or "long" are used in the declaration, as necessary. Notice that all the parameters to API calls must be declared in VB as "ByVal" — this just makes sure that VB delivers the arguments in the right form to the underlying C routine.

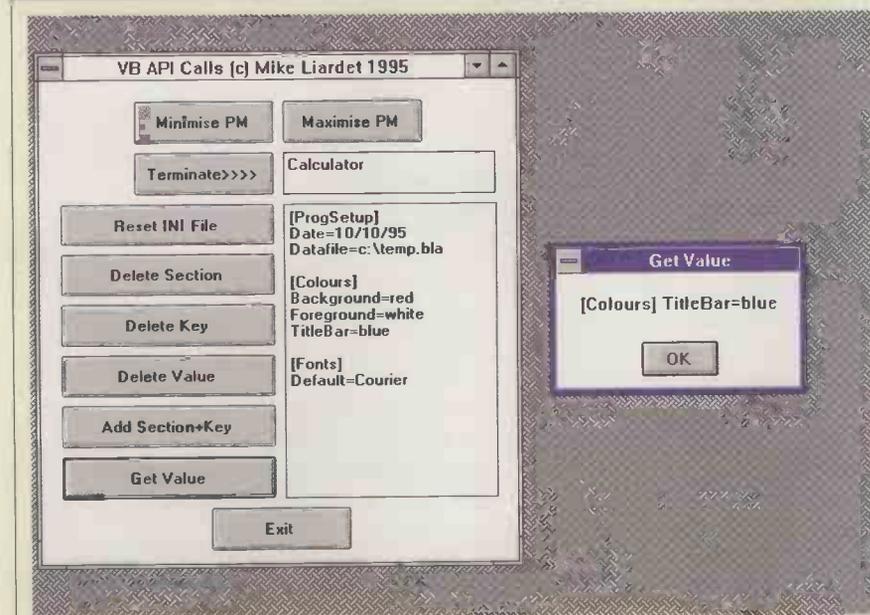
### Callbacks

Although most of the DLLs are up for grabs, there are one or two API calls that simply cannot be handled by Visual Basic at all. For example, some Windows functions do "callbacks", which means that one of their parameters takes the address of a function. As Visual Basic functions are compiled differently from C, they cannot be called from it. Thus there is no meaningful address that can be given in this case. This means that API calls with callback cannot be used, or at least not used directly (there is a way round the problem but we won't go into it here).

Also, Visual Basic itself suppresses some of Windows' functionality, and this can render some calls unusable. For example, there are Windows functions to change the shape of the mouse pointer, but the VB environment has its own ideas about mouse display. This means that in general these functions won't work, and you are likely to be stuck with the dozen or so shapes that are predefined in VB itself.

For most common Windows functions the only awkward area is the handling of

Fig 3 Manipulating an INI file



Accessing an INI file. The various command buttons alongside the big text box show how sections, entries and values in the INI file can be added, deleted, changed or accessed

## Fig 4-Manipulating windows

## IsWindow

## C Declaration

```
BOOL IsWindow(HWND)
HWND hWnd; /* handle of window, */
```

## VB Declaration

```
Declare Function IsWindow Lib "User" (ByVal hWnd As Integer) As Integer
```

## Parameters

hWnd: identifies a window.  
Returns: non-zero if the window handle is valid, otherwise, returns zero (false).

## GetWindow

## C Declaration

```
HWND GetWindow(HWND, wCmd)
HWND hWnd; /* handle of original window*/
UINT wCmd; /* relationship flag, */
```

## VB Declaration

```
Declare Function GetWindow Lib "User" (ByVal hWnd As Integer, ByVal wCmd As Integer) As Integer
'Values for wCmd...
Const GW_CHILD = 5 'Identifies the window's first child window.
```

Const GW\_HWNDFIRST = 0 'Returns the first sibling window for a child window; otherwise, it returns the first top-level window in the list.

Const GW\_HWNDLAST = 1 'Returns the last sibling window for a child window; otherwise, it returns the last top-level window in the list.

Const GW\_HWNDNEXT = 2 'Returns the sibling window that follows the given window in the list.

Const GW\_HWNDPREV = 3 'Returns the previous sibling window in the list.

Const GW\_OWNER = 4 'Identifies the window's owner.

## Parameters

hWnd: identifies the original window.  
wCmd: specifies the relationship between the original window and the returned window. It can be set to one of the constant values given above.  
Returns: the handle of the window if the function is successful, otherwise NULL (integer 0 in VB) - indicating either the end of the system's list or an invalid wCmd parameter.

*An extract from a selection of Windows (with a big "W") functions for manipulating windows (with a small "w"). With the given declarations these can be used from Visual Basic, either to manipulate the VB application's own windows, or the windows belonging to another application*

routines that return strings. The problem here is that Visual Basic and C handle strings differently. With C, the memory for the string needs to be allocated before the call, whereas a VB routine can find the space dynamically.

The `GetPrivateProfileString` routine (Fig 9) is a good illustration of this. It returns a string in its fourth argument. To call it from VB, an appropriate-length string must be initialised before the call and passed to the routine in this argument position, with the length given as its next argument. The function itself returns the number of characters it placed in the string, and these characters can easily be extracted using the VB `left$( )` function.

Fig 4 gives a selection of the Windows functions which are used in the VB API program by both the commands that minimise and maximise Program Manager, and the command that terminates other applications. `IsWindow` and `ShowWindow` are straightforward. `IsWindow` determines whether or not the given window handle is valid, as opposed to being some arbitrary integer value. `ShowWindow` sets the given window's visibility state (maximised or minimised).

**Can you handle it?**

Unless the windows functions are being used to manipulate a VB application's

## Fig 5 Definitions of Windows profile functions

## WritePrivateProfileString

## C Declaration

```
BOOL WritePrivateProfileString(LPCSTR lpAppName, LPCSTR lpKeyName, LPCSTR lpString, LPCSTR lpFilename)
LPCSTR lpAppName; /* address of section*/
LPCSTR lpKeyName; /* address of entry*/
LPCSTR lpString; /* address of string to add*/
LPCSTR lpFilename; /* address of initialization filename*/
```

## VB Declaration

```
Declare Function GetPrivateProfileString% Lib "Kernel" (ByVal lpAppName As String, ByVal lpKeyName As Any, ByVal lpDefault As Any, ByVal lpReturnBuffer As String, cbReturnBuffer As Integer, ByVal lpFileName As String)
```

## Parameters

All string parameters point to null terminated strings, which are case independent, and so can contain any combination of upper and lower case characters  
lpAppName: specifies the section containing the entry.  
lpKeyName: specifies the entry whose associated string is to be retrieved.  
lpDefault: specifies the default value for the given entry if the entry cannot be found in the initialization file- must never be NULL.  
lpReturnBuffer: receives the character string.  
cbReturnBuffer: receives the size, in bytes, of the buffer pointed to by the lpReturnBuffer parameter.  
lpFilename: names the initialization file.  
Returns: the number of bytes copied to the specified buffer, not including the terminating null character.

*Definitions of two of the Windows "profile" functions that can be used to manipulate INI initialisation files*

Fig 6 PostMessage

PostMessage

C Declaration

```

BOOL PostMessage(hWnd, uMsg, wParam, lParam)
HWND hWnd; /* handle of the destination window*/
UINT wMsg; /* message to post, */
WPARAM wParam; /* first message parameter*/
LPARAM lParam; /* second message parameter*/

```

VB Declaration

```

Declare Function PostMessage Lib "User" (ByVal hWnd As Integer, ByVal wMsg
As Integer, ByVal wParam As Integer, ByVal lParam As Long) As Integer
'Alterative value for hWnd
Const HWND_BROADCAST = &HFFFF

```

Parameters

hWnd: identifies the window to which the message will be posted  
wMsg: specifies the message to be posted.  
wParam: specifies 16 bits of additional message-dependent information.  
lParam: specifies 32 bits of additional message-dependent information.  
Returns: nonzero if the function is successful, otherwise, zero (= false).

*The PostMessage function, used for communicating with other windows or applications*

own windows (where the control's hWnd property can return a window handle), it is first necessary to find the window's handle. FindWindow is needed here. It retrieves the handle of a window given either its class name (not so useful from VB) or title. GetWindowLong retrieves extra information on a window, as a long value at the specified offset into the extra window memory. There are many ways of using this, but in VBAPI this function is just used to determine whether or not a window is disabled.

It is often necessary to iterate through all the windows to find one with a particular attribute, or else to process them all in some way. GetWindow can be used for this. It retrieves the handle of a window that has the specified relationship to the given window, searching the system's list of top-level windows, their associated child windows, the child windows of any child windows, or any siblings of the owner of a window.

Windows has several APIs for manipulating INI files, but there are just two main functions that can do almost everything

between them — WritePrivateProfileString and GetPrivateProfileString (Fig 5). WritePrivateProfileString copies a character string into the specified entry of a section of the specified initialisation file. If the file does not exist, it is created. If the section does not exist, it is created; and (surprise, surprise) if the entry does not exist in the specified section, then that too is created. It is also possible to delete information from the INI file using this function. If the entry parameter is given as 0, the entire section is deleted. If the string parameter is given as 0, then only the entry specified by the lpKeyName argument is removed.

#### INI file manipulation made easy

WritePrivateProfileString can also help track down the INI file. If the lpFilename argument does not contain a fully qualified path and filename for the file, it searches the Windows directory for the file. If the file does not exist, it creates

Fig 7 ShowWindow

```

Sub cmdMinPM_Click ()
Dim hWnd As Integer, I As Integer
hWnd = FindWindow(0&, "Program Manager")
If hWnd <> 0 Then
I = ShowWindow(hWnd, SW_SHOWMINNOACTIVE)
End If
End Sub

```

*ShowWindow can be used to minimise any application. Here is how it minimises the Program Manager*

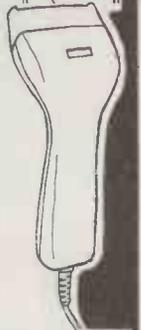
### Eliminate Errors and Speed Throughput



Your existing computer system and software can be upgraded to accept Barcode input at minimal cost and with no changes to existing procedures.

We make electronic identification equipment that's effective and simple to use.

- ☆ Barcode
- ☆ Electronic Tagging
- ☆ Magstripe



Altek Instruments Ltd, 44-46 Terrace Rd  
Walton-on-Thames, Surrey, KT12 2SD  
Phone: 01932 244110 Fax: 01932 227279

## PROTECT YOUR SOFTWARE

Prevent copying of your software with the  
Ultimate Copy Protection System ...

### COPYCONTROL.

- User friendly & secure
- Beats all bit copiers & disassemblers
- Supports networks, backups, disk caches, Windows, CD ROMS, cover discs, etc
- Remote changing of parameters
- No add-on hardware or special disks required
- Control where, when & how often your programs are run
- Works with all IBM PC compatible computers
- Control the number of simultaneous network users

CALL TODAY FOR DETAILS  
**0117 983 0084**  
FAX: 0117 983 0085

### MICROCOSM LTD

1 Eastfield Road, Westbury-on-Trym, Bristol BS9 4AD, UK

the **Phoenix<sup>75</sup>** from **Graham Jacobs**



From  
**£375**  
(+ VAT)



**pentium<sup>®</sup>**  
PROCESSOR

The Phoenix is an upgrade for existing AT clone computer systems. It is based on us re-manufacturing & fitting a new PCI/ISA motherboard complete with the new intel pentium@ 75Mhz processor. We have 30 pin to 72 pin adaptors so that in most instances we can use your present memory. We offer a full range of upgrades for most AT class computers and new LEO computer systems based on the Intel micro-processor family from only £195. Memory, Hard Disk and Controller upgrades. FAX/MODEM's (Approved) 14,400 from £92 and 28800 true V34 bis from £199. Finance available (subject to status). Why not give one of our Engineers a call & get help on selecting your upgrade or new computer system. You will not have to listen to music. You will not be held in a stack, because we have 4 lines you probably won't get the engaged signal. Why should you phone us? Since 1990, 1000's have.

(Graham Jacobs has been selling PC's since 1981)

**TEL (01332) 20 53 53**  
**FAX (01332) 20 53 63**

Email 100016.2325 @COMPUSERVE.COM  
Units 2 & 3 The Business Centre, Beaufort Street, Derby DE21 6AX.  
Members of PCDMA & NASCAR - Licensed Credit Brokers  
Prices & Specifications Correct at time of going to press E&OE ©1995  
The Intel Inside and Pentium Processor Logos are the registered trademarks of the Intel Corporation

**Fig 8 The PostMessage API**

```

Sub cmdTerminate_Click ()
    txtTerminee = Trim$(txtTerminee)
    Select Case TaskKill(txtTerminee)
    Case TASK_NOT_FOUND
        MsgBox txtTerminee & " is not running"
    Case TASK_KILL_FAILED
        MsgBox txtTerminee & " is not answering"
    Case TASK_WAS_DISABLED
        MsgBox txtTerminee & " is disabled"
    Case TASK_WAS_ME
        MsgBox txtTerminee & " is myself"
    Case TASK_KILLED_OK
        MsgBox txtTerminee & " has been killed"

```

```

    End Select
End Sub

```

```

Function TaskKill (ByVal vsTaskTitleOrClass As String)
    As Integer

```

*(Our cover disk has full details of the remainder of this code)*

```

End Function

```

*Using the PostMessage API call to terminate another application*

the file in the Windows directory. If lpFilename contains a fully qualified path and filename and the file does not exist, it creates the file in that directory as long as the directory exists. Note that it is considered bad practice to create INI files in the Windows directory, as it makes it difficult to fully de-install an application.

GetPrivateProfileString retrieves a character string for the specified key from the specified section in the specified initialisation file. It searches the file for an entry that matches the name specified by the lpKeyName parameter under the section heading specified by the lpAppName parameter. If the entry is found, its corresponding string is copied to the buffer. If the entry does not exist, the default character string specified by the lpDefault parameter is copied. If the key is given as 0, all entries in the section specified by the lpAppName parameter are copied to the buffer specified by the lpReturnBuffer parameter. If the filename parameter does

not contain a full path, it searches for the file in the Windows directory.

Much of the low level communication between applications, and even within an application, is handled by "messages". Windows message handling is a complex topic, but you don't need to know the ins and outs in detail to use messages. PostMessage (Fig 6) is the key routine. It places a message in a window's message queue and returns without waiting for it to process the message. Messages in a message queue are retrieved by calls to GetMessage or PeekMessage (neither needed by VBAPI). If the hWnd parameter is set to HWND\_BROADCAST, the message is posted to all top-level windows, including disabled or invisible unowned windows. The routine should not be used to post a message to a control.

Figs 7 to 9 show how these functions can be put together to implement the various commands in VBAPI. Only the key code is shown, but the full program is

available on the cover disk. Fig 7 shows how to minimise Program Manager. First, find the handle for the window whose title is "Program Manager", then use ShowWindow with the command SW\_SHOWMINNOACTIVE to minimise it. This code won't work if the title of the Program Manager window is changed, as it is for example when running under Windows NT, but there are ways around this.

Fig 8 shows how to kill a task. The main code to do this is in the routine TaskKill, which kills the window with the given task or class name. Again, FindWindow is used to find the window. There is some extra complexity in the routine to handle the case when the task being killed is the application itself or if the window is disabled, but for most cases it posts two messages, WM\_CANCELMODE and WM\_CLOSE, to the window, in order to kill it. Note the use of DoEvents: this makes sure that the recipient window gets a chance to clear its message queue and process the two new messages, when VBAPI relinquishes the processor.

One example of the INI file manipulation code is given in Fig 9. The other INI commands are very similar to this. Notice the RefreshINI command at the end of the routine. This is placed at the end of all the INI commands. It reads the INI file, using standard VB file I/O, into the VBAPI form's text box alongside the command buttons, providing instant verification that the command is working correctly.

**Fig 9 Accessing an INI file value**

```

Sub cmdGetValue_Click ()
    Dim FileName As String
    Dim lpAppName As String
    Dim lpKeyName As String
    Dim lpDefault As String
    Dim lpString As String
    Dim nBytes As Integer
    Dim x As Integer
    FileName = app.Path & "\demo.ini"
    lpAppName = "Colours"
    lpKeyName = "TitleBar"
    lpDefault = "Not Found!!!"
    lpString = Space$(100)
    nBytes = 100
    x = GetPrivateProfileString(lpAppName, lpKeyName, lpDefault, lpString,
nBytes, FileName)
    MsgBox "[Colours] TitleBar=" & Left$(lpString, x), 0, "Get Value"
    RefreshINI
End Sub

```

*GetPrivateProfileString can access any value in an INI file, but it's a little tricky to use from within VB*

### PCW Cover Disk

The full code for this month's Low Level is on the cover disk given with this issue of *Personal Computer World*.

### PCW Contacts

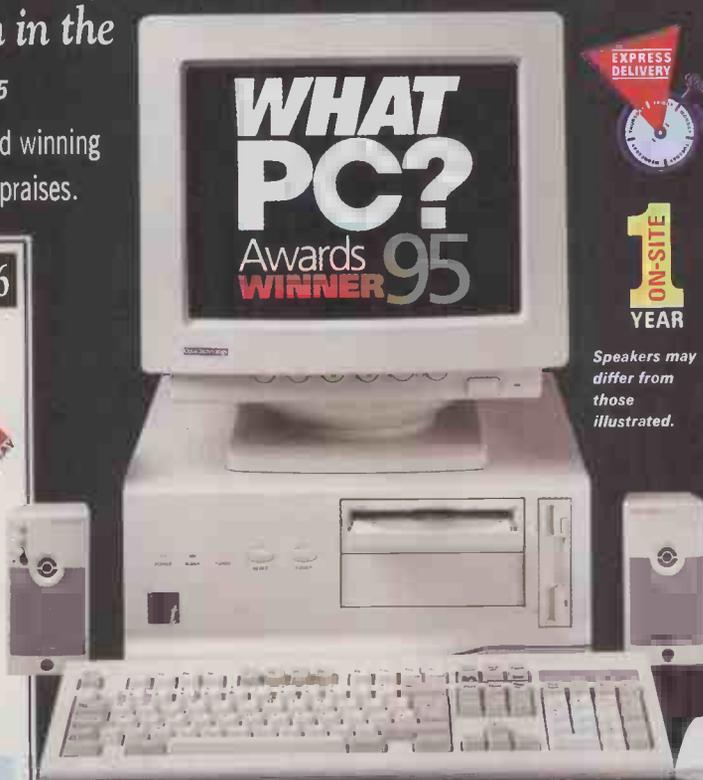
Mike Liardet is a freelance programmer and writer. He can be contacted via the PCW Editorial office or on email as [mliardet@cix.compulink.co.uk](mailto:mliardet@cix.compulink.co.uk)

# AWARD-WINNING SYSTEMS FIRST CLASS PRICES

"...this makes the PCI 4D2/66 a perfect machine for those who want value for money now, and who may want to expand their system in the future." *What PC? June 95*

Call us today to order your award winning system and you'll be singing its praises.

"OPUS has put together a fine system which offers everything you might need in a PC" *What PC? June 95*



**1 YEAR ON-SITE**

Speakers may differ from those illustrated.

Prices under constant review. Please call now for latest details.

### ENTRY LEVEL 486

- 486 DX2/66MHz Processor
- PCI Motherboard Windows 95 ready (Plug 'n' Play)
- 128k Cache
- 8MB RAM
- 540MB Hard Disk Drive
- PCI Enhanced IDE Controller
- 3.5" (1.44MB) Floppy Disk Drive
- 14" SVGA Colour Monitor, .28 dot pitch & Energy Star Compliant
- 1MB PCI Windows Accelerator Card
- 105 Key Windows 95 UK Keyboard
- Windows 95 or MS DOS 6.22/MS Windows 3.11
- Serial Mouse
- Desktop Case Style
- Free Diagnostic Utilities
- 12 Months ON-SITE, Parts and Labour Warranty
- Lifetime Telephone Technical Support
- Express Delivery

**PCI PLUS 'N' PLAY**

**486DX2/66 £739**  
Exc Carr & VAT

4MB RAM DX2/66  
**FROM £669**  
**LIMITED OFFER**  
Ex Stock  
Exc Carr & VAT

### MID-RANGE 486

- 486 DX4/100MHz Processor
- PCI Motherboard Windows® 95 ready (Plug 'n' Play)
- 128k Cache
- 8MB RAM
- 540MB Hard Disk Drive
- PCI Enhanced IDE Controller
- 3.5" (1.44MB) Floppy Disk Drive
- 14" SVGA Colour Monitor, .28 dot pitch & Energy Star Compliant
- 1MB PCI Windows Accelerator Card
- 105 Key Windows 95 UK Keyboard
- Serial Mouse
- Desktop Case Style
- Windows 95 or MS DOS 6.22/MS Windows 3.11
- Free Diagnostic Utilities
- 12 Months ON-SITE, Parts and Labour Warranty
- Lifetime Telephone Technical Support
- Express Delivery

**PCI PLUS 'N' PLAY**

**486DX4/100 £779**  
Exc Carr & VAT

## Optional Upgrade Extras for the System of Your Choice

### MULTI-MEDIA UPGRADE

- Quad Speed, Mult Session CD ROM drive
- 16 Bit Sound Card
- Separate Stereo Speakers

**£135**  
Exc Carr & VAT

### MULTI-MEDIA PLUS

- As Multi-Media Upgrade above PLUS Microsoft Family Pack.
- Including: Works, Encarta 95, Dangerous Creatures, MS Money, Scenes & Entertainment Pack

**£169**  
Exc Carr & VAT

### WINDOWS 95

Unlock the power of your PC with Microsoft's Windows 95 and everything you do on your PC will be...

**FASTER, EASIER & MORE FUN**

**CALL FOR DETAILS NOW**

### COMMUNICATIONS UPGRADE

- Internet Fax/Modem Card 14,400 bps/v32 bis, Hayes compatible & BAPT approved

**£69**  
Exc Carr & VAT

**FREE COMPUSERVE MEMBERSHIP TO A WORLDWIDE WEB**

### GRAPHIC CARD UPGRADES

- 1MB S3 64-Bit (DRAM) Graphics Accelerator Card **£20**
- 2MB S3 64-Bit (DRAM) Graphics Accelerator Card **£95**

Optional Upgrades only available at price shown when purchasing a complete system

### PAYMENT OPTIONS

- CREDIT ACCOUNTS
- CREDIT CARDS
- EASY PAYMENT PLAN
- BUSINESS LEASING

**ORDER RIGHT NOW**

**TEL: 01293-821555**

**FAX: 01293-782663**

**OPUS technology**

**PC'S NOTEBOOKS & NETWORKS DIRECT**

# CD DUPLICATION, THE LONG AND THE SHORT OF IT.

For over thirteen years Loadplan has led from the front in the duplication of media, so not too many eyebrows will be raised at the launch of our CD duplication service.

What might slacken a few jaws, however, is the fact that we are competitive on short runs as well as longer runs.

As you might expect, Loadplan also offer a wide range of packaging options which include high quality litho printing directly on to the disc.



If you need an in-house solution you'll be pleased to know we've got that covered too in the form of dedicated CD duplication hardware.

So if you're thinking about the viability of publishing software or archiving on CD, why not call us on 081-200 7733 or return the coupon below. After all when it comes to CD duplication we offer a broader spectrum.

**LOADPLAN**

Jubilee Close Townsend Lane Kingsbury London NW9 8TZ.

Please send me further information on Loadplan's CD duplication service.

Name \_\_\_\_\_

Company \_\_\_\_\_

Position \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Telephone \_\_\_\_\_

Post coupon to Loadplan Ltd., Jubilee House, Townsend Lane, Kingsbury, London NW9 8TZ or simply fax it over on 081 205 2615.

PCW/12/95



# The CAD Specialists

## FastCAD Architect Pro

### HOUSING, COMMERCIAL & HOME EXTENSIONS

Most CAD software just draws lines arcs and circles, - it's quicker to draw it by hand!

FastCAD Architect Pro generates walls, doors, windows, stairs, Wall floor and ceiling sections with a click of the mouse to the sizes you tell it. Ideal for working drawings.



## FastCAD Pro

Still the best all round low cost 2D Mechanical CAD package. Pro version - Mechanical, Electrical, Process libraries, Bill of Material, Structural, Fonts.

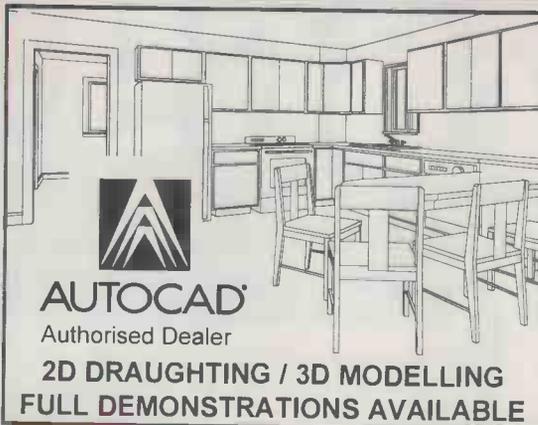
### EasyCAD PRO for Windows

The best selling DOS program is now available to run under Windows - Call for latest details

### INKJET PLOTTERS

a full range of plotters with CAD support always ready for immediate delivery. We also supply paper

**CAD Modelling - Leasing - Training - Support - Export Orders Welcome**



**AUTOCAD**

Authorised Dealer

**2D DRAUGHTING / 3D MODELLING  
FULL DEMONSTRATIONS AVAILABLE**

**Scan2CAD** - the program that makes drawing conversion of paper drawings from scanned raster to CAD vector affordable. Fast and easy to use this program has a good range of flexible controls.

**Scan2CAD** £199+VAT

**MINIVIEW** - full Autocad file viewing, printing and plotting without the need for Autocad. Works with DWG, DXF, HPGL and PCX format files. The ideal solution where drawing editing is not required.

**DWG viewer/plotter** £199+VAT

**Free A3 Plotter worth £995  
with every AUTOCAD r13**

Reading University Innovation Centre RG6 6BX

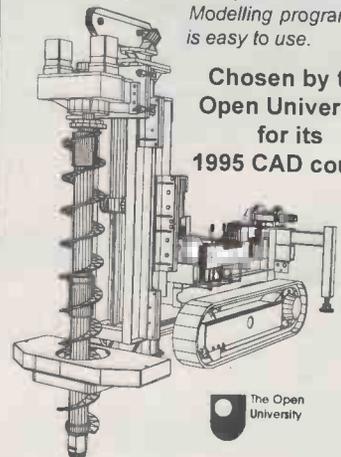
Tel:01734 753477 Fax:01734 861894

## SilverScreen

### Solid Modelling on a PC

If you are new to 3D CAD, or if your current 3D is slow or hard to use, SilverScreen is the Modeller for you. A fast powerful PC Solid Modelling program that is easy to use.

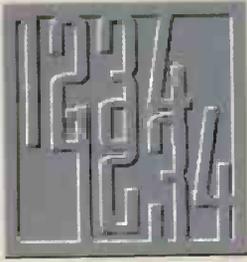
Chosen by the  
Open University  
for its  
1995 CAD course



### WSCAD Electrical Software

A modular CAD program for Electrical wiring schematics which offers professional features for a fraction of the cost. Full component libraries for UK, USA and Europe.

**LEO ARDO**  
COMPUTER SYSTEMS



## Wondrous Numbers

... a sight to behold! Steer your gaze towards these number nuggets, presented by Mike Mudge.

This topic is believed to have originated with Charles Ashbacher: *J. Recreational Mathematics*, Vol. 24(1) 12-15, 1992. However, readers beware — this article contains a serious misprint which has been self-propagating to the present day.

WONDROUS numbers are members of a series of integers (positive?) which always converges to 1. This series is given by:

If  $n$  be even, the next  $n = n/2$ :

If  $n$  be odd, the next  $n = 3n+1$

Hofstadter used the term "Wondrous" as these numbers are so simple and awesome and can be produced in a solitaire-like game. See D.R. Hofstadter, Godel, Escher, Bach: *An Eternal Gold Braid*, Basic Books Inc, New York, pp400-402, 1979. Now B.C. Wiggin, *Journal of Recreational Mathematics*, 20:1, pp52-56, 1988, Wondrous Numbers a Conjecture about the  $3n + 1$  Family, extended the concept as a genus for the numbers 2 through 12. For example, he defined the  $(n/3, 4n+1)$  WONDROUS NUMBERS as:

Divide  $n$  by 3

If there is no remainder, the quotient is the next  $n$ : If the remainder is 2, the next  $n = 4n - 1$ : If the remainder is 1, the next  $n = 4n + 1$ .

This series also converges to 1 and has been tested at least upto 100000. Now Wiggin extended the concept further to  $(n/D, (D+1)n + 1)$  as follows:

Any integer  $n$  greater than or equal to  $(D - 1)$  may be directed through a series of iterations as a function of  $n$  congruent to  $R$  modulo  $D$ :

If  $R = 0$  then the next  $n$  is the quotient  $n/D$ : if  $R = 1(1) (D-2)$  then the next  $n$  is  $n(D + 1) - R$  (NOT  $n/(D + 1) - R$  as in the Ashbacher paper), and finally, if  $R = D - 1$  then the next  $n$  is  $n(D + 1) + 1$ . This series (more correctly referred to as a sequence — M.M.) ultimately converging to  $n$  less than  $D$ .

Now, Ashbacher is quoted as originating this topic (M.M. line one) despite the

earlier references, on account of his extensive computer investigation... using nine computer programs, one for each of the species three through twelve and searching to 14000000 for each divisor. No infinite series were found, for divisors 3 to 8 all numbers terminated before 1000 cycles, for divisor 9 only 13655938 passed the 1000-cycle mark with 1035 cycles, for divisor 10 there were exactly 1000 cycles for 5646474 and 1037 cycles for 13667102. Ashbacher challenged readers to investigate further...

A challenge recently taken up by Brendan Woods of Dublin, who has failed to get termination with  $(D,N) = (13,70), (14,75), (58,59), (82,83), (198,199)$ ...

**PROBLEM W.** Readers are set the task of investigating these generalised WONDROUS NUMBERS, confirming the findings of Ashbacher & Woods, considering further empirical evidence and (hopefully) producing a complete theory of the behaviour of these sequences.

### Feedback from readers

The M500 Society publishes *M500* six times a year for Open University students, staff and "friends", the subscription is £8 per year, the membership secretary is Sue Barrass, 17 Newhall Road, Kirk Sandall, Doncaster DN3 1QQ. Tel 01302 882476.

Harvey Dubner and Harry Nelson announced c.29th August 1995 that they had found SEVEN CONSECUTIVE PRIMES in ARITHMETIC PROGRESSION. Upto 7 computers, believed to be 486/66s, were used over a two-week period to obtain the estimated 52 computer days, the common difference of the A.P. is 210 and the first term has 97 digits.

Simon Jackson of Hackney has expressed an interest in the behaviour of the function  $ph(p,x)$  which essentially counts the number of positive integers less than or equal to  $x$  which remain when the complete set are depleted in turn by the multiples of all primes less than or equal to prime  $p$ . Thus  $ph(11,25)$  com-

mences with the list 1...25, removes the even members (multiples of 2), then the multiples of 2 and so on upto the multiples of 11: leaving 1,13,17,19 and 23. Thus  $ph(11,25) = n(1,13,17,19,23) = 5$ . Does any reader have practical experience of this function which is believed (S.J.) to be of importance in certain aspects of data compression?

Any investigation of Problem W may be sent to Mike Mudge, 22 Gors Fach, Pwll-Trap, St. Clears, Carmarthen, Dyfed SA33 4AQ, tel 01994 231121, to arrive by 1st March 1996. All material received will be judged using suitable subjective criteria, and a prize in the form of a £25 book token or equivalent overseas voucher will be awarded by Mike Mudge to the "best" solution arriving by the closing date.

### Review, May 1995

Problem CJ<sub>1</sub> produced a number of complete proofs, that of Roger Tirtia of Belgium including a method for finding all solutions even when a cube is not present. Roger lists the least numbers that can be written in exactly  $k$  distinct ways as the sum of two non-zero squares. For  $k = 29$   $N$  is greater than  $10^{15}$  but not difficult to find as there are only five candidates!

Iain M. Davidson of Carlisle examined  $a^2 + b^2 = c^n$  but additionally posed questions about general factorisation of

$A^n + B^n + \dots + Z^n$ ,

about the solution of

$X^3 + kY^3 + k^2Z^3 - 3kXYZ = 1$ ,

and (possibly more relevant to most *Numbers Count* readers) also requested information on algorithms used to carry out multi-length integer arithmetic. HOW DOES UBASIC DO THAT? Anthony Stobart of Cheltenham and Mr. Kennedy of Rotherham submitted creditworthy material associated with CJ<sub>1</sub>... details on request.

David Broughton of the Isle of Wight generated a superb analysis of the "two person game" in CJ<sub>2</sub> finishing with a handheld programmable calculator to check his manual theory.

After suitable soul-searching, the prizewinner is Iain M. Davidson of 4 Carlisle Close, Carlisle CA1 2QP.

### PCW Contribution Welcome

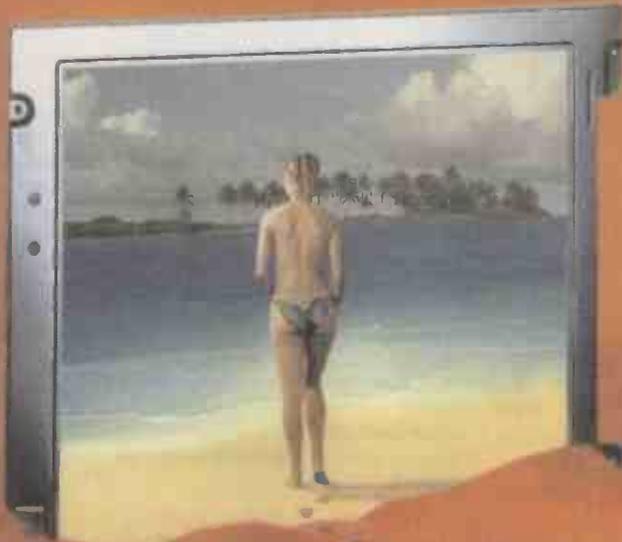
Mike Mudge welcomes readers' correspondence on any subject within the areas of number theory and computational mathematics, together with suggested subject areas and/or specific problems for future *Numbers Count* articles.



pentium®  
PROCESSOR



# Enter the



Designed for



## OPTI Reality



# zone...



OPTI Touch-Pad: Anti Dust Pointing Device.



High Quality SIR port for Infra Red connection



PCMCIA Card: Professional PCMCIA Card Support. PLUG 'N' PLAY

### THE NEW OPTI RANGE OF NEXT STEP NOTEBOOKS

## 741 Advanced Notebook

The new 741 notebook system incorporates all the latest advancements in computing today. With full upgradability through out this system you are able to adapt the spec to your own requirements. Using the highest level of devices to capture, process and store data the 741 provides everything you need to mix information with high quality 16 bit sound and graphics. **YAMAHA®**

Including full 32 bit Local Bus graphics on an upgradable NEW 10.4" DSTN screen, gives the sharpest and most colour true images available today. The latest built-in OPTI Soft Touch pad gives ease of use for what ever application and is another feature to this excellent system.

## 751 Pentium® Notebook

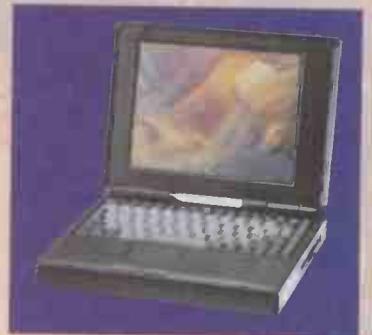
In the forefront of high level Computer technology is OPTI with its 751 Pentium range. This system offers you a choice of powerful Pentium P75Mhz through to P120Mhz processors along with a generous 8 Mb s-ram cache as standard.

The fact that most multimedia applications are memory hungry has also been catered for with the option to upgrade the 751 right up to an amazing 24 mb ram and a full 2 Gb HDD.

This stunning power base is brilliantly integrated with its remarkable range of special features, creating a real performance edge in key areas like networking, enhanced business audio and multi media.

## Portable Multimedia Station

This Novell approved Docking Station is designed to solve any expansion problems you may encounter. Offering 2x16 bit expansion slots, with optional Multimedia built in C.d. Rom. A 3.5" & 5.25" drive bay and 2 additional Serial/parallel ports all give you desktop expansion to create a powerful multimedia system.



741 Notebook 50MHz  
4MB RAM, 340HDD  
9.5" ACTIVE MATRIX  
TFT SCREEN

**£1599.00**

741 Notebook 50MHz  
4MB RAM, 340HDD  
10.3" ACTIVE DUAL SCAN  
STN SCREEN

**£1349.00**



WHERE TOMORROW'S TECHNOLOGY COUNTS

Phone: 0181 507 1818  
Fax: 0181 594 2236





# OPTI IMAGE

# Flat Screen

Introducing a new series LCD panel display that is both user and environmentally friendly. In addition to resolution and screen size which are comparable to that of CRT displays, our new OPTI LCD flat-panel monitors offer several advantage over CRT displays. Our LCD's provide added health benefits of no radiation, no flickering to cause eye fatigue, and low voltage which lessens the risk of electric shock. With extremely low power consumption and reduced plastic content due to their compact size, our LCD's are also environmentally friendly. Add on the convenience of lightweight portability, space saving compactness, digital controls and elimination of the need for an AC adapter, our new OPTI panel display will change the way you look at monitors.

**PRICES FOR 11.3" STN SUPER VGA START FROM £799.00**  
Including VGA card for easy instalment to your PC

## OPTI PCMCIA GOLD AND DIAMOND RANGE START FROM £129



# OPTI GOLD 28,800 CELLULAR FAX/MODEM *Demcia Range*

The NEW Opti Gold V34 Fax Modem is the communications PCMCIA card of choice for the mobile professional. Integrating both wired and wireless technologies, the Opti Gold is a **CELLULAR/DATA/FAX/VOICE MODEM** that also works with plain old telephone lines. Cellular data and fax transmission integrity and throughput is ensured with MNP-10 and MNP-10EC error correction protocols and with its voice processing capacity, your Opti GOLD can be set up to function as your personal voice mail system no matter where you are. The 28.8kps model gives easy installation as it doesn't require proprietary drivers, so giving you **PLUG 'N' PLAY** with this card. It is also able to give you a personalised **VOICE MAILING SYSTEM** and **WIRELESS MESSAGING SYSTEM** via its own internal mailbox and transmission programming.

**NOW WITH FREE ONE MONTHS SUBSCRIPTION TO COMUSERVE/INTERNET**  
OPTIONAL PHONE MOBILE VOICE ADAPTER: NEC - ERICSON - MOTOROLA

# OPTI DIAMOND PORTABLE CD ROM

The NEW OPTI DIAMOND dual speed data transfer CD ROM has an average access time 350ms and a built in 64k memory buffer. With a single 5v operation it is extremely power efficient when working in conjunction with a notebook using its internal battery. It also links to the notebooks on board power management and will alter its voltage consumption according to the notebooks power management status. The main feature of the OPTI Diamond is its ease of use. Having to run only one command enables anyone, no matter how technically inexperienced, to be able to immediately install this hardware. It is able to **CD-DC, CD ROM MODE 1 & 2, CD-XA, Multi session, Photo CD** and most exciting of all **CD-I**.

# OPTI DIAMOND Frame Grabber VIDEO CAPTURE CARD

The NEW OPTI DIAMOND Frame Grabber provides you with the ability to capture **MOTION VIDEO, SCREEN STILLS, LIVE VIDEO OVERLAYS**. Capture still or moving images in 16-bit colour. Fully compatible with Video for Windows, this PCMCIA Type II video capture card accepts input from virtually any video source: Camcorders, VCR's, Videodisks, Security Cameras or any standard NTSC or PAL compatible sources. The OPTI DIAMOND Frame Grabber card transforms your everyday work into a spectacular visul/multimedia presentation. The card combined with the included software applications delivers a full **PLUG'N' PLAY** solution, providing you with an easy-to-use, extremely powerful video capturing tool.

# OPTI DIAMOND SatNav GPS CARD

The NEW OPTI DIAMOND Satellite Navigation Card combines PCMCIA technology with the **\$13 Billion Global Positioning System (GPS)** satellites to produce a **GPS Receiver** on a PCMCIA Type II card. This breakthrough enables users of the ever-increasing array of portable computers, organizers and personal digital assistants (PDAs) to obtain exact location information. The Sat Nav Card interprets signals received from the GPS network of satellites that circle the earth to provide data on position, direction, altitude and speed.

# OPTI DIAMOND 5250 Twinax Emulation Adapter

The NEW DIAMOND 5250 PCMCIA Card provides a complete local to host solution for portable PCs equipped with Type II PCMCIA slots, featuring universal access to **IBM midrange hosts**. It is a connectivity solution that provides an easy way for notebook PC users to connect to an **AS/400 or System/3X** host. Now, users with PCMCIA-compatible portable PCs can quickly plug into their midrange host upon returning to the home office. The OPTI DIAMOND 5250 Card was specifically designed for PC notebooks with PCMCIA Type II or Type III slots.

### WHAT THE PRESS SAYS...

**PC POWER**

"Stunning Performance"

**Personal Computer World**

"Performance of a Ferrari or Porsche"

**PC PLUS**

"Value for Money Award"

**PCDirect**

"The OPTI provided the fastest PC bench 95 figures we've ever seen, even beating 90MHz desktop fliers"

Buy any OPTI product from one of our countrywide network of Showrooms:

LONDON: CAPITAL PORTABLES, EAST LONDON: CHOICE SYSTEMS, ACTON WEST LONDON: GHS TECHNOLOGY, W1 LONDON: EVOLUTION SYSTEMS, SW20:  
SOUTH ENGLAND: COMPUTER SUPERCENTRE LTD, CARDIFF: COMPUTRAD LTD, BRENTFORD: COMPUTER AIDED SOLUTIONS, BRENTWOOD: BIT SYSTEMS LTD, TRURO: MACH COMP LTD,  
E. SUSSEX: 1ST CHOICE SYSTEMS, NORWICH: PRESTIGE, HARBOROUGH: COMPUTER INTELLIGENCE, WEYBRIDGE: GELSERVE COMP SERVICES, BASINGSTOKE: SWIFTEC, HUNTINGDON,  
CAMBS: NORTHWOOD ASSOCIATES, MIDDX:  
NORTH ENGLAND: JBC COMPUTERS, COVENTRY: PORTABLES AND UPGRADES, CHESHIRE: 1ST SOLUTION COMP SERVICES, CAMBERLY: LOGIPLEX COMP CORP, ROSS ON WYE: OSBOURNE  
AUTOMATION LTD, NORTH YORK: PW COMP SUPPLIES, PINNER: TRIANGLE INFOTECH, MACCLESFIELD: ATHENE COMP LIMITED, FAREHAM: PREMA SYSTEMS, DERBY: ANDROMEDA,  
CHESTERFIELD: DEP COMPUTER, OXON: CHAMELEON COMP, MANCHESTER: REDSTONE, OXON



# OPTI SALES HOTLINE 0181 507 1818

OR FAX ON 0181 594 2256 / TRADE/VOLUME ENQUIRY 0181 507 7070



WHERE TOMORROW'S TECHNOLOGY COUNTS  
Business Hours: Mon-Fri 9am-6pm  
/Sat 10am-2pm.  
3 Monteaule Court, 32-38 Wakering Road,  
Barking, Essex IG11 8PD

Subject to availability. All prices and specifications subject to change without notice. All prices are subject to VAT. A Delivery Platform is a trademark of OPTI International Ltd. All trademarks are acknowledged. Terms are strictly cleared payment prior to dispatch. Battery life is measured with power management enabled and may vary according to usage. Intel and Pentium Processors are trademarks of Intel Corp. Microsoft Windows 95 is a registered trademark of Microsoft Corporation. Unauthorised repairs are not refundable and may be subject to a resending fee. Stock items are dispatched same day as order (before 4.00pm) subject to availability. All systems supplied with 3 year manufacturers warranty. 180 day parts & labour. 2nd & 3rd years labour. Government and corporate welcome. All trademarks acknowledged. YAMAHA & BoviH. Trademarks acknowledged. Lotus OS/2 & IBM applications are all pre-installed with on-line documentation. Manuals are at an extra cost. Logo shots are shown for illustration only. ©2000 OPTI. All rights reserved.



## Cleaning up the Office

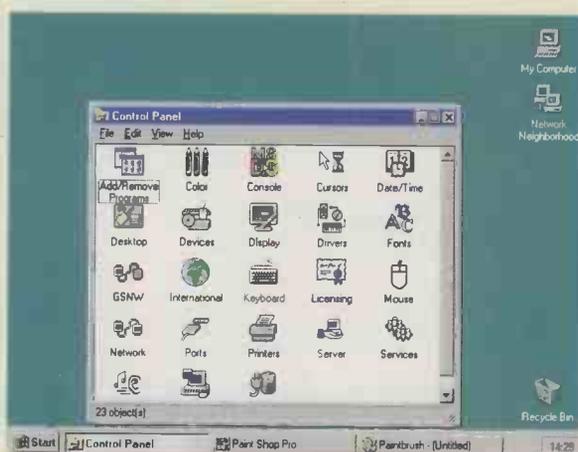
**When Office 95 arrived on Stephen Rodda's doorstep he polished off a scratch on the CD with Brasso and loaded it under NT. Here, he tells you how and why he did it and passes on a dodge for setting up the NT Service Pack.**

Recently, I almost had difficulties getting out of the front door without being waylaid. Not by creditors, you understand, but by hordes of postmen (male and female) bearing CDs of the latest Windows 95 releases and their associated programs.

I received Office 95 first — well you would, wouldn't you? It can't run without the release version of Windows 95, so you'd expect Mr Murphy's law to take effect... which of course, it did. Unfortunately, Murphy had a couple of other nasty surprises up his sleeve for me. The first was that Office 95 was on floppy disks: 24 of the perishing things, to be precise.

But of all the tricks he played on me, the unkindest of all was when the Windows 95 disk arrived two days later with a large scratch radiating from the centre of the CD to the outside. Now, remembering that CDs start from the inside and work outwards, you'll quickly grasp the upshot — the dratted thing was totally unreadable. I examined the CD once again. The scratch didn't look too deep to me, so I went into the kitchen and raided the cupboard under the sink for some Brasso. (Does everyone keep their Brasso under the sink? Everyone I know does.) A few minutes later I was furiously polishing the CD, wondering whether the Brasso would have been better utilised internally.

Although the original scratch had disappeared, the surface looked as though it



*NT Server, looking for all the world like Windows 95. The new shell is available both on CIS and the Microsoft Network.*

had been smoothed down with sandpaper. Undeterred, I rummaged around under the sink again and produced some Silvo (a slightly less harsh abrasive). A few minutes' further work produced a CD which looked pristine. I dusted the metal polish off, popped it back in the CD drive and bingo! Windows offered to install itself for me.

Of course, by the time Windows 95 arrived I had installed Office 95 under NT, and I must admit I was impressed. Less impressive, however, was Windows 95's handling of Office — NT seemed much faster in comparison to Windows 95. And this was running it on the same machine, with three flavours of NT networking support installed simultaneously. I had applied

Service Pack 1 for NT (a copy is on this month's PCW CD-ROM) and had also added the Windows 95 shell to it. I didn't really want to go back to using the Program Manager and File Manager if I could help it. Once NT has all the nice bits like built-in fax, complete Novell interconnectivity, Microsoft Network and the Adobe Type Manager, I don't suppose I shall be using Windows 95 that much. But for the moment, it is necessary that I do.

### NT Service Pack

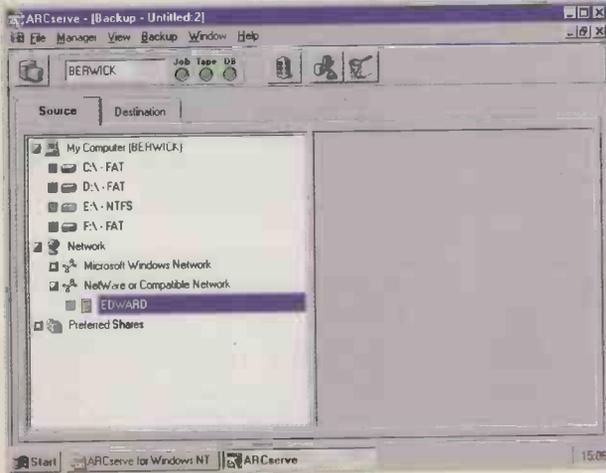
The NT Service Pack didn't seem to run for me — well, not first time. I kept getting a help message from setup, informing me of the correct command-line switches for use with the program. Since I had started it from UPGRADE.EXE this message wasn't very helpful.

I moved the directory in which it was expanded to the root and renamed it SP1, mainly to make it easier to get at from the command line. I don't know why but it then installed without problems. I'm inclined to believe the reason for this was that the directory containing the upgrade had a long name. If you have trouble installing it, I suggest you try this dodge.

You might find my NT setup a little weird: the picture of my Windows 95, er, NT setup appears in Fig 1. I'm running the new version of the NT shell, available from CompuServe and the Microsoft Network. At the moment, I'm impressed. I really can't stand Program Manager any more, now that I've been spoilt with the new GUI. From now on, I shan't even bother with Windows 3.1x.

### DeskWriter 600

Another box turned up on the doorstep this week; it contained a Hewlett-Packard DeskWriter 600. This printer (and its DOS counterpart, from which it scarcely differs)



comes with 600dpi black output and 600 x 300 colour output. For simplicity's sake, I asked to be allowed to borrow the Apple version of the printer: I simply hooked it into the LocalTalk wiring (happily bridged by Novell) just beside the DeskWriter C — the DeskJet 500C type printer which we occasionally use.

Of course that was fine for the Macintosh machines — they saw it instantly. A little later, having edited ATPS.CFG, and having unloaded and reloaded ATPS on the Novell server, the two Windows 95 machines saw the queue. Unfortunately, I haven't got the correct drivers for the DeskJet 600 and although I tried the DeskJet 500 driver, it didn't even want to print. Try as I might, I still can't access it

*ArcServe for NT likes to run as engines in the background, but it's secrecy perhaps doesn't make for good comms*

from Windows — perhaps it's had the DeskJet compatibility removed.

#### ArcServe for NT

Additionally, I tried out the new version of ArcServe for NT. Installation was a real pain in

the neck: I'd copied the disks into network directories, one for each disk like you're supposed to, but installation still bombed out towards the end. Luckily, I thought that I'd got it on a network drive. I eventually found out from the software house, Cheyenne, that I should have put all the directories (Disk1 to Disk5 and Support) in a directory off the root, called Install. Talk about being inflexible...

Anyhow, once the program was installed, I tried to get it to back up a Macintosh, running ArcServe Macintosh. It wasn't having any of it. I think it's only ArcServe for Windows which will see the Macintosh version. At a time when manufacturers are trying to integrate all their backup software, Cheyenne seems

## Problem Solving

### Extended Memory under NetWare 2.2

I've been asked to run a program which requires extended memory on a non-dedicated Novell server, and I can't see a way of limiting the amount of extended memory that the file server program takes up. Please help.

GJT@cix

*I'm sorry, it can't be done. There is just no way of limiting the high memory that NetWare takes up in non-dedicated mode. If you really want to use a non-dedicated server, I'd make a couple of suggestions.*

*You could re-examine your requirements and buy a new machine so that there's another workstation, making the file server into a dedicated machine. Alternatively, depending upon the size and data throughput of the network, you could examine the possibility of using Windows for Workgroups (especially as Windows 95) or of NT Server, both of which allow non-dedicated working and supply you with extended (and indeed, expanded) memory.*

### Infinite loop

Stephen, help! At one of our sites we have a NetWare server (v3.11) which was subject to a couple of unscheduled powerdowns over the weekend. Now when it boots up, after checking binaries it prints a message to this effect: "This server has been shut down — please reboot". Is there a way out of this infinite loop?

JRS@cix

*Depending on the DOS version you've got, you'll need to boot the server without running the AUTOEXEC.BAT. There are a few ways to do this, ranging from using a boot disk through continuous control-C, to pressing F8 (if CONFIG.SYS allows it). Whichever way you choose, once at the DOS prompt run SERVER -NA, which will prevent the AUTOEXEC.NCF from running: this might solve the problem so that you'll be able to see the AUTOEXEC.NCF and edit it.*

COMPUTER KNOWLEDGE CALL NOW ON:

0891 515 066

MODEM DOWNLOAD SERVICE  
V21 UP TO V42bis & V.FC.

\* Over 330 file areas to download from \*

The latest Shareware, updates & additions via daily file links to Europe & USA for the PC, Amiga & Atari.

Areas of specialisation include R:Base, Dbase/Clipper, Windows NT/Windows, OS/2, DOS, DESQview, Novel, Virus prot', & recently Flight Simulator + Much More.

#### Recreational

\* Multi User Games Available \*

Calls cost 39p per minute cheap rate & 49p per minute at all other times. MODEM PARAM'S:-  
8 Data Bits, No Parity, 1 Stop Bit.

Komputer Knowledge, 3 Station Cottages,  
Cheddington, LU7 0SQ

## PC PITSTOP BULLETIN BOARD SYSTEM

- ★ Masses of public domain & shareware
- ★ Compressed files for fast cheap download
- ★ First Time or Frequent User? No restrictions
- ★ Protocols, ZModem, XModem, YModem and Kermit
- ★ No membership fees, no subscriptions
- ★ Simply "pay as you play"

### INTERNET ACCESS COMING SOON

Multiline access via:

0839 661166 and 0839 661177

Modem connects rates up to v32bis.

Online Now Ltd  
Chestnut Farm, Dinton, Aylesbury, Bucks HP17 8UG

Drop into  
**CAFÉ NET**  
Bulletin Board System  
for Internet Email & file transfer

- > Internet email
- > Offline Mail Readers
- > Usenet
- > Files Library
- > Realtime conferences
- > Technical support & information

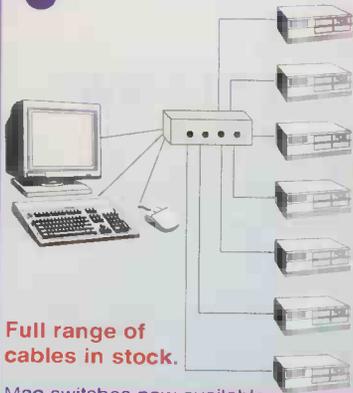
Subscriptions start at £5.00+VAT per month  
Novice ? Call (0181) 224 5555 for help

Immediate access: 0891 615 010 300-14400  
Subscribers: 0181 224 6810 8N1 ANSI,  
24 hours

0891 calls charged per minute at 39p cheap rate, 49p at all other times.  
CafeNet, PO BOX 150, E. Molesey, Surrey, KT8 9YW

# KEYBOARD, MONITOR & MOUSE SWITCHES

Connect several PCs, LAN Servers, etc. to a single Keyboard, Monitor & Mouse.



Full range of cables in stock.

Mac switches now available.

## Keyboard & Monitor Switches

- 2 Device Manual Switch £ 28
  - 4 Device Manual Switch £ 44
  - 8 Device Manual Switch £165
  - 12 Device Manual Switch £210
- Excluding cables

## Keyboard, Monitor & Mouse

- 2 Device Manual Switch £ 80
- 3 Device Manual Switch £100
- 4 Device Manual Switch £120
- 5 Device Manual Switch £140
- 6 Device Manual Switch £160

Supplied with ALL cables  
12 Device Manual Switch £295  
Excluding cables

## Keyboard, Monitor & Mouse Switches With Automatic Emulation

Control multiple Computers for one Keyboard, Monitor & Mouse. **Made In USA**  
Allows automatic booting of servers.  
Hot-Key to select output port from your keyboard or front panel.  
Automatic Keyboard and Mouse emulation.  
Supports PS/2 & AT compatible keyboards and PS/2 or Serial mouse.  
Keyboard modes 1, 2 & 3 are automatically saved for PS/2 & Compaq.  
Built in daisy-chaining to support up to 256 computers.  
Scan mode automatically switches through each CPU in turn.  
Rack mounting kit available 19".  
Multi-Access upgrade allows multiple master Keyboard, Monitor and mouse to access all connected servers. Supports cable length of 75M.  
Upgrades for MAC & SUN available.

- Server View 4 Device Switch £ 545
- 8 Device Switch £ 945
- 12 Device Switch £1495
- 16 Device Switch £1850

MasterView 4 Device Switch £350 (Non-Expandable & PS/2 Compatible)  
MasterView 6 Device Switch £350 (Non-Expandable & Non-PS/2 computers)

## NETWORK PRODUCTS

### Network Cards

- ✓ 8 interrupts and 8 I/O addresses.
- ✓ NE2000 Compatible.
- ✓ 35% Performance improvement.
- ✓ Complies to IEEE 802.3 standard.
- ✓ 10 Mbps transmission rate.
- ✓ Diagnostic software for detecting hardware Configuration / failure.
- ✓ IPX, ODI for Novell Netware
- ✓ NDIS for MS LAN Manager.
- ✓ Windows for Workgroup.
- ✓ Packet drivers for TCP/IP.

Genius £26 £28 BNC BNC+TP  
Zero One £30 BNC+TP+AU1

### Genius Pocket LAN Adapter

- ✓ Additional multiplexer parallel port.
- ✓ 80% Performance improvement.
- ✓ Bi-directional & Enhanced Parallel Port.
- ✓ Phantom power cable steals power from PS/2 keyboard or mouse.
- ✓ Spare Power Adaptor supplied.
- ✓ Diagnostic software supplied.
- ✓ ODI drivers for NetWare.
- ✓ NDIS for M.S LAN Manager.
- ✓ Windows for Workgroup.
- ✓ Packet drivers for TCP/IP.

£70 £73 BNC BNC+TP

### Genius PCMCIA Adapter

PCMCIA Ethernet Adapter BNC+TP £99

### Genius 10Base-T Hubs

- 8 Port ( 8x UTP + BNC) £115
- 12 Port (12x UTP + BNC + AU1) £249

### Ethernet Transceivers

Genius AU1 to BNC or AU1 to TP £32

### Genius Ethernet Repeaters

- 2 Port 2xBNC + 2xAUI £200
- 4 Port 4xBNC + 4xAUI £310

### Network Connectors

- BNC Heavy Duty Crimp Tool £30.00
- Coaxial Cable Stripper £15.00
- 100 Metres Ethernet Cable £25.00
- BNC Plug £1.00
- BNC Strain Relief Boots £0.25
- BNC T-Piece £2.50
- BNC Terminator £2.00
- BNC Barrel Connector F/F £2.00
- Single wall plate with 1xBNC £3.50
- Dual wall plate with 2xBNC £4.00
- Back box (Universal) £2.50
- Make-Before-Break Box (Safertap) £19.50
- Safertap access leads 2 Metres £13.00

### Network Cables

- Thin Ethernet cable BNC / BNC
- 1M £3.50 2M £4.00 Fully Moulded
  - 3M £4.50 5M £5.50 Just add 50p per additional metre
  - 7M £6.50 10M £8.00
- UTP Category 5 cable RJ45/RJ45
- 1M £3.50 2M £4.00 Fully Moulded
  - 3M £4.50 5M £5.50 Just add 50p per additional metre
  - 7M £6.50 10M £8.00

Please call for cables made to order

### Network Print Servers

- Plug in single port parallel print server for Netware (BNC+TP) £175
- 3 Port print server (2 parallel & 1 Serial) for Netware (BNC+AU1+TP) £275
- Multi-protocol print server £325
- Expandable print server for Netware NetPrint Master £250 NetPod £95
- Plug in print server CARD for the HP LJ11si, LJ4si... series Netware £255
- Multi-Protocol print server £285

## CABLES

- 2M Parallel printer cable £ 4
- 2M Parallel cable D25 M/M £ 5
- 2M Centronics cable C36 M/M £ 6
- 2M Serial Printer cable £12
- 2M Serial modem cable £ 5
- 2M Serial null modem cable £12
- 2M Keyboard extension cable £ 6
- 2M Monitor extension cable £ 9
- 2M Universal Laplink/Interlink £15
- 2M Keyboard cable 5 pin M/M £ 7
- 2M Keyboard cable 6 pin M/M £ 7
- 2M Monitor cable M/M or M/F £ 9
- 1M SCSI cable D25M/C50M £12
- 2M SCSI cable C50 M/M £12
- 2M SCSI cable C50 M/F £12
- 1M SCSI cable MD50/D25M £30
- 1M SCSI cable MD50/C50M £22
- 1M SCSI cable MD50/MD50 £32
- 1M SCSI cable MD68/MD68 £55
- 1M SCSI cable MD50/MD68 £45
- 1M Mac PowerBook D30HP/D25 £40
- 1M Mac PowerBook D30HP/C50 £40

## PRINTER SHARERS

MANUAL	AUTOMATIC		AUTO BUFFERS 256K	
<b>Bi-Directional</b>	PC Printer	Parallel	Parallel	Serial
2 Way can be used as 2 to 1 or 1 to 2	1	2	£45	£50
2 Way £ 11	2	1	£30	£35
3 Way £ 14	2	2	£65	£65
4 Way £ 17	4	1	£45	£60
5 Way £ 30	4	2	£80	£85
6 Way £ 42	5	1	£70	£96
2x2 Way £ 19	8	1	£90	£96
2x3 Way £ 50	8	2	£120	£120
	Port Savers			
	Protects your computer port from wear caused by plugging and unplugging of cables. £ 6.00			

### Keyboard, Monitor & Mouse

- 2 Users 250FT Max £ 179
- 4 Users 250FT Max £ 249
- 6 Users 250FT Max £ 299

### Keyboard & Monitor

- 2 Users 60FT Max £ 40
- 2 Users 150FT Max £ 60
- 2 Users EGA 40 FT £ 30

Please contact for further information

## AUTOMATIC PC REMOTE LINK

ACCESS YOUR PC REMOTELY  
Automatic PC Remote Link allows multiple users each with a Keyboard, Monitor &/or Mouse to access a single PC (CPU) on a first come first serve basis. The units will split the monitor signal to allow the same screen to be displayed on all connected monitors. All connected Keyboard, Monitor & Mice will act exactly as if they were connected directly to the main computer.

- Automatically detects users.
- Serial port for mouse connection.
- First come first serve basis.
- VGA/SVGA/XGA Compatible.
- No special software required.

### MODEM SHARERS

Auto Modem Sharers allows multiple users to share a single modem on a single telephone line. No additional software or hardware is required. Compatible with all external modems 3 to 1 £59 6 to 1 £99

### VGA TO TV CONVERTERS

**VGA to TV Pro**  
Flicker free TV display.  
Allows simultaneous Monitor/TV Viewing.  
High resolution 800x600 64,000 colours.  
Supports Microsoft Windows.  
Bundled with microphone for audio out.  
Free presentation software 'Media Mate' £199  
Output to Scart (RGB), Composite or S-VHS  
VGA to TV Converter (Res. 640 x 480) £105  
UHF (Aerial) Upgrade for above £35  
VGA to TV Genlock Overlay allows you to superimpose computer graphics or text directly on top of video recording. £305

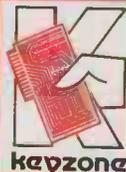
### BI-TRONICS PRINTER SHARERS

SmartShare is a new generation of high performance peripheral sharer that supports bi-directional equipment such as HP Laser Jet IV series Supports Remote Control Panel & LexMarks MarkVision. Parallel port CD ROM can also be shared.  
BDS 4 to 1 £199 BDS 6 to 2 £219

## EXPANDABLE PRINTER NETWORK

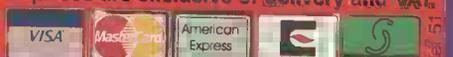
Connect up to 24 PC's to 8 printers.  
The printer sharer that grows with your needs.  
Fully automatic function.  
Access printers up to 366 Metres away.  
Printer selection via Windows and DOS utility.  
No external power supply required.  
Uses inexpensive 4 core telephone cable.  
7 Metres of cable included with each unit.

- PC Unit (TX) £35
- Printer Unit (RX) £35



14 Days money back guarantee on all products

**ORDER NOW** Tel: 0181 900 1525  
FOR DELIVERY TOMORROW Fax: 0181 903 1486  
454 Sunleigh Road, Alperton, Wembley, Middx HA0-4NW All prices are exclusive of delivery and VAT.



to be releasing semi-usable versions without a full set of features — black mark there, Cheyenne.

Once running, it seemed okay although I should have liked to have seen the statistics on backup showing in the same way as any other backup program does. For

my taste, ArcServe for NT seemed a bit too secretive, preferring to run as background engines (all well and good under NT) but the communication with the front-end seemed to be a little shaky. Contrasting this with Arcada backup, which I reviewed a couple of months ago, I

thought it a little unwieldy and, dare I say, bloated. It needed 16Mb of memory to install. Contrasting that with Arcada, which seemed to be happy with 12Mb (which is what I like to supply a review machine with), I felt it was rather greedy. And slow. Don't forget slow.

CONTINUED FROM PAGE 339

*If this doesn't solve the problem, then you'll have to reboot and run SERVER - NS-NA. This will stop the SYSTEM.NCF running as well. Remember you'll have to load a disk driver (such as ISADSK.DSK) before you can see the disk. Look at the SYSTEM.NCF before you run SERVER, too. Once at the server's command prompt, you can then run VREPAIR (either from the SYSTEM directory) or from the C: directory, or even from floppy disk if necessary. The disk should then be repaired so that you can reboot and carry on as if nothing had happened.*

*Of course, you really should have had a UPS attached, but that's another story.*

### Mirroring and duplexing

I've heard about mirroring and duplexing server disks. What's the difference, please? If I do decide to duplex or to mirror a disk, is it easy to do on an existing setup?

**AP@cix**

*There's not a lot of difference, really. Both methods keep data totally backed up on the fly between two hard disks with partitions of exactly the same size. It's how the hardware is arranged which makes the difference. In the case of mirroring, you have two disks hanging off one controller (nothing other than SCSI in your NT and NetWare machines, please) with the operating system set to duplicate data between them at the time it gets written to disk.*

*Disk duplexing is exactly the same, apart from the fact that you have each disk hanging off a different disk controller card, which gives an added level of safety, protecting the data and allowing immediate recovery even if a disk controller card goes down. Remember, if you're duplexing multiple drives, make sure that each member of each pair of disks is on a different controller.*

*Once you have a stable networking setup, all you have to do is to add another disk which is either exactly the same size or larger than the old one (or a disk and a controller), making sure that the new controller is supported by its correct NetWare DSK or NT driver, and create a volume or partition of exactly the same size as that*

*which you want to mirror. Now select the two partitions and start the mirroring off. It's probably better to allow the server to get itself sorted out during a slack time — perhaps overnight. Even better to make sure that it's on a Friday so that if something does go wrong during the process (unlikely, but possible) you've got the next day in which to revert to the original configuration. Oh, and make sure you're backed up — at least three times.*

### Small networks

I'm considering a small network for five or so users who will want to share resources occasionally. Which would you recommend?

**RT@cix**

*Anything which works for you. There are the normal run-of-the-mill programs like Personal NetWare, Windows for Workgroups, Windows 95 or Windows NT, also not quite so mainstream packages like PowerLAN (from Performance Technology) and the Little Big Lan to which we gave the Networking award in 1994.*

*I'd be inclined to stick to a Microsoft product, probably Windows 95. If the use of the network became much heavier, I'd probably think of using Windows NT instead, on one of the machines, in order to act as a server as it will copy all the networking settings from a Windows operating system (if you install it in the same directory). Remember, though, that NT won't currently share a fax/modem like Windows 95 whereas Windows for Workgroups will, so there is added expense if you want to do this. It can range from a comms-port sharing program called WinPort — which I have reviewed (although not the NT incarnation yet) and which is available from lansource@cix for about £100 — to a complete fax package, costing thousands of pounds.*

### Error reading volume directory

We have a Novell NetWare 3.12 server which gives this error. We tried running VREPAIR and it completed, telling us that there were 32 errors. We tried to mount the disk and got the error: "Mirror copies of the directory don't match". We ran

VREPAIR again and this time it flagged five errors.

When we tried to mount SYS: we again got back to the same state as the first error message. We ran VREPAIR once more and then the error message was displayed again. What should we do?  
**PC@cix**

*I suspect that either your hard disk or the disk controller is on the slippery slope to death. You have got good, verified, recent backups of the data, haven't you? If not, and you can't get the disk on line long enough to get them, you're either going to be talking to those nice people at Dr Solomon's or Ontrack recovery with chequebook and a pen — or, you may just be able to get around the problem with a copy of NetUtils. This is a lot cleverer than VREPAIR, but I'd suggest you take another backup just to be extra safe and run something which should examine the thing exhaustively, such as the surface scan option of install. Then you'll know whether it was just a glitch or the disk subsystem dying.*

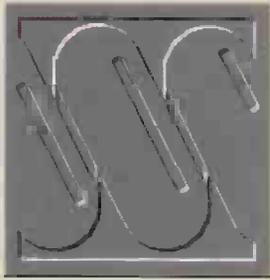
*If you're using both OS/2 and Macintosh name spaces, there could be a problem with using some versions of the name space NLMs. Remove the OS/2 name from the volume with VREPAIR, and this should alleviate the problem. Failing that, do a backup and then get a copy of the latest OS/2 and Macintosh name space NLMs from your NetWare dealer or from your favourite ftp site.*

### Addendum

Sorry. In my October column, I didn't list the address of **Performance Technology**, the manufacturer of Instant Internet. The company is on 01344 382020. Email as [sales@perftech.com](mailto:sales@perftech.com)

### PCW Contacts

**Stephen Rodda** is an independent computer consultant specialising in DTP and networking. He may be contacted as [the\\_bear@cix.compulink.co.uk](mailto:the_bear@cix.compulink.co.uk)



## Help wanted

Readers have written to **Stephen Cobb** asking for advice on all sorts of comms-related subjects, and here he soothes some troubled brows. Plus finding forums, and help with HTML coding.

Answers to your questions make up most of this month's column, starting with this from Barry Stanley: "I read your pages in *PCW* and you obviously understand many people's frustration trying to get anything to work on the Internet or CompuServe, so I thought I'd send you my example from today. You have described an interesting Corporate Logo screen-saver which can be found on a Windows Audio Visual Forum. I have just tried to locate it with no success."

Mr Stanley then provides a list of failed commands, followed by these remarks: "As an aside, I have a physics degree and

work in the semiconductor industry. If I can't get much joy, how do non-technical people manage? Of all my friends/colleagues I've spoken to, none have found any use for the Internet at all (except email which we use extensively). It seems to be just for complete PC nerds using a telephone line that someone else is paying for. Thanks again for your *PCW* articles, however don't ever underestimate the need to explain things in ABC style."

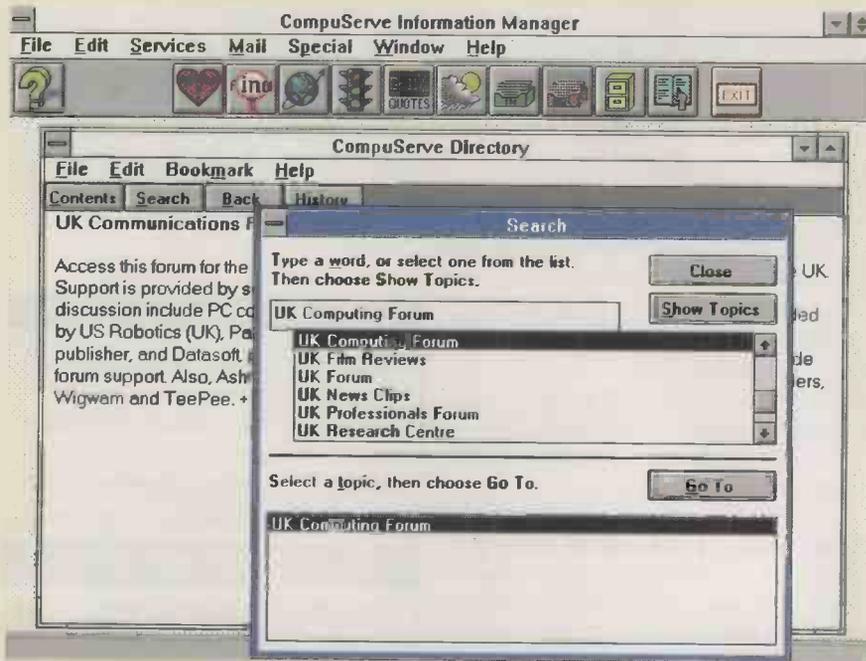
Obviously this letter was written during a moment of frustration, but it raises some important points, besides the very practical question of how you find things on

CompuServe, which we will get to in a moment. Having spent several fruitless weeks trying to install Windows 95, frustration is something I understand. I also understand that the frustration factor is amplified by glib remarks from those who have somehow managed whatever techno-feat it is that you are banging your head up against.

In this particular case I am guilty of tossing out a remark like "you can find this software in the Windows Audio Visual forum on CompuServe" without providing sufficient clues as to how you would actually do that. In the "old days", before graphical user interfaces were invented, CompuServe users navigated the system with text commands, one of which was "GO" followed by the code name of the forum. For the most part these "GO codes" were logical, but like DOS they did not work unless you spelled them correctly. As the number of forums climbed from the dozens into the hundreds, the GO codes became more arcane. The GO code allocated for the Windows Audio Visual Forum is GO WINAV.

You can still issue the GO command using WinCIM and MacCIM (the following commands are for WinCIM, please check the MacCIM Help for the equivalents). I usually access GO by typing Ctrl+G but you can also select Go from the Services menu, or click on the traffic-light button (graphical user interfaces may be easier to use, but when they offer three different ways of doing the same thing they are definitely harder to explain).

If you use WinCIM to visit a forum and decide it is likely to be a regular stop on your tour of the infobahn, then you can add it to the Favorite (sic) Places list. If you click the Add button in the Favorite Places dialogue box immediately after accessing a forum, the appropriate GO word and forum description are already entered for you and you can simply click OK to add this forum to the list. This allows you to visit the forum by double-clicking on the entry in the Favorite Places list (this can be presented in alpha order or ranked by number of accesses — that is, most popular at the top). If you want to add a forum at some other time you will need to type in a description and enter the GO word.



You don't have to go on-line to find the right forums in CompuServe, but you do need to make sure you have a recent listing

### Finding out

So how do you find interesting forums? Again there are several paths to enlightenment, none of them immediately obvious but all fairly effective. The most obvious path is a suggestion from a friend, or from an article like this (if the writer remembers to include the GO word). If you are searching from scratch, the cheapest place to start is the CompuServe Directory icon that is placed in the CompuServe program group when you install WinCIM. This loads a hypertext directory of CompuServe services in the form of a Windows Help file (either *almanac.hlp* or *compudir.hlp*). You can use the standard Search button and

enter subject-related words to locate forums of interest and their GO codes.

Since new forums are being added on a regular basis it is worth checking the date of your copy of *almanac.hlp*. I was surprised to find mine was dated back in 1994, even though I upgraded to WinCIM 1.4 earlier this year. I am not sure if all of the floppy disk 1.4 upgrades include the latest version of the file. The CD-ROM upgrades appear to include it but I cannot find a version of *almanac.hlp* anywhere on CompuServe itself. You would think that the most recent version would be readily available for downloading (I am also unclear as to why some versions use a

### Windows on the Web

Ian Fitzpatrick wrote to say: "I have been reading your very informative columns in *PCW* and was interested to see your mention of WinHTTPD which appears to allow a Windows PC to act as a Web server." This is true: Windows *httpd* 1.4 is available free to non-commercial users and is only \$99 for a commercial licence (however, Windows *httpd* it is not the only path to a PC-based Web service).

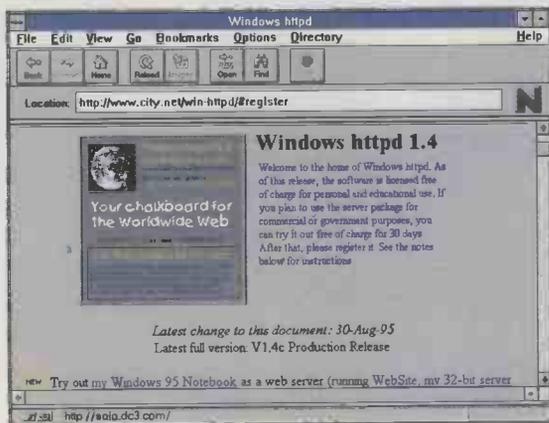
Ian continues: "I would be most grateful

rapidly-emerging favourite in this field is Linux, a freeware version of Unix that runs on 386 and 486 machines (as well as Acorns). You can download Linux from various sites (although it is very large and you might want to buy it on CD — for sources check <http://www.linux.uk.org>).

A CD-ROM containing the full Linux code, plus a compatible version of X Windows (which is a Windows-like graphical user interface for Unix systems) may even be available from your local bookstore. There is one included with the Ventana Press *Web Server Book* by Magid, Matthews and Jones. This very handy book/CD package provides everything you need to set up a Web site, including version 1.1 of NetScape Navigator and both the CERN and the NCSA *http* Serve software.

While the idea of learning a whole new operating system might seem daunting, there is plenty of documenta-

tion available and the basic commands will not be too much to handle if you already know DOS. What is the point of using Linux on a PC as opposed to Windows? Speed. Although many Web pages are highly graphical, you don't need to be running a graphics machine to serve up the pages. Operating in character mode Linux is very fast, particularly if you can afford 16Mb of RAM (it will work as a Web server with 8, but the more the better). With a good high-speed phone line you should be able to handle thousands of "hits" per day, achieving performance equivalent to lower-end Sun SparcStations, with a box that dual-boots to DOS and uses all your peripherals.



**Free Web server software for Windows? That's Windows httpd 1.4, on the Web** if you could provide me with some sites or addresses where I could get hold of Win-HTTPD." The short answer is <http://www.city.net/win-httpd/>. A less direct route is to head for the home page set up for the excellent Prima Online book *Building a Web Site*. This trip is worth taking since it provides links to a wide range of Web server software sites (<http://www.netgen.com/book>). There are also links to a range of Web server utilities.

The fact is, you may want to consider something besides Windows/DOS if you want to run a Web site with a 486 PC. A

## THE LEGEND Bulletin Board

**0891 517688**  
FULL ACCESS FIRST CALL

Over 4 gigabytes of the  
very latest shareware  
from across the Globe

+ OVER 5,000 GIF FILES

Multi-line system - speeds upto 14,400 baud  
8 data bits, no parity, 1 stop bit

THE LEGEND BBS

167 Sunbridge Rd, Bradford, West Yorkshire

Calls charged per minute, 39p cheap rate, 49p other times

## STRANGWAYS BULLETIN BOARD

FULL ACCESS ON FIRST CALL

Over 12 Gigs On-Line  
Multiuser Chat  
On-Line Help & solutions  
No Boring Questionnaires  
Gigs Of Glamour Gifs  
Over 180 Files Area  
over 28,000 programs

28,000  
PROGS  
ONLINE  
SPEEDS UP  
TO 32 bis

*Much to Much to Mention*  
The only Number you will  
ever need

**BBS: 0891 408040**

0891 CALLS CHARGED AT 39p PER MIN CHEAP RATE 49p PER MIN ALL OTHER TIMES. C.D INTERNATIONAL P.O. BOX 107, MANCHESTER M73WZ.

## MICROLAND BULLETIN BOARD



**0891 990 505**

Over 7 Gigabytes Of Shareware To Download  
All Speeds To 33.6k - 8 Data Bits No Parity  
Thousands Of File Areas To Choose From  
Zmodem, Xmodem, Ymodem, Kermit, Sealink  
Multi-line System - Windows 95 Area  
Epic Shareware Games - One Must Fall  
To View 01483 725 905

Trevor Designs Limited.  
P.O.Box 13, Aldershot, GU12 6YX.  
<http://www.luna.co.uk/~trevor>

Email [trevor@luna.co.uk](mailto:trevor@luna.co.uk)

Calls to 0891 990 505 charged at 39p per minute  
cheap rate and 49p per minute at all other times.

# One World. One Communications Software.

PROCOMM PLUS for Windows.

Integrating  
fax with data  
opens up a  
whole new world in  
communications software.



PROCOMM PLUS for Windows 2.1 is here with new features which are above and beyond all other communications software programs.

First up, you have complete fax capabilities including a fax viewer, scheduling, broadcast send, and the ability to receive faxes in the background; all from right within PROCOMM PLUS for Windows.

Plus, you can access your local area net or the vast global village via the Internet with our TCP/IP support



for Telnet connections and an easy-to-use FTP file transfer and file management utility. With the fully-customisable Action Bar,<sup>™</sup>

you can easily activate frequently used features with immediately understandable icons. You'll find our new Dialling Directory smart enough to serve as a single phone source to organise voice, fax and data calls. Enhanced ASPECT scripts automate on-line

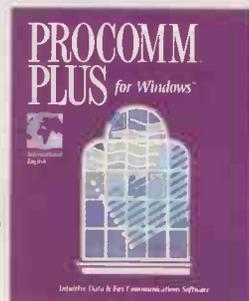
sessions with services like CompuServe and MCI Mail. Our GIF viewer displays graphics as you download them. And in the intuitive PROCOMM PLUS tradition, everything is extremely powerful and easy to use.

**In the UK call us at 0800 789955  
to upgrade for just £39.\***

To start fresh, visit your computer dealer or call us at +44 (0) 1954 789955.

PROCOMM PLUS for Windows 2.1.

A whole world is waiting.



**PROCOMM  
PLUS** for Windows<sup>™</sup>

TOTALLY CONNECTED

DATASTORM TECHNOLOGIES, LTD.

All brand and product names are trademarks or registered trademarks of their respective holders. Copyright © 1994 DATASTORM TECHNOLOGIES, INC. All rights reserved.

\*Plus VAT and shipping charge.

version of the file called compudir.hlp — perhaps I can get answers by next month).

If you cannot find what you want in the directory, try the Find command (on the Services menu). This does a simple online search for forums and definitely uses an up-to-date version of the forum list. The results of your search are presented in a list alongside current entries in your Favorite Places list. This allows you to see which forums are already in your FP list (marked with a tick) and add new ones directly to the FP list.

### HTML tips

Recently I spent several weeks coding about 60 HTML (hyper-text markup language) pages for a new World Wide Web site. In the process I picked up several tips. While html coding is the focus of an article elsewhere in this issue of PCW, I think these tips will also help users of Web pages to understand them better.

For example, most people know that Web pages are specially-coded text files that are stored on a computer system called a Web server. The operating system on many Web servers is Unix, rather than DOS/Windows. This means they can use the file extension .html which is one character too long for DOS or Windows 3.11 (both Windows 95 and the Macintosh OS can handle longer names, as can OS/2).

Consequently, if you are coding pages on a DOS/Windows machine you have to store the files as filename.htm. However, on the system that ultimately stores and displays the pages, the Web server, the file extensions may be changed to html. This means you need to write the references in your file links in the filename.html format, which naturally gives rise to some errors and inconsistencies. For example, the person who writes the pages may leave some links pointing to filename.htm when the correct reference is filename.html. As a Web user you may click on a link with your browser and get a "page not found" message when in fact the problem is simply a missing "l" in a link. If you enter the location or URL by hand, you may be able to overcome this error and get to the desired page.

You might wonder how the person who created the error in the link could have missed it. I mean, don't these people test their work? Well, this is easier said than done. For one thing, some browsers make testing difficult because they are so smart. Recent versions of NetScape actually overlook the differences between htm and html. In fact, they even overlook missing

code elements, such as closing brackets and quotations. This means NetScape will present a "faulty" page as though it were written correctly. The result can be pages that look terrible in Spry Mosaic or other, less "intelligent" browsers.

So why not test with Spry Mosaic? I tried this, but it's a pain because Spry will not read local files if they have the htm extension and your link specifies html. You have to do a lot of search and replace (in my case, 60 pages worth) to switch between the two extensions. In fact, I decided it was easier to go live with the pages, browse them with Spry to spot mistakes, then immediately correct the code. If anybody else has a better method I would be happy to hear it.

I did try proofing pages with HoTMetaL Pro, but that found so many errors (due to incompatibilities between different versions of html) that it was slow going. Besides, that approach does not show you what pages look like under the different browsers. It is quite disappointing to spend hours on an effect, such as centred images, only to see what a mess they look in a browser that does not do centred images.

One final tip: remember that there are still a lot of users who browse the Web with Lynx, a non-graphics Unix browser. I was reminded of this when I received an email feedback from the pages I designed (at [www.ncsa.com](http://www.ncsa.com)) politely listing all of the code changes needed to optimise the pages for Lynx viewers.

### UK Forums

If you haven't been there lately, there have been some major changes to the UK forums on CompuServe, specifically: UKIT (GO UKIT) and UKVENA (GO UKVENA). The UKIT (UK Information Technology) and UKVENA (UK Vendor A), open as the old UKCOMMS and UKCOMP forums close, to allow more space for UK-based vendors in UKVENA and increased UK-centric coverage of subjects such as the Internet, comms, mobile phones, and so on (note that the old GO words UKCOMP and UKCOMMS will both take you to UKIT, but this only a temporary arrangement and you should change your software settings to GO UKIT and GO UKVENA).

### PCW Contacts

Stephen Cobb can be reached on CompuServe as 72662,546 or the Net as [cobb@iu.net](mailto:cobb@iu.net)

## Your Own BBS E-mail and Information Service for just £99 with

# Wildcat 4

### The World's Best-Selling BBS

- \* Discussion areas/conferences
- \* Electronic Mail
- \* File upload/download
- \* Online information
- \* Bullet-proof security
- \* Multi-line versions
- \* Optional INTERNET E-mail
- \* RIP graphics support
- \* Add-on utilities available

Prices from £99 to £775 +VAT

## Telesystems Ltd

3 WYCOMBE ROAD, PRESTWOOD, BUCKS. HP16 0ND.  
Tel: 01494 866365 Fax: 01494 866050 BBS: 01494 891903

### The Premier Communications Solution for Windows 95

## QmodemPro

Only £99 + VAT  
for Windows 95

- \* Full 32-bit multi-threaded design
- \* TAPI and MAPI support
- \* Graphics viewer \* Script language
- \* OLE 2.0 Drag and Drop
- \* Terminal emulation \* File transfer

**The first fully Windows 95  
compliant comms package**  
(DOS & Windows 3 versions also available)

Cut your online costs with...



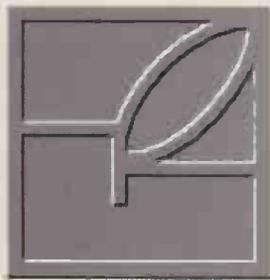
## Off-Line Xpress for Windows

...only £35 + VAT

The ultimate BBS mail manager, Off Line Xpress for Windows makes it easy to read and reply to BBS messages off-line. Includes QWK mail packet support, powerful editor, filing system and address book.

## Telesystems Ltd

3 WYCOMBE ROAD, PRESTWOOD, BUCKS. HP16 0ND.  
Tel: 01494 866365 Fax: 01494 866050 BBS: 01494 891903



## Send in the clones

**Which would you buy: one of Apple's PowerSurge Macs or a Power Computing Mac clone? Chris Cain weighs up the pros and cons, reviews the latest software updates — including the exciting Photoshop 3.0.4, and revisits Pfhor.**

**U**ndoubtedly, the biggest news in the Mac world this month is the arrival in the UK of the Power Computing Mac clones. Top London-based distributor Computer Warehouse (CW) is the first to bring these to our shores and it will be interesting to see how they fare against Apple's new range of competitively priced PowerSurge Macs. The clones are fully compliant with Mac OS and come complete with a large number of bundled software titles.

The basic specification on offer from CW is a 100MHz PowerPC601, 256Kb

level two cache, three NuBus slots, a 365Mb hard disk and 8Mb of RAM. Ethernet and enhanced SCSI are also included in a PC-style desktop case for a mere £1,299. This compares favourably with an official Apple 8100/100 which, with 8Mb and a 700Mb hard disk, is likely to set you back around £2,300. (Both prices exclude VAT.)

Neither machine comes with a keyboard or screen as standard (something I had hoped the clone makers would fix) but even when these are added, the price difference between the products

is astounding. Given the choice between them, I can think of no reason to go for the official Apple model other than one of brand loyalty.

### PCI power

Nevertheless, there are plenty of reasons to buy one of the new PowerSurge Macs instead. Firstly, they have Intel's Peripheral Component Interconnect (PCI) architecture, which is definitely the expansion bus of the foreseeable future. All of Apple's business machines now have this as standard — only consumer-orientated Performa models still use the ageing NuBus architecture.

Secondly, all machines from the 7500 upwards are designed to use the next-generation PowerPC604 processor. This gives a further degree of future proofing — something very important in the minds of today's users. Nobody wants to spend lots of money on a machine, only to find that

### Power Computing 100: technical specifications

#### Microprocessor

100MHz PowerPC 601 RISC microprocessor with integrated floating-point processor and 32Kb on-chip cache. 256Kb Level 2 cache (512Kb and 1Mb also available).

#### Memory

8Mb RAM, expandable to 200Mb.

#### Graphics

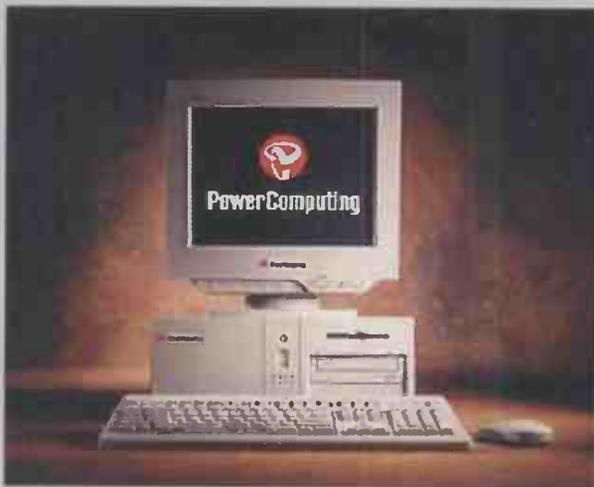
RAM-based built-in video supports all Macintosh-compatible and VGA displays up to 17in (VGA requires an adaptor). Optional high-performance video card.

#### Floppy Disk Drive

3.5in 1.44Mb self-ejecting floppy drive which supports Mac OS, Windows, DOS, OS/2, and ProDOS diskettes.

#### Hard Disk Drive

Internal 3.5in 356Mb - 4Gb hard disk. Support for one 5.25in full-height drive and two 3.5in drives, or four 3.5in drives. Optional



CD-ROM drive. 4x rotational speed. 600Kb/sec sustained transfer rate. CD XA/PhotoCD, multi-session compatible.

#### Networking

Built-in Ethernet (AAUI port). Two high-speed serial ports for LocalTalk, modems or other devices (both can be used with Apple's GeoPort telecom adaptor).

#### Audio

CD quality, 44.1kHz 16-bit sound input and output capabilities. Microphone and headphone jacks. Built-in speaker.

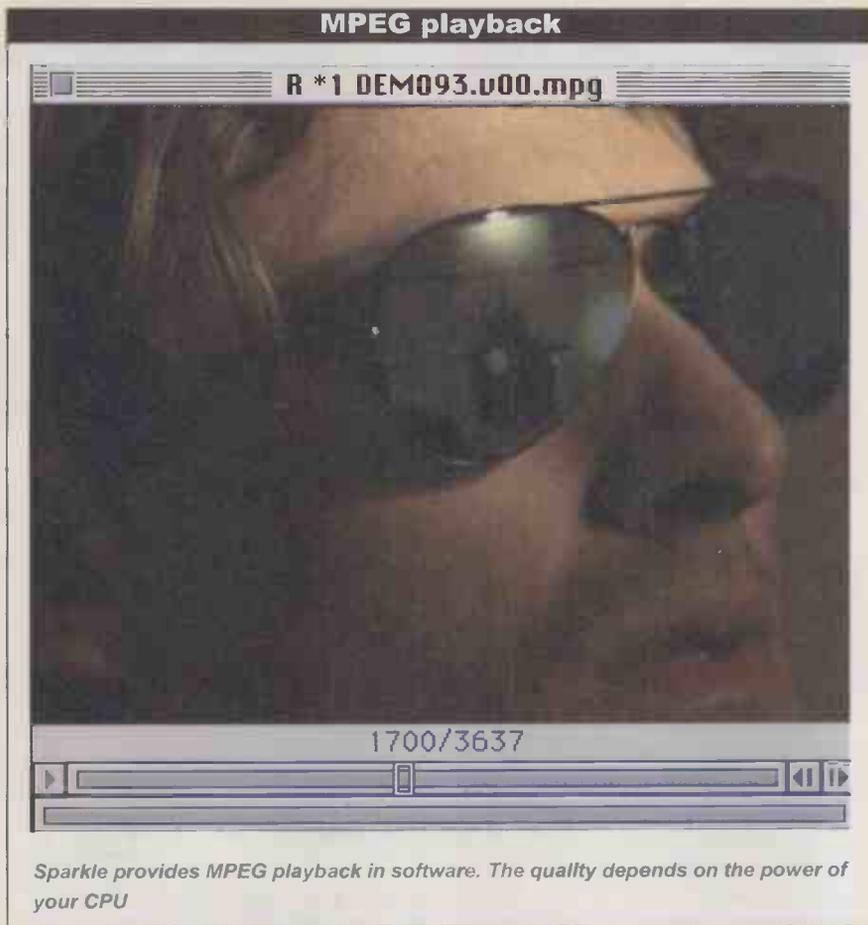
#### Expansion

Three NuBus expansion slots.

Clock/calendar. Custom real-time clock IC with long-life lithium battery. I/O ports. Dual-channel SCSI interfaces for high-speed disk I/O and RAID solutions. ADB ports for keyboard and mouse.

#### Power Supply

200W. Input: 90v-240v.



*Sparkle provides MPEG playback in software. The quality depends on the power of your CPU*

they need to upgrade the whole thing in a year's time. By providing the processor on a daughtercard, Apple has significantly extended the lifespan.

Another reason is the price: a 7500/100 8/500/CD costs £1,749 (plus VAT) — slightly more money for much greater performance.

In theory, the arrival of products like the Power Computing machines should threaten Apple's business, but in reality it can only help to further establish the Mac as the only serious competitor to the WinTel alliance. It also forces the company to remain competitive with regard to specifications and pricing, which is good news for everyone.

US-based Newer Technology has launched a range of products for the 5300 series of Powerbooks, including memory upgrades, PC cards for modem, Ethernet and fax functions, and an external monitor adaptor called Colour Palette which gives a 16-bit colour display.

### Photoshop update

Mac users wanting to keep their systems in tip-top shape will be interested in three recent software updates. First up, Adobe has released Photoshop 3.0.4 which, among other things, adds direct support for the PowerPC604 processor. At last,

users who've splashed out on the new systems will see what this workhorse is capable of.

Among the new features are faster Skew, Rotate and Gaussian Blur facilities on all PowerMacs, a fat version of Adobe Type Manager, support for TWAIN 36/48-bit scanners and on-line registration. There is improved importing of Illustrator files and a scratch-disk efficiency indicator to let the user know the amount of time Photoshop is spending with the scratch disk.

This looks like an essential update and registered users in Europe will receive it free of charge on floppy disk.

### Speed doubler patch

Updated too is a patch for Connectix Speed Doubler, which was my choice for the November issue's "Utility of the Month". The patch, downloaded from eWorld, brings your master disk up to version 1.1 and solves problems with all three extensions. It should cure the crashing associated with some PowerPC upgrade cards, incompatibilities with Microsoft Word 4.0, PrintShare and Virex 5, and desktop rebuild crashes.

The Speed Doubler software updates can be obtained either from a distributor such as Computers Unlimited, or via the

company's Internet support site at <http://www.pcworld.com/connectix/techsupp.html>. Updates for both Mac and Windows 3.11 RAM Doubler can be obtained from here, too.

### New version QuickTime 2.1

The biggest update, of the three items reviewed here, is to QuickTime 2.1. As usual, this new version of Apple's multimedia architecture claims to provide smoother video playback with full-screen 30fps video on PowerMacs. I'll believe that when I see it.

A new sprite animation track has been added so that developers can create Sonic the Hedgehog-like interactive characters, and there's support for the MPEG file format, too. Apple's Multimedia Tuner extension feature has now been incorporated into Version 2.1.

QuickTime comes as three extensions: QuickTime, QuickTime PowerPlug, and QuickTime Musical Instruments. All can be downloaded as one archived file from Apple's software support Internet sites. Apple has updated its Movie Player application too, and the new version can be obtained from the same place. Movie Player 2.1 has a Present Movie option which replaces Print to Video for full-screen movies, and support for the new features in QuickTime.

While on the subject of movies, I've been playing around with MPEG files, (having performed a test with accelerated PC graphics cards in last month's issue). I was impressed by a utility for Windows called Xing that played back these files using the raw power of the processor without the need for any specific decoding hardware, so off I went in search of a Mac equivalent.

### Sparkle

The most promising program I found was a small application called Sparkle, available from eWorld and currently on version 2.4.2. As with Xing, Sparkle provides software decompression and playback of MPEG files on both 680x0 and PowerMacs. The file is encoded as FAT binary and will therefore take advantage of whatever hardware is at hand.

The only limitation I've found with Sparkle is that sound support is limited to playing AIFF data. Files in this format can be associated with MPEG pictures and the two are then played simultaneously. There is no support for playing direct MPEG compressed audio which is normally included in a movie file (the author says he is working on this). If you have files in

.WAV format, as commonly used with Windows, you can also use these by running them through a converter such as Balthazar.

I found that Sparkle produces reasonable results on anything from a PowerMac 7100/80 upwards, and can provide what looks like full 25fps playback on a 9500/132. As processors get more powerful, software MPEG could become a real alternative to buying extra, and often expensive, hardware. If any Mac users know of a better way to replay MPEG files using software alone, let me know.

### Mighty machine

Mentioning the 9500/132 was a sneaky way of boasting that PCW now has access to one of these mighty machines. Having tested an early model when the hardware was first announced, I can report that the finished product is just as good. It comes with the latest version of Mac OS System 7.5.2 pre-installed, although not all of the latest native extensions are included in this release. Sound Manager 3.1, QuickTime 2.1 and Native SCSI Manager have to be added separately.

So far I've found no major compatibility problems, apart from a small problem with RAM Doubler which means having to reinstall it if, for any reason, I switch it out with the Extension Manager. Some software problems have been reported with the PowerPC603, as used in the Performa 5200, so I'll be seriously testing the mettle of the PowerPC604.

### Cor! more Pffhor

Visit Apple UK after hours and the chances are you'll find everyone armed to the teeth and trying their best to kill each other. It's nothing to do with the water supply or the company's close proximity to Heathrow airport; it's all down to that wonderfully addictive pastime, a networked game of Marathon.



To find out what Marathon's "Bobs" are up to now, you'll have to wait for the full review of the game — but I can reveal that it looks and plays better than the original. The high-resolution texture mapping is superb and

*The Pffhor are back for more in Marathon II: Durandell*

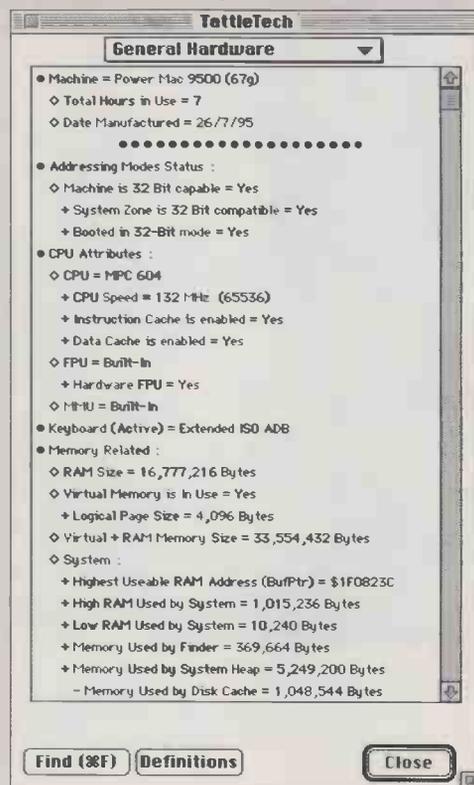
## Utility of the Month

Here is a little shareware number I pulled down from eWorld, called TattleTech. No sooner was it downloaded, it saved the day.

TattleTech was originally known as "TattleTale", a program I first encountered in my Mac IIsi days. Much improved since then, it is a semi-diagnostic program that investigates your machine's configuration and reports the findings. TattleTech can tell you about general hardware, such as what kind of processor your machine has, what speed it is and how much RAM there is, and also about more complicated issues such as system patches, extension version numbers and open files. A complete list can then be printed for your records.

TattleTech is ideal for keeping track of what's in and on your system, seeing what parts are written in native PowerPC code, and for tracking down problems with extensions. It costs nothing to try out and could save you a lot of time if you have a software conflict.

TattleTech currently resides in the ZiffNet Hot Downloads section in the eWorld Computer Center. It doesn't sup-



port PCI at the moment, but the author claims that this will be addressed as soon as he gets his hands on a PowerSurge Mac [see main text].

This was the original Mac answer to Doom on the PC and has built up a considerable following since its release last year. Marathon 2 is due to be released soon and an early demonstration has found its way onto my hard disk.

Marathon 2 sees the return of the Pffhor, the nasty alien race hell bent on man's destruction. They didn't like it too much when you stopped them from taking over the starship Marathon in the first game, and now you have to face them again in an all-new conflict.

A wide-screen display gives you even more of what the Americans like to call "in ya face" action. The sound has also been beefed up with 16-bit stereo panning and ambient effects to make you feel as if you're really exploring an alien world.

My demo came from Mac clone makers, Power Computing (and was distributed at the Boston Macworld '95 show), but another demo should be freely available on the Internet by the time you read this.

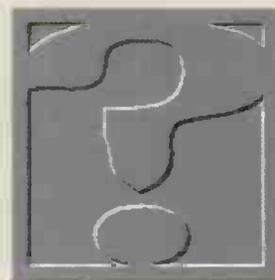
## PCW Contacts

Chris Cain welcomes all comments and suggestions from Mac users. He can be contacted via the usual PCW address or by email as [chris\\_cain@pcw.ccmail.com](mailto:chris_cain@pcw.ccmail.com), [chris@cix.compulink.co.uk](mailto:chris@cix.compulink.co.uk) or [cain@eworld.com](mailto:cain@eworld.com)

Apple 0181 569 1199  
Connectix utilities available  
Computers Unlimited 0181 200 8282  
Power Computing clones from  
Computer Warehouse 0171 724 4104 or  
Newer Technology 001 316 685 4904 (US)

# Any questions?

If you've got a PC problem or think you could help out other readers, contact **Frank Leonhardt**.



For anyone who's just spent six months marooned on a desert island, the news is that Microsoft has finally released a new version of Windows called Windows 95. To make sure everyone knew about this earth-shattering event, Microsoft's publicity machine went berserk, going as far as buying a certain well-respected newspaper and converting it into an advertising freebie for the day.

Everyone knew something had happened, but most were a little unsure as to exactly what it was, and most of them have phoned me for clarification (it feels like it, anyway).

This has had two immediate effects: firstly, my answering machine has broken down for the first time since 1986; and secondly, I have noticed the same questions constantly arising.

Here, then, are my thoughts on the subject.

**Q.** Is Windows 95 any good?

**A.** *What kind of a question is this? Yes, in many ways it is an improvement on 3.11. It is faster (in some circumstances) and it promises to be more robust. It could be easier for some people to get to grips with, and the low-level redesign allows for future expansion. What this means to you, in practical terms, is probably very little.*

**Q.** Should I upgrade to Windows 95?

**A.** *Changing operating systems almost always means grief. If you buy a new machine it will probably come with Windows 95 as standard. If, on the other hand, you have a perfectly serviceable computer running Windows 3.1 there is no real need to upgrade; at least for now.*

**Q.** Will I need to upgrade my PC's memory?

**A.** *One supposed advantage is improved performance. This has been realised, but the increased RAM requirements completely negate this on systems with 8Mb or less of RAM. This is caused by the use of virtual memory; the process by which hard disk space is used as a substitute for real RAM. Once your real RAM is full up, Windows will swap areas of RAM to and from an area on the disk. Swapping is a very slow process in*

*computing terms and its avoidance is to be desired. Because Windows 95 uses more RAM than its predecessor, you will find that you can load less applications before swapping starts. Microsoft may be right when they say a system with 8Mb of RAM will run Windows 95 at the same speed as Windows 3.11, but the question you should be asking is whether your applications will run faster or slower.*

*If you were happy with the level of*



*performance you got with Windows 3.11 in 8Mb of RAM, you will need an extra 4Mb to stop Windows 95 from swapping. If you do stop it swapping, however, it is noticeably faster than 3.11.*

**Q.** What advantage will upgrading to Windows 95 give me?

**A.** *Apart from performance, an important perceived advantage of Windows 95 is its ease of use. This might make a difference to new users, but if ease of use had been a priority in your case you would have bought an Apple Macintosh in the first place. To take advantage of the new front-end you'll have to convert to a different way of thinking about files and applications, and you may be better off with the devil you know.*

*In the future, Windows 95 will be supported by new application software. This is the most compelling reason most people will have for upgrading. Windows 95 will handle the so-called 32-bit applications in a different way from the existing 16-bit versions. At present, a*

*rogue 16-bit program can cause everything running on the machine to crash. Windows 95 can physically keep the 32-bit applications apart, so the dreaded system crashes may become a thing of the past. If you really need a reliable system, however, Windows NT has been multi-tasking all types of application in a robust manner, for a long time.*

*In theory, 32-bit applications can run faster, too, but I'll believe it happens in practice when I've seen it for myself.*

*Windows 95 can handle resource-hungry applications far more effectively than could 3.1. This may be of interest to Microsoft Office, which eats up system resources as if it were never designed to fit on Windows 3.1. Considering the lengthy delay in releasing Windows 95, this may be the case.*

**Q.** Is there any good reason why I shouldn't upgrade?

**A.** *One very good reason for not upgrading a system is backward compatibility. Microsoft has gone to a lot of trouble to make existing DOS and Windows 3.1 software work with Windows 95, but they haven't accommodated everything. For new machines and users this is not a problem — simply buy software and hardware which works with Windows 95. If, however, you bought your software more than a few months ago you're not going to want to fork out to upgrade again.*

**Q.** Can I install Windows 95 along with Windows NT or OS/2?

**A.** *This is generally not a problem. If you have DOS and another operating system installed on your hard disk, Windows 95 can be installed over DOS. Boot Manager, NT loader and so on should keep working. If you want to select between DOS and Windows 95 you can simply press F8 at startup to get back to a DOS prompt. In my experience, absolutely everything which worked under DOS 6 works from a Windows 95 DOS prompt (before Windows 95 proper is allowed to start), including Windows 3.11.*

**Q.** I want to keep my old version of Windows after installing 95 — does this

mean I need to buy the full version of Windows 95?

**A.** *Not at all. The only difference between the full and upgrade versions is that the upgrade checks to see that you have an old copy of Windows somewhere before it installs. If you no longer have Windows 3.1 or Windows NT on your hard disk, it will accept the first installation floppy disk as proof.*

**Q.** Should I install Windows 95 over my old system as the documentation suggests?

**A.** *No — unless your old system is fully backed up. My recommendation is to make a boot floppy for your existing version of DOS (see Computer Answers, October issue) and then install Windows 95 to a new directory. This has the disadvantage that you will have to re-install most of your Windows applications, but after a few years' use most machines could do with a fresh start.*

*Make sure you keep backups of your old AUTOEXEC.BAT and CONFIG.SYS files. Your existing DOS and Windows directories will remain intact during the process but you may need to move them elsewhere to make space on your system partition. To avoid having two swap files on your disk, use the Windows 3.1 Control Panel 386 Enhanced option to set the swap file type to "Temporary" (if it is currently set to "Permanent").*

*By not overwriting your existing version of Windows, you will find you can switch between old and new by pressing F8 when the "Starting Windows 95..." prompt appears at startup and selecting the Command Prompt option from the menu which appears. This is very useful while you are finding out what works with Windows 95 and what doesn't.*

**Q.** How can I get my machine back the way it was before?

**A.** *If you haven't installed Windows 95 in the way I've suggested, you will have to rely on Microsoft's uninstall utility. The documentation for this is supplied with the floppy disks and on the CD-ROM in \README.TXT. During installation you will have been asked whether you wanted to create uninstall files, assuming you opted to overwrite your original system. If you installed to a new directory then you wouldn't have been asked.*

*To get rid of Windows 95 without using the uninstaller, simply boot from your DOS floppy and transfer the system back to drive C: using the command "SYS C:". Then copy your AUTOEXEC.BAT and CONFIG.SYS files, together with your old Windows and DOS directories if necessary, back into place and delete all*

### SIMM conversion device

In the September issue, I said that there was no way to convert 30-pin SIMMs to work with a 72-pin SIMM motherboard. But apparently, Tim Nott had mentioned (on page 290 of that issue) a device called SIMM Swapper which did just this... Oh well, you can't win 'em all. Although I haven't yet seen this new device, there are a couple of points which worry me. For a start, high-performance memory systems can be a bit fussy about their SIMMs so this may not work for everyone. Additionally, most Intel PCI Pentium motherboards are set out with the SIMM sockets right under the drive bay metalwork; clearance, even for normal SIMMs, can often be a problem.

Thank you to everyone who wrote to tell me about this.

*the Win95 stuff.*

*If you didn't make a DOS boot disk before installing Windows 95; don't say I didn't warn you.*

### All things considered

I've only considered practical issues of Windows 95 so far. If you are the type of person who simply enjoys computers then Windows 95 is a lot of fun. It will transform your old machine into something different; a new toy to play with. Windows 95 will inevitably displace Windows 3.1 in the future but, for now, if you rely on your computer to make a living you'd be mad to fix something which isn't broken.

### P60 gets the boot

"I have a Dell Pentium computer. Both MSD.EXE and INFOPLUS identify the processor as a 486. I am a little disturbed by this. At boot, the operating system displays P60, so why does both MSD and INFOPLUS say it is a 486?"

**Joseph M Farrugia**  
<JoeF@harion.demon.co.uk>

*Programs like these identify processors using heuristic methods. They try out a few things which produce different results on all the processors which the programmers know about and take a guess at what they are running on.*

*As the Pentium didn't exist when the programs were written, and is backwards compatible with the 486, the heuristic tests performed to detect a 486 would have passed. Newer versions of the software will try things which only work on a Pentium (or a P6) and thus be able to tell the difference.*

### Upgrade options

The honour of being the most far-flung correspondent this month goes to Adb-EI-Kadir M.M, from Baghdad:

"I currently have a 486 DX2/66, with an ISA motherboard, using an Xtechnology Xgraphic graphics board which I need to upgrade. I don't want to spend money on a new ISA graphics board because the technology is outdated. I want to upgrade my motherboard to either VESA or PCI: I'm not sure which is the recommended architecture.

"I've seen boards available with and without CPUs — although those without CPUs state that they are ZIF. My current board is LIF and I'm not sure if I could make use of my current CPU on one of these new boards. I'm considering an upgrade in processor as well, to a DX4 100 VESA/PCI board.

"This leads to my next problem: the DX4s seem to be 3.3v, and I'm sure my power supply is 5v. Do these 3.3v motherboards have the ability to 'step down' the voltage or would my power supply fry a 3.3v CPU?

"What do you recommend I do?"

**Gary Mot**

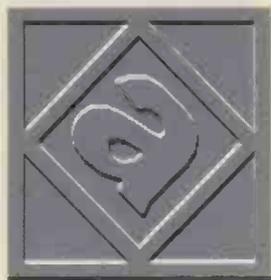
<100072.1661@compuserve.com>

*PCI has some theoretical advantages over VESA but in practice your choice should be dictated by the expansion cards you wish to use. If you want to upgrade your processor too, I'd suggest you forget about the DX4-100 and go straight to a Pentium. The price/performance ratio definitely favours a P60. Personally, I'd prefer a P75 because it's a second generation Pentium running at 3.3v instead of 5v. And it's faster.*

*The 3.3v motherboards have a built in voltage regulator for their CPU and support chips only. The rest of the board must still run at 5v, otherwise all the expansion cards wouldn't work. The power connection is just the same as for the 5v boards. There may well be jumpers on the motherboard to select different CPU voltages.*

### PCW Contacts

Frank Leonhardt is an independent computer boffin who can sometimes be contacted on 0181 429 3047 or via email as frank@dircon.co.uk or leo2@cix.clink.co.uk. Letters may be sent to PCW at VNU House, 32-34 Broadwick Street, London W1A 2HG, but individual replies are not normally possible. Please do not ask about cover disks or CD-ROMs.



## Hard facts

**When your old PC needs a Zimmer frame to cope with new software, it's time for action. Eleanor Turton-Hill helps you along the road to deciding what you should do and explains the issues involved in upgrading your hard disk.**

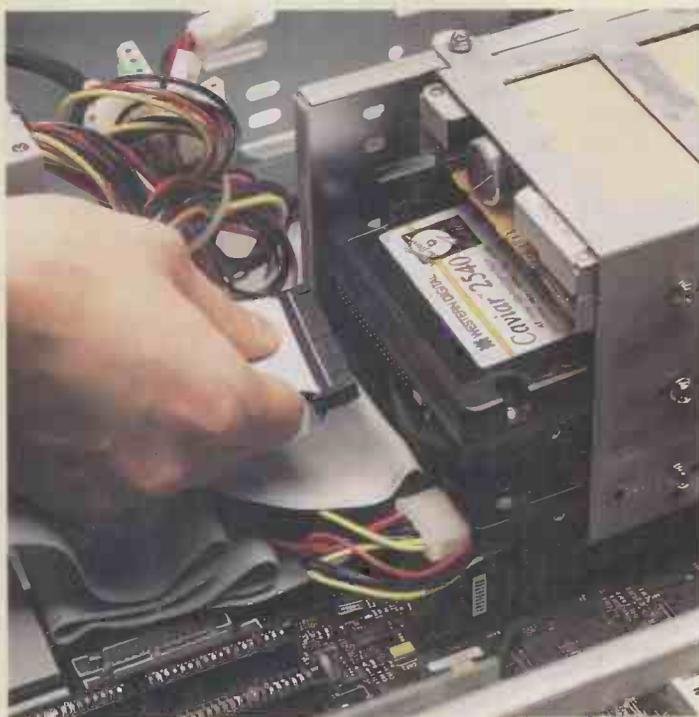
**C**omputer technology changes fast: every year, processor speeds increase and hard drive capacity grows. Before you know it, there's a new generation of feature-rich software waiting to cripple your poor, aged PC. Sooner or later, you'll have to face up to the fact that your machine is becoming outmoded and find some way of dealing with it.

### Dig your heels in

One approach is to ignore all new technological advances and carry on using the software you've got. This is not a completely silly idea. Most software "upgrades" do not transform your current application into a superior product — they just add lots of extra features which you don't necessarily need. Ultimately, this takes up lots of disk space and strangles your system. So if your software does everything you want it to, that's a good argument for leaving it alone.

The problem with the "dig your heels in" approach is that eventually your hardware and software become obsolete. There's no chance of making any kind of minor upgrade, let alone running the current generation of software or adding some whizzy new peripheral. One day, you'll pick up a computer magazine and realise that no-one knows of your PC anymore.

Most people, especially computer



*Connecting a Caviar 2540 IDE hard disk*

enthusiasts, can't bear to be this out of touch. But they can't necessarily afford to splash their money around on new hardware either; so what they do is push their current systems to the limit. In fact, this is the option which most people unwittingly take. Although you may benefit from some of the new features provided in the constant software upgrades, your system will soon let you know that it can't cope with the continual effort of churning data from memory to disk. The signs are often subtle: "Out of memory" messages start to

flash up on the screen and your favourite applications inexplicably refuse to save any more files.

### Upgrade or not?

This is a sad state to get into, but once you've arrived at this point, there are only certain options available

The first is to clean up your machine, and there are dozens of techniques for squeezing more life out of your system. The most effective, however, is to delete old files (that you no longer use) from your hard disk and compress any "archive" files which you seldom use but would like to keep. There are hardware and software utilities which will do this. The software variety is generally cheaper;

the hardware type, generally faster.

Second on the list is to buy a new machine. Whether or not you decide to do this will depend on the state of your current machine. If your PC has become truly medieval, it's the only sensible solution. But before you do this you should consider the third option, which is to upgrade some of your machine's over-worked components.

### Hard disk upgrade

Last month we looked at simple upgrades, like adding more memory and improving graphics cards. This month we'll look at

some of the issues involved in upgrading your hard disk.

Although the price of RAM has remained constant for about two years and is showing little sign of change, the price of hard disks has plummeted in the past six months. Giving your machine a boost, in the form of a new hard drive, is now an option well worth consideration.

The speed of your hard disk has a major impact on overall machine performance. Hard drives found in old (or really cheap) computers tend to be physically large, slow, power-hungry and of limited capacity. If your machine is *really* ancient, then a modern IDE hard disk would greatly improve its performance.

Before splashing your money around, there are a few basic things you need to know about your PC. First, take the lid off it (there's no way of doing this without a screwdriver) and take a look at the arrangement of the components. The first and most obvious thing to find out is whether you actually have room for another hard disk.

If there's no spare space, don't panic. You can still add hard disk space using a "hard card": literally a "plug-in" card with a hard disk and controller circuitry attached to it. Hard disks of all types come on hard cards, so if the whole idea of replacing your hard disk or adding one to your system brings you out in a rash, a hard card

may be the ideal solution for you. You can use it as a replacement for a dead hard drive or as a second drive. People with slimline PCs which generally lack extra drive bays may have no alternative but to use a hard card. The drawback with hard cards is that they tend to have rather low capacity and poor performance, but they're just as reliable as conventional disks.

If you find that you do have a spare drive bay, the next thing to check is the interface standard used by your machine. If your hard disk is of the MFR (Modified Frequency Regulation), RLL (Run-Length Limited) or ESDI (Enhanced Small Device Interface) type, then you have several upgrade options. With a bit of phoning around you can still get hold of RLL and MFM drives. The major problem with them is they tend to be painfully slow (compared with modern IDE drives) and of low capacity. The more sensible choice is to replace your old drive with an IDE hard disk, but make sure you get a matching controller with it. This goes for any type of hard drive. You cannot plug an MFM drive into an RLL controller and expect anything other than smoke.

Check up on the manufacturer of your hard drive, and the drive's type (if you've lost your manual look in the machine's setup screen) before you go shopping for a new hard disk because the BIOS (basic

input/output system) in some older machines do not officially support IDE (integrated drive electronics). Ask the dealer if the new drive will work in a "master/slave" configuration with the old one. And finally, cover yourself by checking that the drive you buy has a "no questions asked" return policy.

### Which drive interface?

There are basically two types of modern drive interface: SCSI and IDE (see the panel, below left). Here we'll concentrate on the more common IDE variety. Unfortunately, adding a second IDE drive is not always a simple procedure because they don't all work to the same standard. If both your drives adhere to the ANSI standard (ATA) they should happily co-exist. But if they are incompatible, you could well end up throwing your old one away.

IDE drives can control two hard disks on the same cable, and in order to make them work together one must be set up as a "slave" and the other as a "master". This is done fairly simply by moving a jumper at the back of the drive from one position to another. When you plug in the drive, make sure that the cable is plugged in the right way round, otherwise your machine will appear dead when you turn it on. Pin 1 is usually marked so that you can align the cable correctly.

The hard disk you buy will generally be faster than your current one, so set up the new one as the master and the existing one as the slave. They'll work more efficiently together if you store your applications on the faster disk and data on the slow one.

Once you've physically connected your new hard drive to the machine, you will have to configure the PC's BIOS. The BIOS contains a series of entries such as number of heads, cylinders and sectors per track which define the type of hard drive in the machine. Generally, you can get into the BIOS setup utility by pressing a key combination when you boot up. Here you'll need to configure the hard drive type number as well as other system configuration details. Make sure you have all the information you need before you go anywhere near your BIOS, or you could spend many frustrating hours (even days) trying to put it right.

## IDE and SCSI: the next generation

If you've leafed through a PCW computer group test, you couldn't have failed to notice lots of incomprehensible acronyms like those above. These acronyms refer to interface standards which define the way in which the hard drive connects to your PC.

The first generation of computers stored the electronics to manage the hard disk, on a separate controller card. But technology has moved on since then and the same advances in microchips which have led to faster processors and cheaper memory, now enable the controller function to be placed on the disk itself. Integrated Drive Electronics (IDE) is currently the most common hard drive interface. It's also the least expensive.

IDE disks are connected to an interface card by a cable which extends the signals from the bus inside the PC. The cable does not plug directly into the ISA bus (industry standard architecture), so it either goes into an interface port on the main board or into an interface card. The IDE standard supports two connected disks, the first acting as controller, the second as a slave, with both disks sharing a single I/O address and interrupt.

Enhanced IDE (EIDE) is a much upgraded version of IDE. All computers built since 1994 should have an EIDE hard disk controller, and this provides many advantages over IDE. Firstly, EIDE can support four devices (instead of two) and they don't necessarily have to be hard disks — they can be CD-ROMs or tape drives that are compatible with the EIDE standard. Secondly, IDE was always restricted in that it would not support hard disks larger than 528Mb. The third improvement was in the massive increase in data throughput compared with standard IDE. This massive speed enhancement puts EIDE on an equal level with SCSI (pronounced "scuzzy") as a high-end drive interface.

SCSI stands for Small Computer Systems Interface — it is another standard for connecting hard drives and peripherals to your PC. SCSI hard drives are very fast and very expensive. They act as good interfaces for high-capacity hard drives used as network file servers and for very high-powered scientific and engineering applications. For the average user, it's not really worth spending lots of extra money on a SCSI, especially as EIDE now provides similar performance results.

### PCW Contacts

Eleanor Turton-Hill welcomes any feedback and suggestions from readers, on  
[ellie@pcw.cmail.compuserve.com](mailto:ellie@pcw.cmail.compuserve.com)

From Only  
£259.95  
(inc. VAT)

# Computer to

# Video

## DELTA SCAN



## DELTA SCAN

### PRO

## Signal Splitters

## SPLITTER



Designed and Manufactured  
in the United Kingdom

Give your presentations and video productions a new twist with the Deltascan. Add impact to computer presentations displaying them onto a large screen television, a video projector, or even downloading them onto videotape. Enhance your video productions by adding computer graphics and text, or even use your television as a large screen colour monitor for your laptop. All this, and more is possible by simply connecting the Deltascan between your computer and its monitor - it's that simple!

**For IBM PC & Macintosh Compatibles**  
Up to 1280x1024 Resolution  
Composite Video, S-Video & RGB Outputs  
PAL or NTSC Compatible  
Simultaneous display on computer monitor  
No Driver Software Required  
Remote Control of all functions  
2 stage Flicker Reduction Control  
Overscan & Underscan (Horizontal & Vertical)

There are two Deltascan units. The basic unit provides optimum quality at resolutions up to 800x600 in up to 256,000 colours. The Deltascan Pro provides improved quality output running at resolutions of 1024x768 and above, and 2 x Zoom.

Deltascan - £259.95 Deltascan Pro - £399.95  
(inc. 12V mains adaptor & VAT)

For presentations, training, or exhibitions the Splitter range provides numerous identical outputs from a single source, making them ideal for distributing information. Computer Signal and Video Signal splitters are available, carrying signals up to 50 metres from the source unit.

Computer Signal Splitters from £79.95. Computer & Video Splitter - from £175.08.  
(inc. 12V mains adaptor & VAT)

For further details please contact:

Vine Micros Ltd. Vine House, Cowper Road, Margate, Kent, CT9 1SX, U.K.  
Tel (01843) 225714 Fax (01843) 296237

E&OE. All Copyrights & Trademarks acknowledged. Details subject to change.

### PC-CD2 PCMCIA 2-speed CD-ROM drive

ONLY £225+VAT

- 300 Kb/s transfer, 350mS access time
- mobile - no mains/battery, weighs only 1.3Kg
- power thrifty - 5V operation, 120mA in SLEEP mode, 250mA in STANDBY, 800mA when accessing drive
- Supports: CD-DA, CD-XA, CD-I, CD-ROM modes 1 and 2, Multi-session Photo-CD
- Requires: PCMCIA 2.1 card slot, and min MS-DOS 6.x, MSCDEX.EXE (in DOS)
- Multimedia-ready - 16-bit Audio output
- easy to install - comes with own PCMCIA software driver

### PC-CD4 PCMCIA 4-speed CD-ROM drive

ONLY £329+VAT

- 600 Kb/s transfer, 190mS access time
- built-in power supply - power from mains
- Supports MPC-2, Photo-CD Multi-session, Video CD White Book, CD-I, CD-XA, CD-DA
- Requires: PCMCIA 2.1 card slot, and min MS-DOS 6.x, MSCDEX.EXE (in DOS)
- Multimedia-ready - 16-bit Audio output
- easy to install - uses your notebook's PCMCIA socket services

### CDplus4 parallel port 4-speed CD drive

ONLY £229+VAT

- Has the advantage that you can use it with both notebooks and desktop PCs
- Same specification as PC-CD4
- 600 Kb/s transfer when your PC has an EPP (enhanced parallel port)

CDplus2 Double-speed ..... £155

Delivery - overnight, UK mainland . £10

Prices exclude VAT @ 17.5%. MarkTech acknowledges all trademarks and reserves right to change specifications and prices without notice E. & O.E.

## Plug & Play. Anywhere.

The practical way  
to boost your notebook  
with CD power

**Y**OU can use our PC-CD2 double-speed CD-ROM drive at work, at home, or on the plane to New York - it runs without batteries or mains.

### Why PCMCIA?

The PC-CD2 makes good economic sense because you can use one unit to service several notebooks.

You can also use it to fast-install big software programs in all your notebooks - e.g. MS Office, Lotus SmartSuite and CorelDraw.

The PC-CD2 is compact, lightweight and easy to install, using PCMCIA's Plug-&-Play standard.

It's easy to use too - you run it under Windows and DOS just like any other drive.

And with a notebook with a built-

in sound card, it also gives you full-blown Multimedia.

### Quad-speed versus Double-speed

The PC-CD2 drive will satisfy all your current requirements for a fast CD drive and Multimedia.

For more advanced capabilities, such as Animation, you can opt for the latest PC-CD4.

This Quad-speed CD drive comes with its own power supply and connects directly to the mains.

### There's more

When you want a single device to boost both your notebook and your desktop PCs, check out also our Plug-&-Play parallel port drives.

These include portable hard disks as



well as a fast Quad-speed CD-ROM drive - all easy to install and use.

### Your Money Back Guarantee

Get any of our devices today and we'll give you a full refund if you're not completely satisfied within 14 days of purchase. With each device you also get a full one year Warranty.

To order, call us now on

**0181-841 6711**  
fax **0181-841 7133**

**MarkTech**  
SYSTEMS LTD

1 Belvue Business Centre, Belvue Road  
Northolt, Middlesex UB5 5QQ

# POWERFUL NETWORKING OPTIONS COST CONSCIOUS SOLUTIONS

## NETWORKING

Novell  
Authorised  
Reseller

OPUS Technology provide the most cost-effective, high performance range of Fileservers available today. Just add a network card to any OPUS Technology PC and you are network ready!

### NOVELL AUTHORISED CONSULTANCY

We are a fully Authorised Novell Network Reseller offering a range of solutions from simple low cost peer to peer networks involving 5 users right through to Local and Wide Area Networks (LAN's & WAN's) up to 500+ users.

#### NETWORK SERVICES

- Consultancy
- Free On-Site Survey
- Design
- Planning
- Project Management
- Installation
- Approved Training
- Support
- Maintenance

#### INFRASTRUCTURE

- Structured cabling
- Communications Hardware
- Gateways, Bridges, Routers, Hubs, Modems

- Disk Arrays
- UPS's
- Tape Backup Systems
- 100 Mbps Hubs

#### HARDWARE

- RAID Fileservers
- Pentium Fileservers
- Workstations

#### SOFTWARE

- Windows for Workgroups 3.11
- Windows NT
- Novell Netware

## PRESTIGE ENTRY LEVEL FILESERVER

- Intel® Pentium® 75Mhz Processor
- Triton Performance PCI Motherboard, Windows 95 & Plug 'n' Play Ready
- 16MB RAM
- 1Gb SCSI Hard Disk Drive
- 32 Bit SCSI controller
- 32 Bit PCI Ethernet Adaptor
- 1.44MB 3.5" Floppy Disk Drive
- 14" Mono Monitor
- 16 Bit Graphics Card
- 102 Key UK Keyboard
- Full Tower Case Style
- Free Diagnostic Utilities
- 12 Months ON-SITE, Parts & Labour Warranty
- Lifetime Telephone Technical Support



P75

£1,299

Exc Carr & VAT

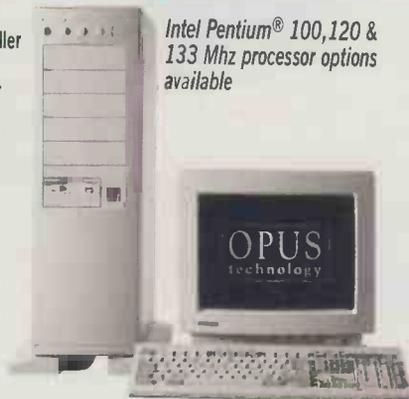
Intel Pentium® 90,100,120&133Mhz processor options also available

All OPUS Technology Networks are Commissioned Free of Charge. Call for Details

## PRESTIGE MID-RANGE FILESERVER

- Intel Pentium® 90Mhz Processor
- Triton performance PCI Motherboard, Windows 95 & Plug 'n' Play ready
- 256k Cache
- 32MB RAM
- 4Gb SCSI Hard Disk Drive
- Quad Speed SCSI CD ROM
- PCI SCSI Controller
- 32 Bit PCI Ethernet Adaptor
- 14" SVGA Mono Monitor, Energy Star Compliant
- 16 Bit Graphics Card
- 102 Key UK Keyboard
- MS DOS 6.22
- Full Tower Case Style
- 12 Months ON-SITE, Parts and Labour Warranty
- FREE Diagnostic Utilities
- Telephone Technical Support

Intel Pentium® 100,120 & 133 Mhz processor options available



1  
ON-SITE  
YEAR

P90

£2,495

Exc Carr & VAT

## PRESTIGE RAID FILESERVER

- Intel Pentium® 75 or 90Mhz Processor
- Triton performance PCI Motherboard, Windows 95 & Plug 'n' Play ready
- Dual Pentium Motherboard also available
- 3x2GB Hard Disk Drives in Hot Swappable, Removable Drive Cradles
- RAID Level 5 Controller with 486 processor & 4MB Cache (expandable to 64MB)
- 256k Cache
- 32MB RAM
- 32 Bit PCI Ethernet Adaptor
- Quad Speed SCSI CD ROM
- 3.5" (1.44MB) Floppy Disk Drive
- 14" SVGA Mono Monitor, Energy Star Compliant
- 16 Bit Graphics Card
- 102 Key UK Keyboard
- MS DOS 6.22
- King Tower Case Style
- 12 Months ON-SITE, Parts and Labour Warranty
- Lifetime Telephone Technical Support

Intel Pentium® 100, 120 & 133 Mhz processor options available



• Network Operating Systems available from OPUS Technology include Windows for Workgroups 3.11, Windows NT and Novell Netware. Full range of Memory, UPS, & Tape Backup subsystems available please call for details.



pentium  
PROCESSOR

1  
ON-SITE  
YEAR

P75

£4,669

Exc Carr & VAT

P90

£4,799

Exc Carr & VAT

### PAYMENT OPTIONS

CREDIT ACCOUNTS

CREDIT CARDS

EASY PAYMENT PLAN

BUSINESS LEASING



ORDER **RIGHT NOW**

TEL: 01293-821555

FAX: 01293-782663



OPUS  
technology

PC'S NOTEBOOKS & NETWORKS DIRECT

OPUS Technology PLC., Redhill Business Park, Bonehurst Road, Salfords, Redhill, Surrey RH1 5YB

Prices and specifications subject to change without notice. E. & O.E. OT is a registered trademark of OPUS Technology PLC. Pentium and Intel Inside are registered trademarks of Intel Corporation. Credit subject to Status, available to private purchaser's only. OPUS Technology PLC is a Licensed credit broker. Written quotations available on request from Chartered Trust. Payment Protection Plan available for redundancy and sickness protection, with Merchandise Insurance. All trademarks acknowledged.

# OPUS TECHNOLOGY... DOING IT RIGHT FOR 15 YEARS

## RIGHT PRODUCT

We offer an outstanding range of personal computer systems to meet your requirements. Our desktop systems have won awards and the reviews about our Pentium processor based systems speak for themselves.

## RIGHT QUALITY

Our commitment ensures we exceed exacting standards to guarantee your system is of the highest quality. All OPUS Technology systems conform to the latest European Directives on Electromagnetic Compatibility (EMC).

With full compliance to British Standard Institute (BS5750), International Standards Organisation (ISO 9002) and Health & Safety standards we ensure you get peace of mind right from the start.



## RIGHT SERVICE

From the moment you call we are ready to help. Whether you speak to our friendly sales team, technical support or our customer services representatives; we are all committed to helping you.

## RIGHT SUPPORT

OPUS Technology provide a 1 year On-site warranty on all systems. You can rest assured that you have the best level of support available - and there's no extra to pay. Help is always on hand from our dedicated and highly trained technical support team through our FREE lifetime telephone "Support Line".



## RIGHT ON TIME EX STOCK AND READY-TO-RUN

Advertised systems are available immediately. We deliver when we say we will and all systems are insured in transit. When you receive your system it's fully tested and ready-to-run with all the software pre-loaded and accompanied by the relevant manuals and master disks.



## THE RIGHT WAY TO PAY

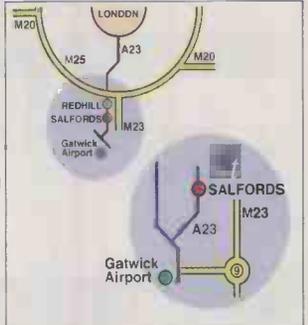
You can pay by cheque, credit card, "Easy Plan Finance Scheme". 0% Finance is also available on selected models with the 0% Logo.

## ALL AT THE RIGHT PRICE

The right price means the best value for money. We know you want a reliable, quality system at no extra cost - real value for money.

## THE RIGHT COMPANY THE RIGHT PEOPLE

OPUS Technology plc is the longest standing direct PC manufacturer in the UK with over 15 years experience and a group turnover exceeding £100 million. Our objective is to provide a range of personal computers that set the standard for quality, reliability and safety whilst incorporating innovative technology. Our commitment to this objective means that you benefit from the *best products at the best prices.*



## RIGHT AT THE LEADING EDGE

By using the latest proven technology and industry standards in ALL our systems we do more to protect your investment and provide you with a computing solution built to last for years.

All our PC's incorporate the latest *PCI architecture*, being *Plug'n'Play* compatible and ready for *Windows '95* - something you don't get from all manufacturers.

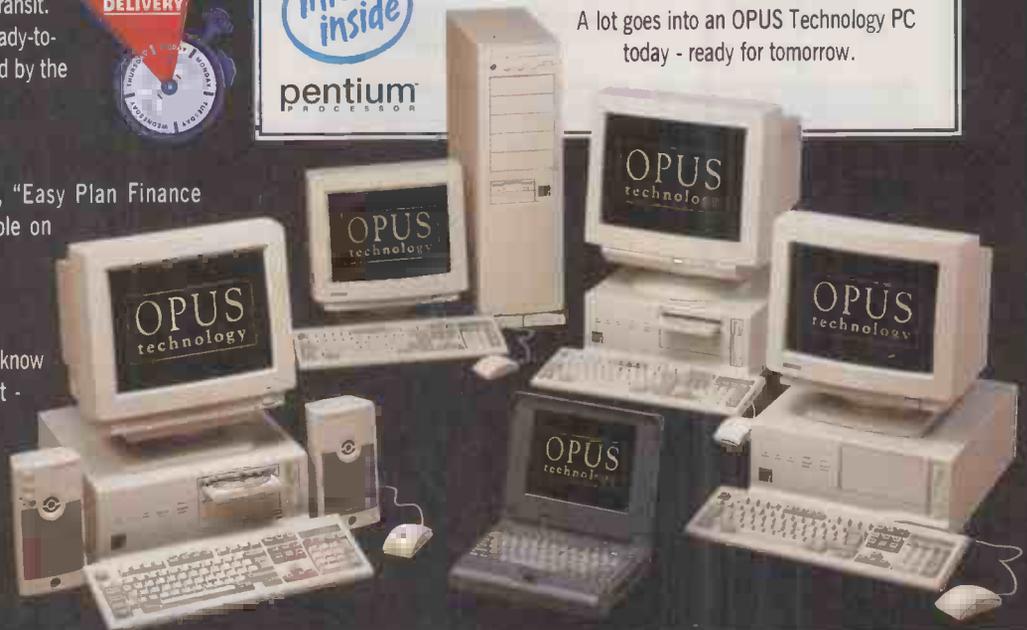
Processor upgrades are simple and all systems have an *Enhanced IDE Controller* built into the motherboard, increasing system performance by 20%.

*Energy Star* compliant power management reduces the power consumption - providing more environmentally friendly computing.



pentium  
PROCESSOR

A lot goes into an OPUS Technology PC today - ready for tomorrow.



## PAYMENT OPTIONS

CREDIT ACCOUNTS

CREDIT CARDS

EASY PAYMENT PLAN

BUSINESS LEASING



## ORDER RIGHT NOW

TEL: 01293-821555

FAX: 01293-782663



OPUS  
technology

PC'S NOTEBOOKS & NETWORKS DIRECT

OPUS Technology PLC., Redhill Business Park, Bonehurst Road, Salfords, Redhill, Surrey RH1 5YB

Prices and specifications subject to change without notice. E. & O.E. OT is a registered trademark of OPUS Technology PLC. Pentium and Intel Inside are registered trademarks of Intel Corporation. Credit subject to Status, available to private purchasers only. OPUS Technology PLC is a licensed credit broker. Written quotations available on request from Chartered Trust. Payment Protection Plan available for redundancy and sickness protection, with Merchandise Insurance. All trademarks acknowledged.

# ELECTRONE

*Point of Sale*

# ELECTRONE

*General*

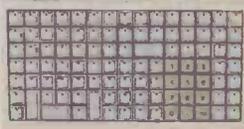
## ▼ PRECISECASH KEYBOARD ▼

The P.O.S. Keyboard with QWERTY keys, 58 programmable keys, full QWERTY typing area, magnetic card reader and bar-code port.



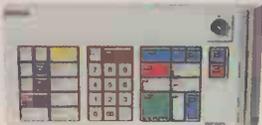
## ▼ 8001 P.O.S. KEYBOARD ▼

One of our newest P.O.S. keyboard products, the 8001 has a host of features packed into a very small footprint. Includes 105 programmable keys. Built in magnetic card reader optional.



## ▼ CARY 9000 P.O.S. KEYBOARD ▼

The Cary 9000 Programmable Keyboard looks and feels like a cash register keyboard. New Membrane Expansion module for 56 extra keys. Featuring tactile membrane and changeable inserts.



## ▼ BARCODE READERS ▼

Both CCD Scanner and wand readers include built-in decoder and interface. Bar code data is entered as keyboard data. Serial versions also available.



## ▼ CASH DRAWERS ▼

Available for serial port connection or with dedicated adapter card, the cash drawers offer a variety of coin and note compartments.



## ▼ KEYPORTS ▼

The range now includes 7 models for use in all environments including stainless steel Industrial/ P.O.S. models. Fully user programmable. Call for full details of models and interface options.



## ▼ CUSTOMER DISPLAY ▼

The 8003 pole display is specially designed for point of sale applications. Back-lit L.C.D. displays 2 lines of 20 characters, 12.7mm high characters.



## ▼ KEYCAT ▼

A real space saver, includes 102 keyboard with separate cursor controls numeric pad and serial trackball in a standard footprint.



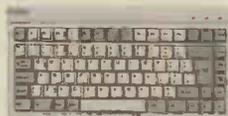
## ▼ MCK142 PRO ▼

The MCK 142 Pro has all the keys you'll ever need: two sets of function keys, enhanced style 102 layout with separate cursor pad and 24 user programmable keys.



## ▼ MINIKB ▼

Occupying less space than an A4 notepad, the MINIKB has 85 full sized tactile click keys. Includes QWERTY keys, function keys and cursor controls. Optional numeric pad available.



## ▼ 5100 MINIATURE KEYBOARD ▼

Only half the size of an ordinary keyboard, the 5100 squeezes 81 keys into the smallest footprint yet. Includes embedded numeric pad.



## ▼ MICROPADS ▼

Micropads for all applications. Include notebook numeric pads, keyboard replacement pads and fully programmable, customised keypads.



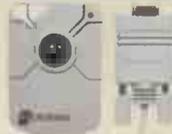
## ▼ KEYBOARD MASTER ▼

Remote data entry for computer-based presentations and demonstrations, Keyboard Master can operate any keyboard driven PC application up to 50' away from the computer.



## ▼ MICROTRAC ▼

Miniature trackball for use with notebook computers. Smaller than a mouse, Micro-TRAC can be hand held and keyboard mounted.



## ▼ PC-TRAC ▼

PC-TRAC sets new standards in style and comfort. The sculptured shape fits naturally into your hand and large, wrap-around buttons are right under your fingertips.



Electrone Limited, Unit 1, Central Park, Bellfield Road, High Wycombe, Bucks. HP13 5HG Fax: 0494-511888 Int + 44-494-511888

**Product Hotline 0494-511999 Int + 44-494 511999**

**CALL FOR OUR NEW CATALOGUE**



# DIRECT BUYERS' WORLD

**Direct  
Buyers',  
World**

**Competitive  
prices from quality  
suppliers**

# Pers Com W

August 1995 £2.50

Overseas Price £2.95  
France 58 FF Germany DM 17,00  
Italy 13,400 Lira Spain 925 PTS  
Holland HFL 14,25 Belgium 272,00 BFR  
Finland FIM 39,50 Malta Lm2,25c  
VNU Business Publications

157,544 readers can't be wrong • Bri

## Color Inkjet

Brilliant colour  
you can afford

### On Test

133MHz Pentiums  
Flow-charting software  
Multimedia software

### Hackers

The Kevin Mitnick Story

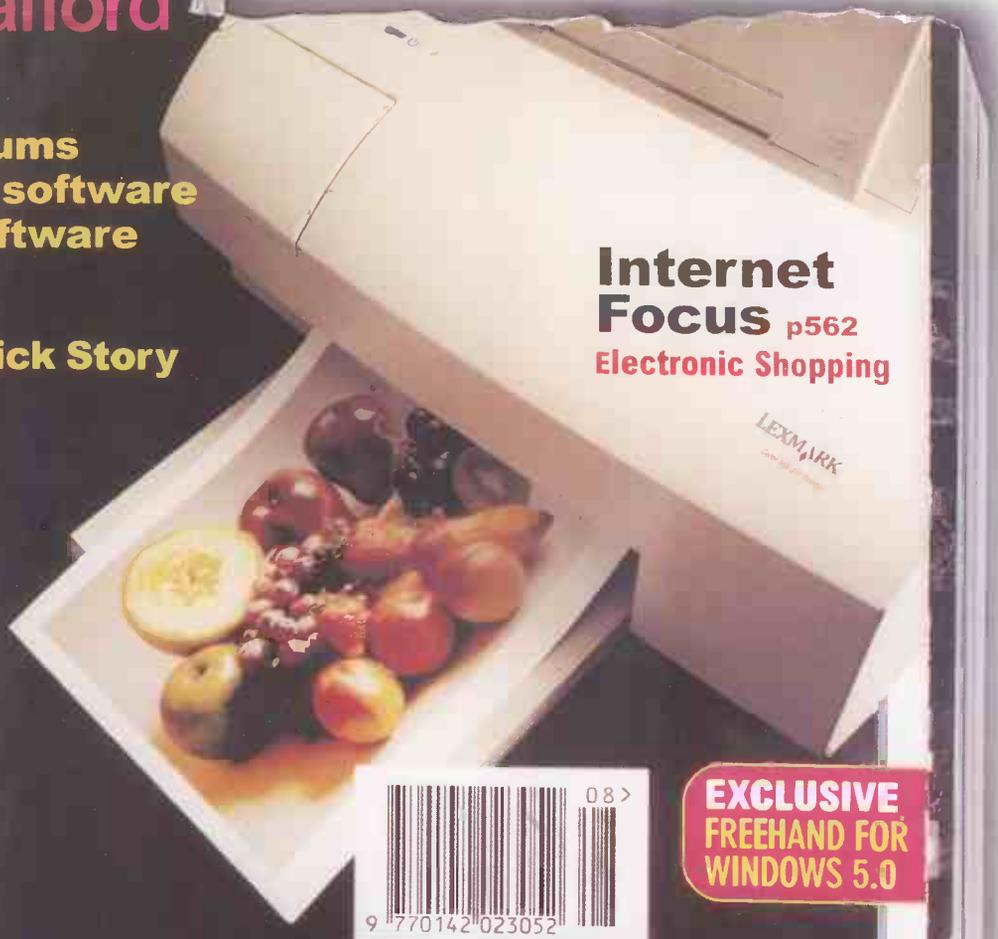
### Apple's Speedster

Power Mac  
9500

If your Disk or  
CD is missing,  
please ask  
your  
Newsagent

# 30% OFF

for all new subscribers



Internet  
Focus p562  
Electronic Shopping



**EXCLUSIVE  
FREEHAND FOR  
WINDOWS 5.0**



# Buyer's Charter

## MAIL ORDER PROTECTION SCHEME

**H**ello, I'm Anthony George, your Customer Services Manager. My job is to assist you when things go wrong or when you have a complaint about advertisements in *Personal Computer World*. If you encounter a problem, write to me with details of the complaint and I will contact you.



### Ten rules to buy safely

1. Always use a PERSONAL COMPUTER WORLD order form.
2. Keep a copy of the original advert.
3. Keep copies of all correspondence, and if you speak on the phone make a note of who you spoke to.
4. On large orders obtain a written quotation.
5. Wherever possible pay with a personal credit card. All transactions over £100 should be covered by the card company's insurance scheme.
6. Does the price quoted include everything discussed? Is VAT extra?
7. Check how they will deliver and if times are guaranteed.
8. Is telephone support or on-site maintenance included in the price? If a return to base warranty can be extended, how much does it cost?
9. Check that all branded components are genuine.
10. Is the supplier reputable? Do they comply with BS5750 or ISO900? If in doubt, ask to see customer testimonials.

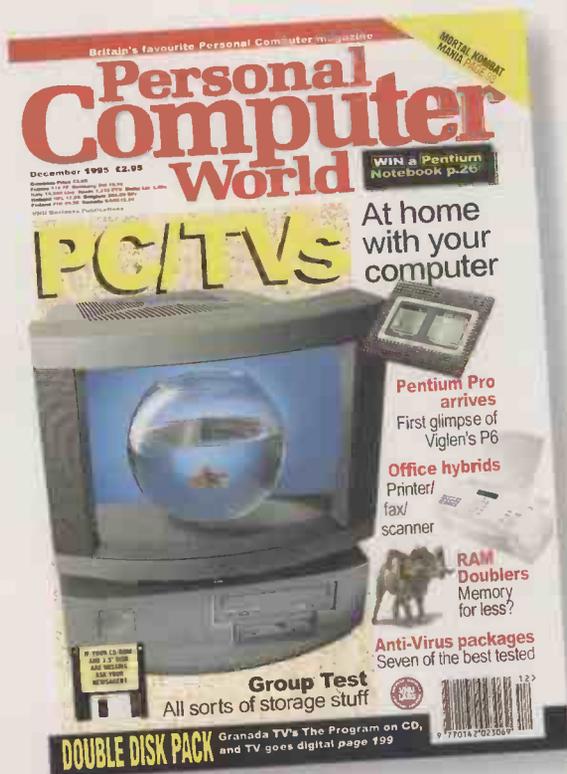
### Personal Computer World Buyer's Charter

When you purchase goods as a private individual reader from an advertisement appearing in this magazine and pay in advance of delivery, and that supplier ceases to trade and subsequently goes into Receivership, Liquidation, and/or Bankruptcy, you may be protected under our "Buyer's Charter" providing you have:

1. Not received the goods for which you have paid or had your money returned.
2. Followed all our guidelines when placing your order.
3. Retained a copy of the magazine's original Order form and the original advertisement, together with comprehensive proof of payment.
4. Submitted a detailed claim in writing to the magazine's customer services manager not earlier than 28 days and not later than three months from the official on-sale date of the magazine from which the goods were ordered. For example, by the end of June for the May issue (which is on sale at the beginning of April).

#### The following limitations apply:

1. Personal Computer World's liability under the Buyer's Charter will not exceed £2,000 in respect of any claim submitted by any one Private Individual Reader or more than £100,000 in respect of claims in any one calendar year. Any additional payments are at the sole discretion of the Publisher.
2. The Buyer's Charter only applies to goods advertised in this magazine. It does not cover goods depicted in classified advertisements, loose inserts, catalogues or any other sales material obtained from any relevant advertiser, or products that have not been advertised even if they are from the same supplier.
3. The "Buyer's Charter" will not safeguard any commercially orientated outlet, neither will it cover goods which are purchased outside Great Britain or any goods which are obtained for resale.



## ORDER FORM



# NETLAND • NETWORKING

NETLAND Tel: 01638 720999 Fax: 01638 721424 NETWORKING

### Novell Networking Operating Software Server Based



**NOVELL NETWORK 4.1 & 3.12**  
Only UK Authorized Product Sold

NetWare	3.12	5	user	£459.00
NetWare	3.12	10	user	£999.00
NetWare	3.12	25	user	£1420.00
NetWare	3.12	50	user	£2235.00
NetWare	3.12	100	user	£3959.00
NetWare	3.12	250	user	£5950.00
NetWare	4.1	5	user	£459.00
NetWare	4.1	10	user	£999.00
NetWare	4.1	25	user	£1520.00
NetWare	4.1	50	user	£2235.00
NetWare	4.1	100	user	£3959.00
NetWare	4.1	250	user	£5950.00
NetWare	4.1	500	user	£9999.00
NetWare	4.1	1000	user	£14999.00

### 100 Mbps Ethernet Adapters Fast Ethernet TX

Intel EtherExpress PRO/100 32bit PCI	£199.00
Intel EtherExpress PRO/100 32bit EISA	£299.00
Networth 10/100 Mbps EISA	£349.00
Networth 10/100 PCI	£220.00
3COM 3C595TX 10/100 EISA	£199.00
3COM 3C595TX 10/100 PCI	£139.95
EAGLE 10/100 Plus ISA	£189.00
SMC 10/100 EISA	£169.00
SMC 10/100 PCI	£157.00
Assante Fast 10/100	£199.00
Compaq Netflex3 EISA	£295.00
Compaq Netflex3 PCI	£190.00
DEC Fast Ethernet PCI 10/100	£199.00
D-Link DFE-500TX Fast Ethernet	£175.00
Grand Junction Fastnic 100 EISA TX	£540.00
Grand Junction Fastnic 100 EISA FX	£1295.00
HP J2585A 10/100V PCI	£159.00
HP J2577A 10/100V EISA	£179.00

### 10 BaseT Ether Switches

3COM LinkSwitch 500	£2199
3COM LinkSwitch 1000	£2529
SMC TigerSwitch XE 24 Port	£4683
KAPLANA	
15 x TP ports, std SNMP & Spanning Tree	£6893
15 x TP ports, Enhanced EtherChannel Filtering Full Duplex & Virtual EtherSwitch	£6082
50 Mbps Bandwidth & 20 Mbps Throughput, Self Learning of Network Configuration	
5 x TP ports with SNMP	£1680
5 x TP ports with Duplex	£1750
5 x TP ports with SNMP & full Duplex	£2300
NBase SWITCH	
4 port Ethernet Switch, TP/AUI ports, 250,000pps zero delay Filter/Forward/Learn Rate Full Duplex & Configurable Packet Latency SNMP, Spanning Tree Custom Filtering	£2599
8 port Ethernet Switch, 1 AUI, 8 TP (STP/UTP), Full Wire Speed on Each Port, Under Full Load, Configurable Multiple Bridge Entities, SNMP & Spanning Tree Protocol.	£1795

### Hubs & Repeaters

**Netland**

10 Base T 5 Port Hub	£59.95
10 Base T 8 Port Hub + 1 X BNC	£89.00
10 Base T 8 Port Hub	£109.00
10 Base T 16 Port Hub + 1 X BNC	£195.00
10 Base T 16 Port Hub + 1XBNC+1AUI	£249.00
10 Base T 12 Port SNMP Hub + 1XBNC	£499.00
10 Base T 24 Port Hub + 1 X BNC	£399.00
10 Base T 32 Port Hub + 1 X BNC	£479.00
2 port Repeater 2 X BNC	£139.00
4 port Repeater 4 X BNC 4 X AUI	£279.00
4 port Repeater Rack Mount 4BNC 4AUI	£299.00
7 port Repeater 4 X BNC 4 X AUI 1 X TP	£239.00
6 port Repeater 6 X BNC 1 X AUI	£349.00
6 port Repeater fiber Optic Repeater	£ LOW PRICE

**Bay Networks**

16 port Manageable Hub + AUI port	£469.00
16 port Manageable Hub + Fibre port	£649.00
16 port Managed Hub + AUI port & Adv SNMP Management	£1239.00
16 port Managed Hub + AUI port & Std SNMP Management	£769.00
16 port Managed Hub + Fibre port & Adv SNMP Management	£1439.00
16 port Managed Hub + Fibre port & Std SNMP Management	£939.00

### NETLAND BEST BUYS

**New WEB NE2000 Plug & Play BNC & TP**



**£32.95**

**Lan Professional Pocket Adapter BNC & TP**



**£55**

### Novell Peer to Peer Personal Netware Kits



**With Network Card**

**£39.95**

**5 pack inc 5 Cards £190 !!**

Personal Netware 2 User Kit £79.95  
Personal Netware 1 User Add-on Kit £49.00

### Unix Connectivity

LAN WorkGroup v4.2 5 user	£728.00
LAN WorkGroup v4.2 10 user	£1211.00
LAN WorkPlace for DOS 1 user	£189.00
LAN WorkPlace for DOS 10 user	£975.00
NetWare NFS Gateway v1.2 5 user	£1040.00
NetWare NFS Gateway v1.2 10 user	£1730.00
NetWare NFS Starter Kit	£728.00
NetWare /IP v1.1 5 user	£45.00
NetWare /IP v1.2 10 user	£441.00
NetWare /IP v1.2 25 user	£679.00
UnixWare Personal Edition CD	£ring
UnixWare Personal Edition Tape	£ring

**ENTERPRISE CONNECTIVITY**

NetWare for SAA 16 session	£973.00
NetWare for SAA 64 session	£2919.00
NetWare HosPrint 16 session	£581.00
NetWare HosPrint 128 session	£1456.00
NetWare Connect 2 Port	£287.00
NetWare Connect 8 Port	£1071.00
NetWare Connect 32 Port	£2919.00
NetWare Multi Protocol Router	£728.00
NetWare Multi Protocol Plus	£504.00
NetWare for Macintosh v3.12 200 user	£483.00
NetWare for Macintosh v4 Unlimited	£581.00

### Departmental Routers

**3Com/Sonix Arpeggio Plus** £2995.00

**Bay Networks Advanced Stack** £9800.00

**Jaguar Digital** £1895.00

**OST Magellys** £2495.00

**Jaguar Integrator Mezza** £3790.00

**Symplex DR-1** £2699.00

**Xylogics Marlin NX1** £2295.00

### 100 Base-TX Fast Ethernet Hubs

100 BASE-TX ETHERNET HUBS	
Networth 100Base-TX 8 port Hub	£1250.00
NBase Switch 100Base-TX 8 port Hub	£1195.00
SMC 5116TX Tiger Hub 100 16 Port	£2997.00
Asante 100Base-TX 12 Port Stackable	£1675.00
3COM 100Base-TX 12 Port Stackable	£1559.00
100 VG-ANYLAN HUBS	
Thomas Conrad 24 Pt 100VG-AnyLAN HP J2410A Adv Stack 100VG 15 port	£2625.00
10/100 SWITCHES	
NBase MegaSwitch 7 100Mbps Ports UTP & Fibre Capabilities	£6500.00
NBase MegaSwitch 6 AUI/TP Ports + 2 slots for NH200MP & SNMP	£3499.00
NBase MegaSwitch 6 AUI/TP Ports + 7 TP Ports, + 2 slots for NH200MP & SNMP	£6999.00
NBase 100Base-TX Megaport Module for NH208/215	£1129.00
Bay Network Lattis Switch System 10/100 Mbps UTP Switch, 16 TP supports 10/100 Mbps Ethernet	£13200.00

### NETLAND BEST BUYS

**Lan Professional Express PCI Combo**



**£79.95**

**WEB Print Servers 2 Parallel, 1 Serial Novell/TCP**



**£279**

**2 Parallel, 1 Serial Novell**

**£269**

### SUN PC NFS Operating Software



**Includes TCP/IP**

**Special Promotion Price £299**

**NEW PC-NFS PRO**

**Special Promotion Price £299**

### TCP/IP Operating Software

**FTP 3.1** £284.00

**FTP ONNET 1.2** £389.00

FTP PC/TCP/IP Network Software for DOS/Windows  
FTP PC/TCP/IP Network Software for DS/2  
FTP PC/TCP/IP Site License 5/10/20 users & above  
FTP PC/TCP/IP KERNEL for DOS/Windows  
FTP PC/TCP/IP Development Kit for DOS/Windows  
FTP PC/TCP/IP Development Kit for OS/2  
Application Development Package for DOS/Windows, LANWatch Network Analyzer for DOS, PC/SNMP TOOL, NFS Client, PC/BIND, TCP/IP Boot Prims for SMC, 3COM, NE2000 Etc.

SPRY AIR NFS 3.0	£595.00
WALKER RICHER & QUINN TCP FRONTIER TECH CORP	£399.00
SUPER TCP PRO FOR WINDOWS	£595.00

### Internet Kits Modem and Comms Software

**EVERYTHING YOU NEED TO CONNECT TO THE INTERNET IN ONE BOX**

**New Low Price**



**3400 ONLINE** £167.95  
**3400 PRO MAC** £174.95  
**3400 PRO PC** £166.95

### 100 VG AnyLAN Adapter

Thomas Conrad 100VG-AnyLAN ISA Adapter	£195.00
TCVG045-UTP	£195.00
100VG-AnyLAN EISA Adapter	
TCVG047-UTP	
Netland 100VG ISA Adapter	£149.00
Netland 100VG EISA	£192.00
Hewlett Packard 100VG 16bit ISA J2573A	£192.00
100VG 32bit EISA J2577A	£235.00
100VG 32bit PCI J2585A	£209.00

### NETLAND BEST BUYS

**Genius GE2000 NE2000 Combo BNC & TP**



**£26**

**Genius E3000 II Pocket Adapter BNC & TP**



**£63**

### FDDI Adapters

Cogent PCI-SC Connector	£499.00
PCI ST Connector	£499.00
Network Peripheral BSA (SAS) FDDI	£1510.00
Efficient Networks PCI ATM Adapter	£1200.00
NBase ATM Converter	£3995.00

### Microsoft Networking Operating Systems

WINDOWS WORKSTATION	£249.00
WINDOWS 3.5 SERVER	£599.00
WINDOWS NT Client Pack Single user	£339.99
WINDOWS NT Client Pack 20 user	£469.00

### Internal & External MODEMS

Internal 14.4K V.32 Bis Modem Fax	£93.00
Internal 14.4K V.32 Bis Modem Fax	£103.00
External 28.8K V.34 Bis Modem Fax	£170.00
External 28.8K V.34 Bis Modem Fax	£184.00
PCMCIA 14.4K V.32 Bis Modem Fax	£140.00

**THE LIGHTNING MODEM**

FREE SOFTWARE: COMIL, Winfax & DosFax software for DOS and Windows, lite versions

External Modem Uses Serial Port, 28.800 baud full duplex modem, V.34 Modem MNP 5/V.42bis data compression, Auto answer and auto dial, 14.400 baud fax send and receive, Hayes compatible, Class 2 compatible fax

**£199**

### Gandalf/Cray/Retix/Sonix

**RETIX BRIDGE BUILDERS**

2265M Local Ethernet Bridge  
4660 High Speed Local Bridge

**THE BEST PRICE REMOTE ACCESS THE CRAY MATCHBOX REMOTE ROUTER ONLY £1249.00...!!... THATS LOW..!!**

**SONIX LAN & WAN**  
Sonix Communications  
Arpeggio Remote Ethernet Bridge  
Arpeggio Remote Ethernet ISDN Bridge  
ISDN Interface Card Remote Ethernet ISDN Bridge

**GANDALF**  
LANLine5210; LANLine5220; LANLine 5221 (PC Card); LANLine 52201 Optimiser Option; LANLine 52211 (PC Card); LANLine522L; Simply The Best Prices!

### NETLAND BEST BUYS

**WEB 5 Port Hub**



**£59.95**

**WEB 9 Port Hub**



**£89**

EITHER POST OR FAX YOUR ORDERS TO:  
Netland (UK) Ltd.  
5F Lynx Business Pk.  
Newmarket, Cambs.  
CB8 7NY

**TEL: 01638 720999**  
**FAX: 01638 721424**



### US Robotics Modems

Sportster 14.4 + Fax Ext	£149.00
Sportster 14.4 + Fax Int	£152.00
Courier V34 + Fax External	£274.00
Courier V34 + Fax Internal	£289.00
Worldport HST dual sid PCMCIA	£192.00
Worldport PCMCIA 2496 + Fax	£155.00

### Instant Internet up to 50 Sessions

**LOW COST !!**

**One Price provides up to 50 concurrent sessions supporting LANs with over 200 PCs.**

**No extra hardware is required and high maintenance and installation fees are avoided**

**INSTANT INTERNET FOR £2950**



### Microsoft Networking Peer to Peer Kits

WFWG Starter Kit 2 user with cards	£269.00
WFWG Starter Kit 1 user with card	£137.50
WFWG Add-on Kit 2 user with cards	£180.00
WFWG Add-on Kit 1 user with card	£95.00

### NETLAND BEST BUYS

**WEB 7 Port Repeater 4 BNC, 2 TP, 1 AUI ports**



**£239**

**Lan Professional NE2000 Software Set BNC & TP**



**£23.50**

All prices exclude V.A.T. & carriage. All services offered by Netland are chargeable. All trademarks Acknowledged. Product specification and prices subject to change dependant on availability. Subject to availability goods will be dispatched immediately on receipt of cleared payment. E&OE. Systems received may differ from the illustrations. All Netland products are sold on a product only basis.

**Tel: 01638 720999 Fax: 01638 721424**

**Fill in The Blanks N\_T\_A\_D The Leading Network Specialist Over £10,000,000 of Products just waiting for a FAST, FAST Delivery !!**

# NETWORKING 3Com 100 Mbps 3C595TX 10/100 Only £139.95

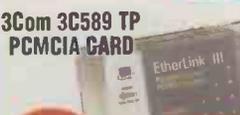
## NETLAND BEST BUYS

**3Com 3C509B Combo BNC & TP**



**£59**

**3Com 3C589 TP PCMCIA CARD**



**£118**

**3Com 3C589 Combo PCMCIA CARD**



**£137**

## Dlink Ethernet Cards

DE-220 ISA Combo	£47
DE-530CT PCI Combo	£99
DE-816TP+ 16 Port Hub	£299
DFE-500TX 10/100 PCI	£175
DE220CAT BNC/AUI/TP ISA	£49.50
DE220 BNC/AUI ISA	£47.00
DE220C BNC ISA	£44.50
DE220T TP ISA	£44.50
DE220TP TP/AUI ISA	£49.00
DE220CT BNC/TP ISA	£52.00
DE220CT COMBO MCA	£135.00
DE400 COMBO EISA	£245.00
Novell Boot Rom For 3.12	£19.00
POCKET ADAPTERS	
DE600E BNC	£98.00
DE600TP E	£98.00
DE600AUI TP	£139.00
DE600AUIE BNC/TP	£98.00
DE600CTE BNC/TP	£169.00
DE620 BNC	£159.00
DE620 TP	£159.00
DE620AUI AUI	£159.00

## WEB Ethernet Cards 3 Year Warranty

NE2000 Turbo Combo	£24.95
NE2000 Plug & Play	£32.95
Web PCI Combo	£69.95
Web 16 Port UTP Hub	£195.00
10 Base T 5 Port Hub	£59.95
10 Base T 8 Port Hub + 1 X BNC	£89.00
10 Base T 8 Port Hub	£89.00
10 Base T 8 Port Hub Internal Card	£229.00
10 Base T 12 Port Hub + 1 X BNC	£179.00
10 Base T 16 Port Hub + 1 X BNC	£195.00
10 Base T 16 Port Hub + 1XBNC+1AUI	£199.00
10 Base T 12 Port SNMP Hub + 1XBNC	£499.00
10 Base T 16 Port Hub Internal Card	£499.00
10 Base T 24 Port Hub + 1 X BNC	£399.00
10 Base T 24 Port SNMP Hub + 1XBNC	£699.00
10 Base T 24 Port SNMP Hub Int. Card	£899.00
10 Base T 32 Port Hub + 1 X BNC	£479.00
2 port Repeater 2 X BNC	£139.00
2 port Repeater 2 X BNC 1 X AUI	£149.00
2 port Repeater 2 X BNC 2 X AUI	£159.00
2 port Repeater 2 X BNC 1 X AUI 1 X TP	£179.00
2 port Repeater which can be up-graded to 4 port (2 X BNC 2 X AUI)	£239.00
2 PORT INTERNAL CARD	£149.00
4 port Repeater 4 X BNC	£199.00
4 port Repeater 4 X BNC 4 X AUI	£279.00
4 port Repeater Rack Mount 4BNC 4AUI	£299.00
7 port Repeater 4 X BNC 2 X AUI 1 X TP	£269.00
6 port Repeater 6 X BNC 1 X AUI	£349.00
6 port Repeater fiber Optic Repeater	£ LOW PRICE

## 3Com Ethernet Networking Cards

3C509B ISA Combo	£59
3C590B PCI Combo	£98
3C589B PCMCIA Combo	£137
3C595TX 10/100 PCI Model B= PLUG & PLAY	£139
3C509B ISA Combo	£59.00
3C509B ISA BNC	£29.95
3C509B ISA TP	£23.50
3C579B EISA BNC	£24.95
3C579B EISA TP	£34.00
3C590B PCI TPO	£29.95
3C590B PCI Combo	£27.50
3C529B MCA BNC	£32.95
3C529B MCA TP	£99.00
3C589B PCMCIA Combo	£99.00
3C589B PCMCIA TP	
3C595TX 10/100 PCI	
3C595TX 10/100 EISA	
3C619B TokenLink III 16/4 ISA	
3C629B TokenLink III 16/4 MCA	
3C679 TokenLink III 16/4 EISA	
3C689 TokenLink III 16/4 PCMCIA	
3C5-TRIOM TriProtocol Boot Rom	£35.00

## SMC Ethernet Networking Cards

EtherEZ PnP ISA Combo	£59
Ultra ISA Combo	£59
EtherPower PCI Combo	£93
EtherPower 10/100 PCI	£157
EtherEZ PnP ISA Combo	Single £59.00
EtherEZ PnP ISA BNC	Single £53.00
EtherEZ PnP ISA TP	Single £53.00
EtherEZ PnP ISA Combo	5 Pack £58.00
EtherEZ PnP ISA BNC	5 Pack £52.00
EtherEZ PnP ISA TP	5 Pack £46.00
Ultra ISA Combo	Single £59.00
Ultra ISA BNC	Single £45.00
Ultra ISA TP	Single £45.00

## NETLAND BEST BUYS

**WEB Turbo NE2000 BNC & TP Jumper & Software Set**



**£24.95**

**WEB Combo BNC & TP Pocket Adapter with Throughput**



**£59.95**

## D-Link System Products

DE650 PCMCIA COMBO	£159.00
DE650C PCMCIA BNC	£149.00
DE650T PCMCIA TP	£149.00
UNMANAGED HUBS	
DE809TC 9 PORT	£159.00
DE809TP 9 PORT	£159.00
DE812TP+ 12 PORT	£199.00
DE816TP 16 PORT	£299.00
DE950 Print Server 2 Par, 1 Serial	£375.00
REPEATERS	
DE802 2 PORT	£285.00
DE804 4 PORT	£369.00
DE808C 8 PORT	£444.00

## WEB Budget Ethernet Hubs & Repeaters

10 Base T 5 Port Hub	£59.95
10 Base T 8 Port Hub + 1 X BNC	£89.00
10 Base T 8 Port Hub	£89.00
10 Base T 8 Port Hub Internal Card	£229.00
10 Base T 12 Port Hub + 1 X BNC	£179.00
10 Base T 16 Port Hub + 1 X BNC	£195.00
10 Base T 16 Port Hub + 1XBNC+1AUI	£199.00
10 Base T 12 Port SNMP Hub + 1XBNC	£499.00
10 Base T 16 Port Hub Internal Card	£499.00
10 Base T 24 Port Hub + 1 X BNC	£399.00
10 Base T 24 Port SNMP Hub + 1XBNC	£699.00
10 Base T 24 Port SNMP Hub Int. Card	£899.00
10 Base T 32 Port Hub + 1 X BNC	£479.00
2 port Repeater 2 X BNC	£139.00
2 port Repeater 2 X BNC 1 X AUI	£149.00
2 port Repeater 2 X BNC 2 X AUI	£159.00
2 port Repeater 2 X BNC 1 X AUI 1 X TP	£179.00
2 port Repeater which can be up-graded to 4 port (2 X BNC 2 X AUI)	£239.00
2 PORT INTERNAL CARD	£149.00
4 port Repeater 4 X BNC	£199.00
4 port Repeater 4 X BNC 4 X AUI	£279.00
4 port Repeater Rack Mount 4BNC 4AUI	£299.00
7 port Repeater 4 X BNC 2 X AUI 1 X TP	£269.00
6 port Repeater 6 X BNC 1 X AUI	£349.00
6 port Repeater fiber Optic Repeater	£ LOW PRICE

## 3Com Networking System Products

LinkSwitch 500	£2199.00
LinkSwitch 1000	£2529.00
LinkSwitch 1200	£179.00
LinkSwitch 2200	£179.00
LinkSwitch 2700	£199.00
Linkbuilder FMS II 12 Port TP Hub	£369.00
Linkbuilder FMS II 24 Port TP Hub	£669.00
Linkbuilder TP/12 Hub	£295.00
Linkbuilder FMS II 48 Port Hub Kit	£2670.00
Linkbuilder FMS II 24 Port Hub Kit	£1265.00
Linkbuilder FMSII 24TP Hub rack mount	£915.00
Intelligent MAU 8 Lobe 4/16 STP	£965.00
Intelligent MAU 8 Lobe 4/16 UTP	£965.00
FMS II 12 Port TP Hub	£655.00
FMS II 24 Port TP Hub	£1150.00
Management Module for FMS II	£520.00

## SMC Ethernet System Products

EtherPower PCI Combo	Single £93.00
EtherPower PCI Combo	5 Pk £88.00
EtherPower 10/100 PCI Combo	Single £157.00
EtherPower 10/100 PCI Combo	5 Pk £144.00
EtherPower 10/100 EISA Combo	Single £169.00
EtherPower 10/100 EISA Combo	5 Pk £155.00
Ultra 32c EISA Combo	£125.00
ElitePORT Pocket Adapter Combo	£129.00
Universal Boot Roms for Ultra Range	£39.00
SMC-ECC PCMCIA Adapter Combo	£129.00
Tiger Hub TP12, 12TP, 1BNC, 1AUI	£238.00
Tiger Hub TP6, 6TP, 1AUI	£119.00
Tiger Hub TP6B, 6TP, 1BNC	£119.00
Tiger CX3, 3BNC, 1AUI	£217.00
TIGERSWITCH ETHERNET SWITCHES	
XLE 224-2TX w/dual 100BaseTx ports	£5927.00
XLE 224-2TX w/dual 100BaseTx ports	£6342.00
XLE 224-2TX w/dual 100BaseTx ports	£4118.00
XLE 124-2FX w/dual 100BaseTx ports	£4531.00
XLE 224 with unconfigured slot	£4863.00
XLE 124 with unconfigured slot	£3081.00
TigerSwitch XE 24 port	£4863.00
Dual 100BaseFX slide in daughter card	£1036.00
Dual 100BaseTX slide in daughter card	£1036.00

## NETLAND BEST BUYS

**Intel Netport II Print Server**



**£299**

**SMC EtherEZ PnP Combo**



**£59**

## Hewlett-Packard Networking Products

Ethertwist Adaptor Card BNC	£119.00
Ethertwist Adaptor Card TP	£59.00
Ethertwist Adaptor Card 32	£139.00
HP Jetstore 2000	£1449.00
HP Jetstore 5000	£2399.00
JetDirect Ethernet Thin Laserjet II, III, IIIi, IIIiD	
JetDirect Ethernet 10BT Card Laserjet II, III, IIIi, IIIiD	
JetDirect Token Ring Laserjet II, III, IIIi, IIIiD	
JetDirect Ethernet for Unix 10BT Laserjet	
JetDirect HP-IR 1 serial 4 list P.L.I 300 DJ600	

## Web Ethernet Products

MCA PS/2 Ethernet Card	£99.00
PCI 32 Bit Ethernet Card	£79.00
Pocket Adapter works off Parallel Port	£69.95
PCMCIA Ethernet Card	£89.95
Fiber Optic Ethernet Cards	£RING
16 Bit BUS ARCNET	£99.00
16 Bit Star ARCNET	£99.00
16 Bit 16/4 Mbps TOKEN RING	£199.00
16 Bit 16/4 Mbps MCA TOKEN RING	£RING
8 Port Token Ring STP MAU (Type 1)	£RING
8 Port Token Ring UTP MAU (Type 3)	£RING
Print Server 2 Par, 1 Serial Po	£279.00
Print Server 1 Par, 1 Serial Ports	£179.00

## Intel Networking Products

Etherexpress 16 BNC or TP	£69.95
Etherexpress PRO 10/100 Mbps	£199.00
Etherexpress PRO BNC/TP	£79.95
Etherexpress PRO BNC/TP w/FLASH	£79.95
Etherexpress PRO TP	£69.95
Etherexpress 32 EISA	£295.95
Etherexpress FLASH 32	£199.95
Etherexpress MCA BNC or TP	£179.95
Etherexpress EISA HUB	£RING
Etherexpress EISA HUB	£RING
Etherexpress Expansion HUB	£RING
Etherexpress RJ45 Harmonica	£ 309.00
Intel Netport II TP/UTP	£ 309.00
Intel Netport II BNC	£ 429.00
Intel Netport II Token Ring	£ 329.00
Intel Express XL Ethernet	

## Eagle Ethernet Networking Cards

NE5000 32 bit Plug-N-Play BNC/TP	£RING
NE2500 16 bit ISA BNC/TP Plug-N-Play	£RING
NE2500T 16 bit ISA BNC/TP Plug-N-Play	£RING
NE3300 32 bit EISA BNC/AUI/TP	£RING
NE3200 32 bit EISA Bus Master BNC/AUI	£RING
NE3200T 32 bit EISA Bus Master TP/AUI	£RING
NE4200 16 bit PCMCIA BNC/TP	£119.95
NE2000+ 16 bit ISA BNC	£59.95
NE2000+ 16 bit ISA TP	£59.95
NE2000+ BNC/AUI/TP with anti-virus	£79.95

## NETLAND BEST BUYS

**WEB 16 Port Hub**



**£195**

**WEB Turbo Bus Master PCI Combo**



**£69.95**

## DAT Backup Systems

HP Jetstore 5000	£915.00
C1521E 4GB Ext DDS-1 Drive	£799.00
C1526A 4GB Int DDS-1 Drive	
HP Jetstore 6000	
C1528A 8GB Int DDS-2 Drive	£928.00
C1529A 8GB Ext DDS-2 Drive	£1044.00
HP Jetstore 2000	
C1520E 2GB Ext DDS-1 Drive	£825.00
C1525A 2GB Int DDS-1 Drive	£739.00
SONY DAT DRIVES	
8 - 16 GB Internal	£799.00
8 - 16 GB External	£899.00
Int KIT inc. Software and Card	£899.00
Ext KIT inc. Software and Card	£999.00

## American Power Conversion UPS

APC 400VA SMART	£213.00
APC 600VA SMART	£224.00
APC 700VA SMART	£282.00
APC 900VA SMART	£389.00
APC 1250VA SMART	£539.00
APC 1400VA SMART	£634.00
APC 2000VA SMART	£915.00
APC 600VA BACK UP	£161.00
APC 900VA BACK UP	£313.00
APC 1250VA BACK UP	£380.00
APC MATRIX 3000	£232.00
APC MATRIX 5000	£364.00
POWERCHUTE	£42.00

## Allied Telesyn Networking Products

AT1500T 16 BIT CARD TP	£59.95
AT1500AT 16 BIT CARD TP & AUI	£79.95
AT1500BT 16 BIT CARD BNC & TP	£79.95
AT1500FT 16 BIT CARD FIBRE & TP	£199.95
BNC Micro Transceiver	£25.99
BNC Slimline Micro Transceiver	£24.99
10 BaseT Micro Transceiver	£25.99
BNC Slimline Micro Transceiver	£24.99
Fibre Optic FOIRL/SMA Micro Trans	£139.00
Fibre Optic FOIRL/ST Micro Trans	£139.00
Micro Repeater AUI to UTP	£189.00
Micro Repeater BNC to UTP	£199.00
Micro Repeater UTP to FIBRE	£249.00
Micro Repeater BNC to FIBRE	£339.00
Micro Repeater AUI to FIBRE	£329.00

## Genius Networking Cards

GE2000 II Ethernet Adapter BNC/TP	£26.00
E3000 II Pocket Adapter BNC/TP	£63.00
GE2500 PCI BNC/TP	£87.00
GH4080 8 Port 1 BNC	£88.00
GE2000 PnP BNC/TP	£34.00

## NETLAND BEST BUYS

**WEB 2 Port Repeater 2 BNC, 1 AUI**



**£139**

**WEB PCMCIA Ethernet BNC & TP**



**£89.95**

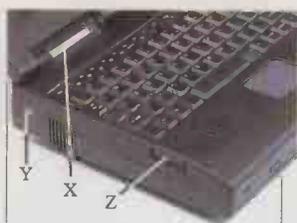
## Cheyenne Backup Software

ARCserve for NetWare NLM 5-user	£229.00
ARCserve for NetWare NLM 10-user	£379.00
ARCserve for NetWare NLM 25-user	£599.00
ARCserve for NetWare NLM 50-user	£799.00
ARCserve for NetWare NLM 100-user	£899.00
ARCserve for NetWare VAP 5-user	£199.00
ARCserve for NetWare VAP 10-user	£349.00
ARCserve for NetWare VAP 100-user	£549.00
ARCserve for NetWare Windows 5-user	£239.00
ARCserve for NetWare Windows 10-user	£425.00
ARCserve for NetWare Windows 25-user	£629.00
ARCserve for NetWare Windows 50-user	£899.00
ARCserve for NetWare Windows 100user	£1029.00
ARCserve for NetWare Windows 250user	£1495.00
ARCsoilo for DOS	£149.00

# AJP

## Full function - without sacrifice!!

Intel Pentium® processor upgradable to 133MHz • PCI bus • Built-in CD-ROM • 2 MB video RAM  
256 KB write-back L1/L2 cache memory • Optional MPEG & video module with TV tuner connector



- X) LCD display showing machine status
- Y) IrDA - Infrared file transfer (HP SIR Compliant)
- Z) Game port or MIDI port (auto detect)
- Built-in FM synthesizer, 16 bit stereo sound card, stereo speakers and hands-free microphone (Microsoft Sound System and Sound Blaster compatible)



- User upgradable RAM up to 32 MB
- User upgradable Intel Pentium® processor 75 MHz to 133MHz
- 64 bit data bus system memory
- PCI video adaptor with 2 MB video RAM
- PCI enhanced IDE controller
- 256 KB write-back cache memory

- Upgradable LCD display - 11.3" dual scan colour (800 x 600 resolution - 256 colours) or 10.4" TFT active colour (640 x 480 resolution - 256 colours)

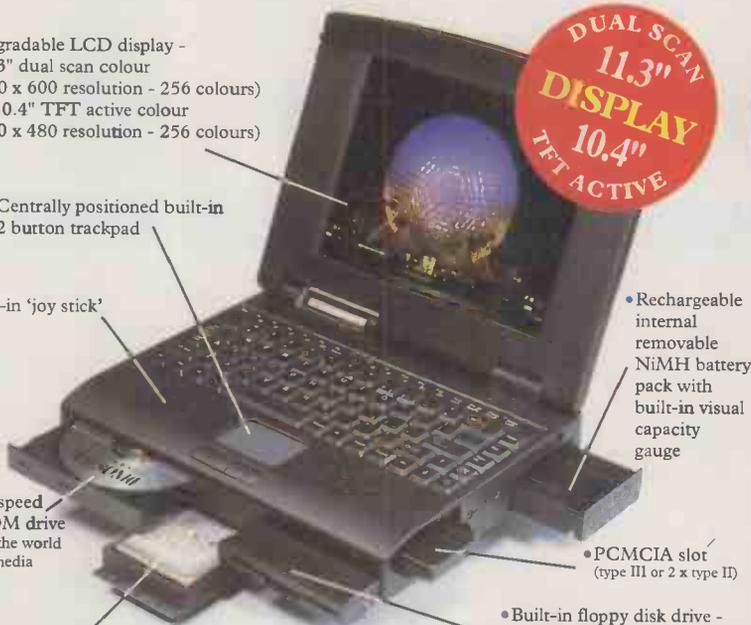
- Centrally positioned built-in 2 button trackpad

- Built-in 'joy stick'

- Built-in double speed CD-ROM drive to enjoy the world of multimedia

- User removable/interchangeable 'pocket-size' hard disk - offering up to 1.3 GB capacity

- Carrying case supplied



**DUAL SCAN  
11.3"  
DISPLAY  
10.4"  
TFT ACTIVE**

- Rechargeable internal removable NiMH battery pack with built-in visual capacity gauge

- PCMCIA slot (type III or 2 x type II)

- Built-in floppy disk drive - user removable/interchangeable for optional MPEG + video module with TV tuner connector

- Weight: 3.5 kg
- Size: 300mm (W) x 227mm (D) x 54mm (H)

### AJP 5400 8 MB RAM 510 MB HDD

	54-75 Pentium® 75 chip	54-90 Pentium® 90 chip	54-100 Pentium® 100 chip	54-120 Pentium® 120 chip	54-133 Pentium® 133 chip
D Dual Scan Colour (11.3")	£ 1995	£ 2095	£ 2195	£ 2395	£ 2595
T TFT Active Colour (10.4")	£ 2495	£ 2595	£ 2695	£ 2895	£ 3095



- Up to 5 hours continuous use with optional additional NiMH battery pack



- Optional internal full-range universal auto-switching AC adaptor available - replaces battery pack

- Supplied with external full range universal auto-switching AC adaptor



- Optional docking station offering desktop port replication with ISA slot, built-in PCMCIA type IV slot and FDD bay



**WHAT  
PC?  
AWARD  
ENTRY-LEVEL  
NOTEBOOK**

### AJP 7500

4 MB RAM 340 MB HDD

RAM upgradable to 36 MB

7575 7599

486DX4-75 486DX4-100

### AJP 7600

8 MB RAM 340 MB HDD

RAM upgradable to 40 MB

7675 7690

Pentium® 75 chip Pentium® 90 chip

	7575 486DX4-75	7599 486DX4-100	7675 Pentium® 75 chip	7690 Pentium® 90 chip
M Mono VGA (9.5")	£ 875	£ 925	-	-
D Dual Scan Colour (10.3")	£ 1175	£ 1225	£ 1495	£ 1595
T TFT Active Colour (9.5")	£ 1575	£ 1625	£ 1895	£ 1995

- Intel processor • Built-in 3.5" FDD • 1 MB 32 bit VLB video RAM • PCMCIA slot (type III or 2 x type II) • 16 bit built-in sound card/microphone/speakers
- Large 19mm trackerball
- NiMH battery pack (NiCad for mono) • AC adaptor
- HDD upgradable to 1.3 GB
- Carrying case • Weight: 3 kg
- Size: 282mm (W) x 232mm (D) x 53mm (H)

- Ram upgrade per MB .....£40.00
- MS DOS 6.2 & Windows 3.11 .....£79.00
- MS Windows 95 .....£79.00
- Upgrade HDD from 340 to 510 MB \*£125.00
- Upgrade HDD from 340 to 810 MB \*£295.00
- Upgrade HDD from 340 to 1.3 GB \*£495.00
- Upgrade HDD from 510 to 810 MB \*£195.00

- Upgrade HDD from 510 to 1.3 GB \*\*£395.00
- Additional 340 MB HDD .....£165.00
- Additional 510 MB HDD .....£275.00
- Additional 810 MB HDD .....£395.00
- Additional 1.3 GB HDD .....£595.00
- HDD housing kit (for all models) .....£39.00
- PCMCIA ethernet adaptor .....£145.00

- PCMCIA fax/modem (14,400) .....£195.00
- PCMCIA fax/modem (28,800) .....£295.00
- PCMCIA CD-ROM drive (2x speed) .....£295.00
- Parallel port CD-ROM drive (4x speed) .....£295.00
- Docking station (7500/7600 series) .....£319.00
- Docking station (5400 series) .....£195.00

- NiMH battery (for all models) .....£95.00
- NiMH heavy duty battery (5400 series only) .....£149.00
- Additional external AC adaptor (for all models) .....£55.00
- Car adaptor (7500/7600 series) .....£45.00

\*initial sale only

Government & educational orders welcome • 12 months RTB parts & labour warranty • Free lifetime technical support

**Call Us Now 0181-452 9090**



**VISIT OUR SHOWROOM**

**No Surcharge On Credit Cards**

Showroom hours: Mon-Fri 9.00-5.30, Sat 9.00-2.00

**AJP Business Computers Ltd**

Units 6 & 7, The Edge Business Centre, Humber Road, London NW2 6EW

Tel: 0181-452 9090 Fax: 0181-450 6360



**pentium**

The Intel Inside and Pentium Processor Logos are trademarks of Intel Corporation

Prices exclude VAT and delivery. Prices and specification are subject to change without notice. All trademarks acknowledged. AJP standard terms and conditions, which are available on request, apply to all sales. E. & O. E.



# THE Showman

THE ULTIMATE IN PRESENTATION & DEMONSTRATION THE POWER OF PROJECTION

The Portable MultiMedia Workstation that combines power portability and overhead projector presentation

Three easy steps to producing a perfect meeting, educational lecture or just entertaining your friends

*It's as easy as...*

- A ✓ Remove the tablet from the back of the TFT panel
- B ✓ Set the adjustable stand to the correct height, and attach the supplied fan
- C ✓ Place the TFT Screen over the Overhead Projector and switch on.

## PRESENTING THE SHOWMAN:

- ◆ In-Built Overhead Projector Tablet TFT Screen
- ◆ In-Built CD ROM 5.25" Dual Speed
- ◆ 8 Mb Ram Expandable to 64 Mb
- ◆ 3.5" (1.44Mb) Floppy Disk Drive
- ◆ 32 Bit Vesa Local Bus 1Mb Graphics
- ◆ Trackpoint for easy use, no cleaning
- ◆ Built-In 16 Bit Sound Card ◆ Built-In Speakers, Microphone
- ◆ 1 x Type III PCMCIA 2 x Type II PCMCIA
- ◆ Portable 340Mb HDD Drive ◆ 16 cell RTG NIMH Battery
- ◆ 2 x Serial Ports & Parallel Port
- ◆ External Keyboard Port & SVGA Port
- ◆ Auto-Switching Mains Battery Charger
- ◆ Midi/Joystick Port ◆ Carry/Brief Case with accessory pockets
- ◆ Full Three Year Warranty Plan ◆ Fan & Stand

Showman



PROJECTOR TABLET & PORTABLE TFT COMPUTER

## OPTIONS AVAILABLE

**TV TUNER: £149.00**  
For Video Conferencing, Television, Video Capture

**MPEG LIVE VIDEO: £299.00**

Play your video CD's on the Overhead Projector screen

Includes 340Mb Hard Disk and 8Mb Ram

486DX2-66	£2499.00
486DX4-75	£2549.00
486DX4-100	£2599.00
PENTIUM-75	£2849.00
PENTIUM-90	£2999.00

## WHY CHOOSE XITEC ...

- ✓ Guaranteed delivery dates at point of order. Same day delivery available
- ✓ Lifetime technical support and Three Year Warranty plan
- ✓ The independent British company with one of the largest installed notebook bases in the UK

- ✓ We are told that we offer the highest level of support on notebook computers in the UK.
- ✓ A notebook solution for every requirement. We fulfill contracts from £800 to £2,000,000.
- ✓ Our UFS (unique friendly service) ensures that our Sales Team recommends the best notebook for your need.

SUPPLIERS to the MoD  
AS USED BY THE MoD IN OPERATIONAL DEPARTMENT  
intel inside  
1991 COMPANY LIMITED

### SOME OF THE UPGRADE OPTIONS AVAILABLE

Upgrade per 4Mb Ram £160	Upgrade to 510Mb Hard Disk £79
MPeg Option £159	Upgrade to 810Mb Hard Disk £179
TV Tuner £149	Docking Stations £299



Lotus SmartSuite v. 3 £349  
Mini Docking Station £55  
Range of PCMCIA products £CALL



CALL OUR SALES OFFICE ON  
**TEL: 0181 287 4000**  
**FAX: 0181 287 4242**

UNIT 7, PRINCESS MEWS, HORACE ROAD,  
KINGSTON, SURREY KT1 1SZ





## BENEFITS OF THE ELITE PRO



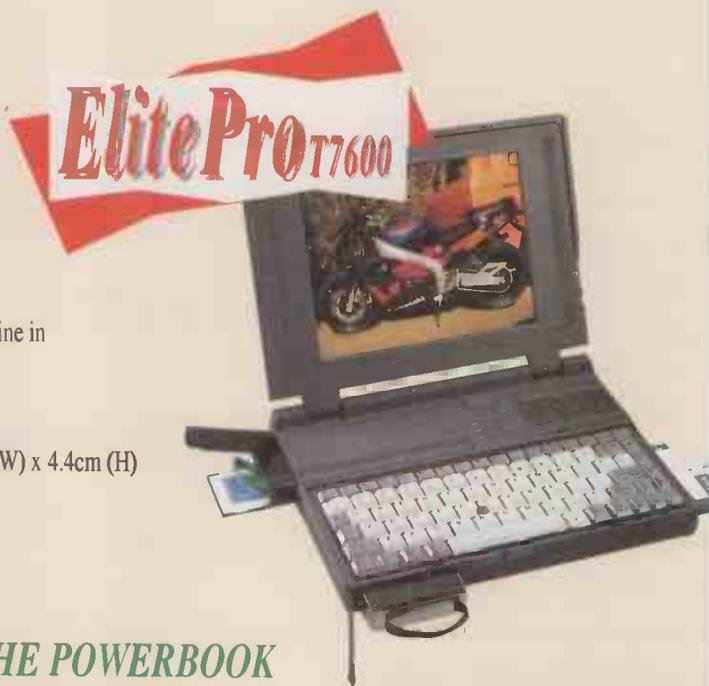
- ◆ 486 Upgradeable Processor Socket
- ◆ V.2 PCMCIA Slot
- ◆ Removeable 340Mb Hard Disk Drive
- ◆ 3.5" (1.44Mb) Internal Floppy Disk Drive
- ◆ Award Winning Toshiba Display Mono/Dual Scan/TFT
- ◆ 4Mb Expandable to 16Mb RAM
- ◆ 2 Serial/1 Parallel/1 PS2 Mouse Port
- ◆ Built-In Trackball ◆ Carry Case with accessory pockets
- ◆ Autoswitching Mains Battery Charger
- ◆ AT Expansion slot for expansion box
- ◆ External SVGA Monitor & Keyboard Port
- ◆ Slimline Design 28cm x 21cm x 4cm ◆ Weight 5.7lbs
- ◆ Simultaneous Display (not dual scan models)
- ◆ Three Year Warranty Plan

Includes 340Mb Hard Disk & 4Mb Ram

Processor	Mono	Dual Scan	TFT
486DX2-66	£699	£999	£1299
486DX4-100	£899	£1199	£1499

## BENEFITS OF THE ELITE PRO T7600

- ◆ 486 Upgradeable Processor
  - ◆ 2 x Type II PCMCIA Slots
  - ◆ Removeable 2.5" 340Mb Hard Disk Drive
  - ◆ 3.5" (1.44Mb) Floppy Disk Drive
  - ◆ Mono/Dual Scan/TFT Screen Options
  - ◆ 4Mb RAM upgradeable to 32 Mb
  - ◆ 32 Bit Vesa Local Bus
  - ◆ Removeable NIMH Battery Pack
  - ◆ Auto-Switching mains battery charger
  - ◆ Trackpoint situated between G & H Keys
  - ◆ COM 1, Parallel Port, CRT Port
- Includes 340Mb Hard Disk & 4Mb Ram
- | Processor  | Mono | Dual Scan | TFT   |
|------------|------|-----------|-------|
| 486DX2-66  | £799 | £1049     | £1399 |
| 486DX4-75  | £849 | £1099     | £1449 |
| 486DX4-100 | £899 | £1149     | £1499 |
- ◆ MIC, Midi Joystick Port, Speaker out, Line in
  - ◆ 16 Bit Audio System
  - ◆ 128Mb External Cache, Level 2
  - ◆ Physical Dimensions 29cm (L) x 22cm (W) x 4.4cm (H)
  - ◆ Weight 6.2 lbs ◆ Carry Case
  - ◆ Three Year Warranty Plan



## BENEFITS OF THE POWERBOOK

- ◆ PGA Motherboard takes 3.3V or 5V CPU's
- ◆ 128KB External Cache ◆ 32 bit Vesa Local Bus
- ◆ 4Mb Expandable to 36Mb Ram
- ◆ Removeable Upgradeable Hard Disk Drive
- ◆ 3.5" (1.44Mb) Floppy Disk Drive
- ◆ Mono, Dual Scan or TFT 10.4" Screen Options
- ◆ Microsoft Sound System
- ◆ 8 bit Sound Card, Sound blaster compatible
- ◆ Built-In speaker ◆ Built-In 25mm Trackball
- ◆ PCMCIA Type IV expansion slot
- ◆ External Microphone and Speaker Connections
- ◆ 1 Serial/1 Parallel Port
- ◆ Autoswitching Mains Battery Charger
- ◆ External SVGA Colour Monitor Port & External Keyboard Port ◆ Docking Station Port
- ◆ 28cm (W) x 22cm (D) x 5cm (H)
- ◆ 2 NiMH Batteries with hot swap facility
- ◆ Carry Case ◆ Three Year Warranty Plan

Includes 340Mb Hard Disk & 4Mb Ram

Processor	Mono	Dual Scan	TFT
486DX2-66MHz	£849	£1149	£1529
486DX4-75MHz	£869	£1169	£1549
486DX4-100MHz	£889	£1189	£1589

PENTIUM STANDARD WITH 4Mb Ram, 340 HARD DISK AND 16 BIT SOUND

PENTIUM 75	N/A	£1339	£1689
PENTIUM 90	N/A	£1399	£1749



A DIVISION OF ELITE CORPORATION  
EUROPE LIMITED

**TEL: 0181 287 4000**  
**FAX: 0181 287 4242**

All prices exclude VAT at 17.5% & delivery. E & OE  
The Intel logo is a trademark of the Intel Corporation

\*PLEASE ASK FOR DETAILS ON THE NEW MULTI-MEDIA POWERBOOK 9000\*

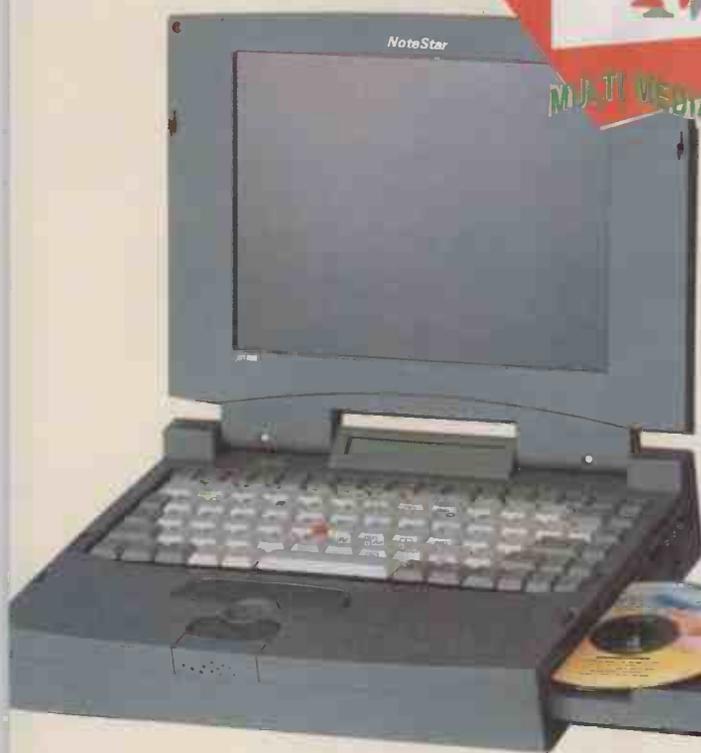


**RENTAL & HIRE PURCHASE OPTIONS NOW AVAILABLE ON ALL XITEC NOTEBOOKS**

# MULTIMEDIA

# THE MediaPro

MULTIMEDIA TECHNOLOGY - COMPUTES, EDUCATES AND ENTERTAINS



**XITEC**  
DELIVERING NEW  
DIMENSIONS IN  
MULTIMEDIA  
PORTABILITY

## Make a professional move into the world of multimedia with options that are set to *amaze!*

### BENEFITS OF THE MEDIAPRO

- ◆ Upgradeable 486 or Pentium processor socket & CPU Options
- ◆ 256K External Cache
- ◆ Upgradeable 5.25" Built-In Dual Speed CD ROM Drive
- ◆ Trackpoint (easier to use than trackball - no cleaning required)
- ◆ Two Built-In speakers, Built-In microphone
- ◆ 16 Bit Sound blaster compatible card
- ◆ VESA 32 Bit Local Bus, 1Mb graphics card
- ◆ Removeable, upgradeable and easily interchangeable Hard Disk
- ◆ 4Mb Expandable to 64Mb RAM
- ◆ 1xType III or 2xType II PCMCIA Slots

- ◆ 3.5" (1.44Mb) Floppy Disk Drive
- ◆ Upgradeable Dual Scan (10.4"), TFT (9.5"/10.4") Screen options
- ◆ External Keyboard Port and SVGA Monitor Port
- ◆ 2 Serial/1 Parallel Port/1 Midi/Joystick Port
- ◆ NiMH Battery 16 cell with special RTG feature for extra life
- ◆ Autoswitching Mains Battery Charger
- ◆ Carry Case with accessory pockets
- ◆ External microphone and speaker ports
- ◆ MPEG live video option
- ◆ Full Three Year Warranty plan

### ACCESSORIES AND UPGRADES

Upgrades per 4Mb RAM	£160
Lotus SmartSuite V.3	£349
Upgrade to 510Mb HDD	£79
Upgrade to 810Mb HDD	£179
PCMCIA 14.400	
IBM Fax Modem	£159

Includes 340Mb Hard Disk, 4Mb Ram & CD ROM

Processor	Dual Scan	TFT
486DX4-75	£1399	£1749
486DX4-100	£1449	£1799
PENTIUM 75	£1539	£1889
PENTIUM 90	£1599	£1949

### VIDEO MPEG OPTION

This option for live video film integrates the MPEG I decoder for video CD and CD-I, making it a perfect partner for education, entertainment and practical programs £299.00

**PLEASE TEST OUR PRICE PLEDGE!**



**THE FUTURE TOGETHER**  
A DIVISION OF ELITE CORPORATION  
EUROPE LIMITED



CALL OUR SALES OFFICE ON  
**TEL: 0181 287 4000**  
**FAX: 0181 287 4242**

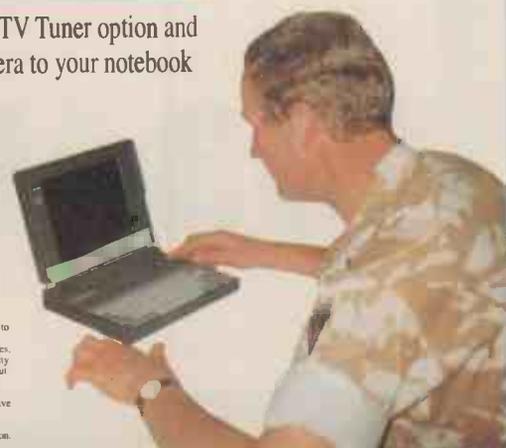
UNIT 7, PRINCESS MEWS, HORACE ROAD,  
KINGSTON, SURREY KT1 2SZ  
Please note: all prices exclude VAT at 17.5% & Delivery prices  
& specifications are subject to change without notice.

### TV TUNER OPTION

Keep up with current affairs with this TV Tuner option and capture still images from a video camera to your notebook with this module £149.00



Purchase orders are subject to approval, business leasing programs available. All prices, specifications and availability are subject to change without notice. All products and company names are trademarks of their respective holders. Intel Inside and Pentium Processor are trademarks of Intel Corporation.



# ALL YOUR PROBLEMS SOLVED.

*The kids are locked in their room playing heavy metal albums backwards.  
The Swedish au pair's eloped with the silver-tongued milkman.*

*The dog's packed his bowls and run away to Catford.  
Can we fix it all? Don't be silly.*

■ *What we can do, however, is to offer you the most comprehensive, all-encompassing computer support service ever devised.*

*The PC rescue service, from Digital.*

*The PC rescue service supports just about everything except Sheffield Wednesday. In computer terms, that means all the major applications software, PC hardware and networks from all the leading manufacturers – so no more support line 'pass the parcel'. And it covers you, not the computer. Just one phone number gets you total support wherever you are, whatever you're in, whatever you're on.*

*But the real beauty of the PC rescue service is that you only pay for it when you really need it. And when you dial in, it's comforting to know that just £20(inc.VAT) opens up access to 20,000 Digital expert support engineers around the world, all for the cost of a local call.*

*Register before December 31st 1995 for just £117.50(inc.VAT), and we'll credit your account with five calls. We'll also give you up to four extra 'registered user' cards to distribute amongst eternally grateful colleagues and friends. People who won't pester you any more because*

**digital**<sup>™</sup> *they'll be able to pester us instead, from breakfast 'til Horlicks (8am-10pm), 365 days a year.*

*To find out more, or to register on the spot, call 0345 440011 (or send off the coupon to Digital, The PC rescue service, PO Box 1101, Slough, Berkshire SL1 4AT for more details).*

*The PC rescue service from Digital. £20. No problem.*

PersCW 12/95

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Postcode \_\_\_\_\_

Telephone \_\_\_\_\_

© 1995 Digital Equipment Corporation, Inc. All trademarks and registered trademarks acknowledged.

£20.

0345  
440011

# Big Servers

Amazingly, sophisticated large servers can be found at incredibly reasonable prices! Look no further. Adams have two basic types of large server system to offer. The Accura Modular offers flexibility and expandability whilst the Accura Integrated has many performance and redundancy enhancements engineered in. Both systems are based on R.A.I.D. technology and offer very high equipment quality levels, flexible warranty and service plans with a pricing structure that is truly amazing!

**Modular** Accura Modular, features a new "building block" style external disc array, providing the ability to upgrade your server as requirements dictate, from disc mirroring to full RAID level 5, even peripherals like DAT, can be added.

**Integrated** Accura Integrated gives a traditional server layout, with up to 6 removable drives integrated into the case. Features include a redundant power supply system with "quick change" spare, a high efficiency cooling system and the ability to integrate further peripherals like DAT, CD-ROM and optical drives. The Accura Integrated is one of the most cost effective high performance server systems available.

Call technical sales on 0161 877 8822 to find out more.

## Accura Modular Server



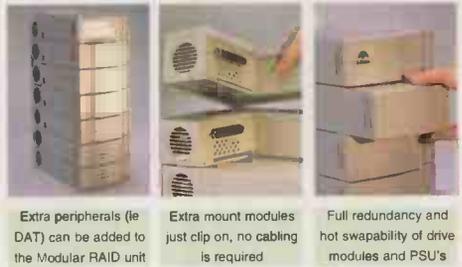
### Modular features

- Intel Pentium® 90/120mhz CPU
- Plug and play compatible with auto configuration (PCI and ISA bus)
- 512k external cache
- 32mb RAM (max 192mb)
- Modular expandable RAID enclosure with redundant PSU's
- 2.0gb addressable RAID level 5 array, with 3 x 1gb fast SCSI-II hard drives
- DPT 2124 PCI 32-bit bus mastering RAID controller with 4mb cache memory
- SCSI CD-ROM drive, 4.4 speed, multi session,
- 3.5" 1.44mb floppy drive
- Fast PCI graphics card with 1mb RAM
- 14" Accuscan energy saving, MPR-II monitor, NI, max res 1024 x 768
- 2 serial (16550), 1 parallel port (EPP/ECP)
- 32 bit 100mbps PCI bus mastering ethernet card
- Accura tower case with 250w PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Operating systems: OS/2 Lan Server, Novell, SCO Unix, Windows NT (not supplied).

## Powered by MICRONICS

Prices	Accura Modular RAID Server with Intel Pentium® 90 CPU, as specified	£4899
	Accura Modular RAID Server with Intel Pentium® 120 CPU, as specified	£5049

Modular	1gb → 2gb fast SCSI-II HDD (per drive)	£369
	1gb → 4gb fast SCSI-II HDD (per drive)	£699
	Main system memory upgrades per 1mb	£36
	RAID upgrade to 5 drives (4gb capacity)	£899
	2 extra 1gb drives and 2 mount modules	
	5 x 1gb RAID → 5 x 2gb RAID	£1799
	8gb total capacity	
	5 x 1gb RAID → 5 x 4gb RAID	£2899
	18gb total capacity	
	Motherboard and RAID controller ECC memory upgrade (per 1mb)	£CALL
Options	2-4gb DDS-1 DAT drive mounted in mount module (ready to stack)	£729
	4-16gb DDS-2 DAT drive mounted in mount module (ready to stack)	£829
	100mbps PCI bus mastering ethernet card	£199



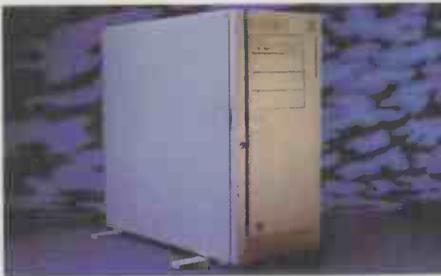
Extra peripherals (ie DAT) can be added to the Modular RAID unit. Extra mount modules just clip on, no cabling is required. Full redundancy and hot swapability of drive modules and PSU's.

# Whoppers!

## Accura Integrated Server

## Powered by MICRONICS

Integrated Prices	Accura Integrated RAID Server with single Intel Pentium® 90 CPU as specified	£7999
	Accura Integrated RAID Server with dual Intel Pentium® 90 CPU's as specified	£8249
	Accura Integrated RAID Server with single Intel Pentium® 120 CPU as specified	£8149
	Accura Integrated RAID Server with dual Intel Pentium® 120 CPU's as specified	£8549



### Integrated features

- Intel Pentium® 90/120mhz CPU
- Dual Pentium motherboard with Intel Neptune II 3.3v chipset, PCI and EISA slots.
- Plug and play compatible with auto configuration (PCI and EISA bus)
- 512k external cache
- 32mb RAM (max 512mb)
- 3 channel bus mastering, PCI RAID fast wide SCSI-II controller with 8mb cache. Max data transfer as configured 50-60mb/s
- 4.0gb addressable RAID level 5 array, with 3 x 2gb fast wide SCSI-II hard drives, mounted on alloy "hot pluggable" mounts.
- SCSI CD-ROM drive, 4.4 speed, multi session
- 3.5" 1.44mb floppy drive
- Fast PCI graphics card with 1mb RAM
- 14" Accuscan energy saving, MPR-II monitor, NI, max res 1024 x 768
- 2 serial (16550), 1 parallel port (EPP/ECP)
- 32 bit 100mbps PCI bus mastering ethernet card
- Accura Integrated Server case with 2 x 400W redundant power supplies and 1 x 400w pluggable spare.
- Power supply failure alarm
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Operating systems: OS/2 Lan Server SMP, SCO Unix with SMP extns, Windows NT 3.5 (not supplied).

Integrated Options	2gb → 4gb fast SCSI-II HDD (per drive)	£299
	Main system memory upgrades per 1mb	£36
	RAID cache upgrades per 1mb	£36
	3 x 2gb RAID → 5 x 2gb RAID	£1699
	8gb total capacity (includes extra 2 alloy mounts)	
	5 x 2gb RAID → 5 x 4gb RAID	£1499
	16gb total capacity	
Motherboard and RAID controller ECC memory upgrade (per 1mb)	£CALL	
Secondary external RAID unit	£CALL	



Case accommodates 6 removable RAID drives and 5 secondary units. HDD's mounted in alloy glitch free carriers, hot swapped, spare unit fitted in lower case. 400w PSU's can be hot swapped, spare unit fitted in lower case.

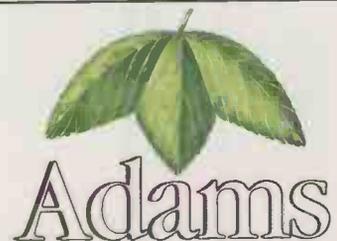
## Adams service

**Warranty:** For your peace of mind Adams offer a 3 year parts and labour warranty on your Accura Server. The first year of this warranty is on-site with BS5750 standard eight hour response provided by our partner ICL. All main system components are covered except monitors which are warranted by their own manufacturers. The on site service can be extended up to 3 years, and in certain areas, a four hour response time can be provided. Please call for specific quotations.

**Ordering:** We are pleased to accept enquiries between 9am and 6pm Monday to Friday. All Accura Servers are normally shipped within 2 weeks of order. We accept cheque with order, Visa, Mastercard or American Express. PO's are welcome from FTSE100 listed companies and government departments. Carriage charges at cost, normally around £25 per system. All prices quoted are subject to VAT.



0161 877 8822



Advanced Computer Technology  
ADAMS TECHNOLOGY LTD, CITY POINT, CHESTER RD, OLD TRAFFORD, MANCHESTER M32 0RW UK. FAX: 0161 877 8884

# Nearly!

The perfect computer, now there's something. Imagine, just what you wanted, everything exactly right, perfectly trouble free with no hardware wobbles and software crashes. Sounds to good to be true? Well unfortunately computers tend to have a mind of their own and do the most unwanted things at the wrong time.

So, Mr. Adams are you going to tell me then that yours are perfect? No. Nearly perfect though, as close as we can possibly get them. We're constantly fine tuning and improving both our products and our company's service with the aim of making our whole customer relationship...perfect!

Adams have many, many corporate clients who value the effort and hard work we put in for them. We'll do the same for you when you become an Adams customer.

Talking about things perfect, here's a little barage of software:



Like it? We did so we thought that we would

## Accura Premium

P  
r  
e  
m  
i  
u  
m  
  
4  
8  
6



**DX2-66 £899**

**DX4-100 £979**

- 486DX2-66 or DX4-75/100 CPU
- 256k external cache
- 8mb RAM (max 128mb)
- 540mb sub 12ms IDE hard drive with built in IDE controller
- 3.5" 1.44mb floppy drive
- Accelerated local bus graphics engine with 1mb RAM (max 2mb)
- 14" Accuscan energy saving, MPR-II monitor, NI, max res 1024 x 768
- 2 serial, 1 parallel port
- Slim desktop case
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Win OS/2 V3.0 or Windows 95 preloaded

P  
r  
e  
m  
i  
u  
m  
  
5  
8  
6



**P75 £1149**

**P90 £1249**

**P100 £1349**

- Intel® Pentium® 75/90/100mhz CPU
- PCI local bus
- 256k external cache
- 8mb RAM (max 128mb)
- 850mb 11ms IDE hard drive with PCI 32-bit EIDE controller
- 3.5" 1.44mb floppy drive
- Ultra fast PCI graphics engine with 1mb RAM
- 15" Accuscan energy saving, MPR-II monitor, NI, max res 1280 x 1024
- 2 serial, 1 parallel port
- Desktop case with 200w PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Win OS/2 Warp v3 with Lotus SmartSuite for OS/2 or Windows 95 with Novell PerfectOffice Standard

# Perfect C

include Novell PerfectOffice with some of our PC's. If you choose an Adams PC, loaded with Microsoft Windows 95, we will offer either PerfectOffice standard with our Accura Premium range, or PerfectOffice Professional with the Accura Professional machines. Win OS/2 Warp V3 is available as an alternative to Windows 95, this time we load Lotus SmartSuite for OS/2. Decisions, decisions!

All this talking about software, we haven't mentioned the PC's themselves. Our Premium range is designed for the home user who would like a quality PC. The Professionals are of the highest quality and are the fastest that we can possibly make them; for the serious user. Our Professional 586 Workstation was Personal Computer World's Editors choice, by the way.

Our 3 year warranty remains unchanged, with on site support from our partner ICL. For those wishing to spread the financial burden, we can now offer you a "Buy now pay in Spring 1996" credit option. Of course at 0% APR\*

Help us to make the perfect PC. Call Adams sales on 0161 877 8822 and say "Perfect PC!"

**PS:** Please write and tell what makes your perfect PC. We will arrange a trip with Williams to a touring car race for the most original letter.

## Accura Professional Powered by MICRONICS

P  
r  
o  
f  
e  
s  
s  
i  
o  
n  
a  
l  
  
5  
8  
6  
W  
S



**P90 £2049**

**P100 £2149**

**P120 £2249**

**P133 £2399**

- Intel Pentium® 90/100/120/133 mhz CPU
- Intel Triton® chipset
- Plug and play compatible with auto configuration
- 256k synchronous SRAM
- 16mb EDO RAM (max 128mb)
- 1.2gb sub 10ms IDE hard drive with PCI 32 bit mode 4 enhanced IDE controller
- Six speed multi session ATAPI CD-ROM drive
- 3.5" 1.44mb floppy drive
- Soundblaster Pro 16 with speakers
- Matrox Millennium graphics card with 2mb WRAM (u/g to 8mb)
- 15" Accuscan energy saving, MPR-II monitor, NI, max res 1280 x 1024, 75hz refresh
- 2 serial (16550), 1 parallel port (EPP/ECP)
- Desktop Case with 200w PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Win OS/2 Warp v3 with Lotus SmartSuite for OS/2 or Windows 95 with Novell PerfectOffice Professional

P  
r  
o  
f  
e  
s  
s  
i  
o  
n  
a  
l  
  
5  
8  
6  
M  
M



**P90 £2549**

**P100 £2649**

**P120 £2749**

**P133 £2899**

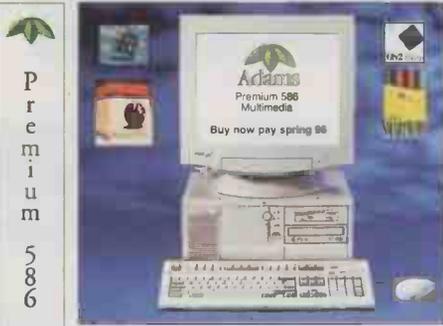
- Intel Pentium® 90/100/120/133 mhz CPU
- Intel Triton® chipset with 256k synchronous SRAM
- Plug and play compatible with auto configuration
- 16mb EDO RAM (max 128mb)
- 1.2gb sub 10ms IDE hard drive with PCI 32 bit mode 4 enhanced IDE controller
- Six speed multi session ATAPI CD-ROM drive
- Soundblaster® AWE32 sound card and Yamaha M10 speakers
- 3.5" 1.44mb floppy drive
- Matrox Millennium 2mb WRAM graphics card (u/g to 8mb)
- 17" Idtek MF8617 energy saving, MPR-II monitor, NI, max res 1600 x 1200, max refresh 100hz
- 2 serial (16550), 1 parallel port (EPP/ECP)
- Desktop Case with 200w PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Win OS/2 Warp v3 with Lotus SmartSuite for OS/2 or Windows 95 with Novell PerfectOffice Professional

superb quality and value for money



<b>P90 £1499</b>	<b>P100 £1599</b>
<b>P120 £1699</b>	<b>P133 £1849</b>

- Intel® Pentium® 90/100/120/133mhz CPU
- PCI local bus with 256k external cache
- 8mb EDO RAM (max 128mb)
- 1gb sub 10ms IDE hard drive with PCI 32-bit mode 4 enhanced EIDE controller
- Quad speed, multi session ATAPI CD-ROM drive
- 3.5" 1.44mb floppy drive
- #9 Fx Vision 330 64 bit PCI graphics card with 2mb DRAM
- 15" Accuscan energy saving, MPR-II monitor, NI, max res 1280 x 1024
- 2 serial, 1 parallel port
- Desktop case with 200w PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Win OS/2 Warp v3 with Lotus Smartsuite for OS/2 or Windows 95 with Novell Perfect Office Standard



<b>P90 £1999</b>	<b>P100 £2099</b>
<b>P120 £2199</b>	<b>P133 £2349</b>

- Intel® Pentium® 90/100/120/133mhz CPU
- PCI local bus with 256k external cache
- 16mb EDO RAM (max 128mb)
- 1.2gb sub 10ms IDE hard drive with PCI 32-bit IDE mode 4 controller
- Quad speed, multi session ATAPI CD-ROM drive
- Soundblaster® Pro 16 and speakers
- 3.5" 1.44mb floppy drive
- #9 FX Motion 771 64 bit PCI graphics card with 2mb VRAM (u/g to 4mb)
- 17" Accuscan MPR-II monitor, NI, max res 1280 x 1024
- 2 serial, 1 parallel port
- Desktop case with 200W PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Win OS/2 Warp v3 with Lotus Smartsuite for OS/2 or Windows 95 with Novell PerfectOffice Standard

Accura options

540mb IDE → 1gb 10ms IDE HDD	£99
1gb IDE → 1.1gb 10ms IDE HDD	£35
Std memory upgrades per 1mb	£31
EDO memory upgrades per 1mb	£36
Ultra fast PCI graphics 2mb → #9 Fx Vision 330 with 2mb DRAM	£59
#9 Fx Vision 330 with 2mb DRAM	£99
→ #9 FX Motion 771 2mb VRAM	£150
VRAM upgrades 2mb → 4mb	£80
14" → 15" Accuscan Monitor 1280 x 1024, MPR-II	£219
15" → 17" Accuscan Monitor 1280 x1024, MPR-II	£99
Sound Blaster Pro 16 (includes Speakers)	£39
NE2000 compatible ethernet card	

1gb IDE → 1gb 8.5ms fast SCSI-II Including 32 bit DPT 2024 PCI fast SCSI-II controller (cache and RAID upgradeable)	£299
1gb fast SCSI-II → 2gb 9ms fast SCSI-II	£349
DPT CM4000 cache module (0 mb) for DPT 2024	£349
Memory for CM4000 (per 1mb)	£36
DPT DM4000 RAID module for DPT2024	£349
Matrox Millennium 2mb → Matrox Millennium with 4mb VRAM	£150
Matrox Millennium 4mb → 8mb VRAM u/g	£270
2mb → 4mb VRAM upgrade	£185
17" Idek → 21" Idek MF-9121 Diatron Pro 1600 x 1200, MPR-II	£899

PLEASE CALL FOR MANY MORE OPTIONS

# omputers?

no compromises for power users



<b>P90 £2499</b>
<b>P120 £2699</b>

- Intel Pentium® 90/120 mhz CPU
- Plug and play compatible with auto configuration (PCI and ISA bus)
- 512k external cache
- 16mb RAM (max 192mb)
- 2.0gb 8.0ms fast SCSI-II hard drive with DPT PCI 32-bit bus mastering SCSI controller (caching and RAID upgradeable)
- 4.4 speed multi session SCSI CD-ROM drive
- 3.5" 1.44mb floppy drive
- Fast PCI graphics card with 1mb RAM
- 14" Accuscan energy saving, MPR-II monitor, NI, max res 1024 x 768
- 2 serial (16550), 1 parallel port (EPP/ECP)
- 32 bit PCI bus mastering ethernet card
- Tower case with 250w PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Operating systems: OS/2 Lan Server, Novell, SCO Unix, Windows NT (not supplied).



<b>P90 £3099</b>
<b>P120 £3629</b>

- Two Pentium® 90/120mhz CPU's
- Plug and play compatible with auto configuration (PCI and EISA bus)
- 512k external cache
- 16mb RAM (max 192mb)
- 2.0gb 8.0ms fast SCSI-II hard drive with DPT PCI 32-bit bus mastering SCSI controller (caching and RAID u/g)
- 4.4 speed multi session SCSI CD-ROM drive
- 3.5" 1.44mb floppy drive
- Fast PCI graphics card with 1mb RAM
- 14" Accuscan energy saving, MPR-II monitor, NI, max res 1024 x 768
- 2 serial (16550), 1 parallel port (EPP/ECP)
- 32 bit PCI bus mastering ethernet card
- Server case with 300 W PSU
- Accutouch 102 key UK keyboard
- Microsoft Ergonomic Mouse
- 3 year parts and labour warranty (first year on site)
- Operating systems: OS/2 Lan Server SMP, SCO Unix with SMP extns, Windows NT 3.5 (not supplied).

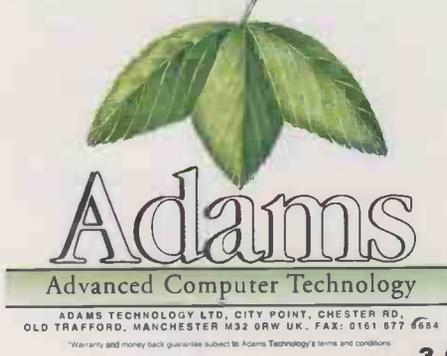
ordering

Adams Technology sales lines are open from 9am till 6pm from Monday to Friday. Technical sales staff are available to answer questions on any of our products to help you with any differing requirements that you might have. Please add VAT to all prices quoted. We welcome payment by Visa, Mastercard and American Express, or on a cheque with order basis. We charge £20 for carriage on all systems and servers and £12 for portables. A 14 day money back guarantee\* is offered on all purchases.

All sales are subject to Adams Technology Ltd's terms and conditions of sale. These are available on request. Please call for any further information you may require.



0161 877 8822





# Hot Stuff!

Autumn has finally arrived, with fond memories or our last good summer for many years to come, we launch into computer silly season. Windows 95 has had a lot of press, but we still find we getting asked a lot for Win OS/2 Warp and good old Windows 3.11. Any of our machines can be supplied with either one of these operating systems.

At Adams we've been busy enlarging our range of notebooks to give you more choice, we've also been hammering away at the negotiating table to try and offer an even better price structure, to bring you the best ever value for money.

**Portable+** Our latest product is the Accura Portable Plus, with many features of the original Accura Portable, but now with the largest LCD available: an 11.8" SVGA TFT. Other screens include an 11.3" DSTN or 10.4" TFT LCD's which all display 800 x 600 SVGA resolution. This machine is available in either Pentium or 486 versions, both are full multimedia portables and have CD-ROM, secondary battery and MPEG options.

**750** The Accura 750 we launched in August as a quality entry level machine. It's near sub notebook size believes it's power and performance. Above all it represents outstanding value.

**0%** Adams has a new Personal Finance package to offer on certain portables. Buy now and pay in Spring 1996. APR 0%. Written details available.

Call Adams sales on 0161 877 8822 to find out more about the right notebook to suit you and your budget.

## Accura 750

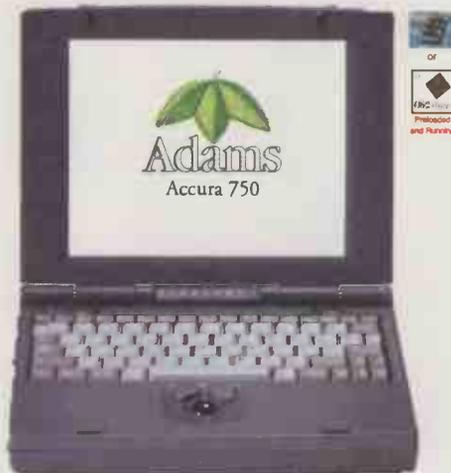
The Accura 750 represents a true compact, near sub notebook sized, entry level solution that is both rugged and extremely portable. Weighing only 2.2kgs the Accura 750 features a 9.5" LCD either mono or dual scan, with memory upgradeability to 20mb and CPU choices of 486DX2-66 or DX4-100. A large front mounted trackerball and type III PC card slot completes the value for money feature list.

## Accura 750

features

- 486DX2-66 CPU upgradeable to 486DX4-100
- 4mb standard memory upgradeable to 20mb
- 340mb 2.5" fast IDE hard drive upgradeable to 1.2gb.
- 9.5" Mono LCD with 64 grey levels, Dual Scan passive colour displaying 256 colours.
- Local bus graphics accelerator giving simultaneous LCD/CRT display and CRT resolutions up to 1024 x 768
- 1.44mb floppy disk drive built in
- BIOS controlled dual level power management facility
- Built in LED status indicator
- 19mm trackerball built in
- 1 PC Card type III slot (takes type I and II also)
- Ni CD battery standard
- 1 serial port, 1 parallel port, external CRT port, external keyboard port
- Full function 84 key UK keyboard
- Multi voltage 90-240v charger power supply (2 hour charge time)
- Light weight 2.2kgs with hard drive and battery
- Compact size - near sub-notebook dimensions
- 1 year parts and labour warranty
- 14 day money back guarantee of satisfaction

Our new value for money entry level notebook



## Accura 750

prices

Model	Mono	Dual Scan Colour
486DX2-66	£849	£1199
486DX4-100	£929	£1279

# Latest &

## Accura Portable+

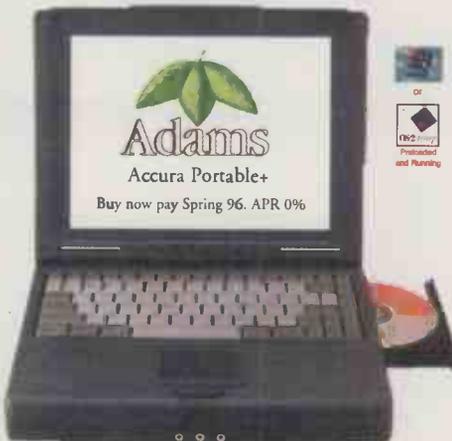
Our new SVGA, CD-ROM, MPEG Pentium® and 486 multimedia notebook

The Accura Portable+ is a Super VGA, full featured multimedia portable, with MPEG and an internal CD-ROM options. With either 486 or Pentium CPU's, the removable floppy drive, can be replaced by an additional battery to give up to 4 hours use, or alternatively fitted with a CD-ROM. An 11.3" SVGA dual scan, 10.4" and 11.8" SVGA TFT are the screen options. Software MPEG-1 and wavetable synthesis on the Pentium version are standard.

## Accura Portable+

Pentium® features

- Pentium® 75 or 90 mhz CPU's, with 256k level 2 cache
- PCI local bus with 64 bit memory addressing
- 8mb standard memory upgradeable to 32mb
- Quick removable 540mb 2.5" enhanced IDE PCI local bus hard drive upgradeable to 1.2gb
- 11.3" SVGA DSTN LCD, and 11.8" TFT VGA LCD (65,000 colours) both with with 800 x 600 resolution
- PCI 64 bit local bus graphics accelerator giving notebook resolution of 800 x 600 and external CRT up to 1024 x 768, with software MPEG-1 playback.
- 1.44mb removable FDD built in
- 16 bit stereo sound with wavetable synthesis and built in speakers
- Optional CD-ROM or secondary battery
- BIOS controlled dual level power management facility
- Built in LED status indicators
- Intuitive front mounted trackpad pointing device
- Type IV PC Card slot (Takes 1 x type III and 1 x type II)
- Ni MH battery standard
- Up to 4.5 hours battery life with optional secondary battery
- 1 enhanced serial port, 1 EPP parallel port, external CRT port, external keyboard port, audio connectors
- Full function 84 key UK keyboard
- Multi voltage 110-240v charger power supply
- Weight 3.2kgs with hard drive and battery
- 1 year parts and labour warranty
- Windows 95 or Win OS/2 v3 preloaded and running
- 14 day money back guarantee of satisfaction



Model	Dual Scan Colour	11.8" TFT VGA LCD	11.3" SVGA DSTN LCD
486DX2-66	£1399	£1799	N/A
486DX4-100	£1479	£1879	N/A
Pentium® 75	£1849	N/A	£2299
Pentium® 90	£1949	N/A	£2399

Terms and conditions: 14 day money back guarantee does not apply to special orders. Desktop 3 year warranty subject to warranty terms and conditions. Carriage charges. Notebooks £12. Systems £20. All prices quoted are subject to change without notice. Availability and VAT. Payment by cleared funds. VISA or Mastercard. P.D.'s welcome from FTSE100 companies, universities, government departments and local authorities. Adams Technology was established in 1989 and is a corporate, university and MOD supplier. Interest free credit offers subject to status. Full written details available. E & O.E.

## Accura Portable+

some options

Memory upgrade to 8mb	£159
Memory upgrade to 16mb	£420
Memory upgrade to 32mb	£980
Internal x4 speed CD-ROM	£199
Internal MPEG-1 card (for 486)	£229
Additional primary battery or secondary battery	£79
Docking Station (available soon)	£349
Port replicator	£55

## Accura Portable+

486 features

- 486DX2-66 or DX4-100 CPU's
- 4mb standard memory upgradeable to 32mb
- Quick removable 540mb 2.5" enhanced IDE VESA local bus hard drive upgradeable to 1.2gb
- 11.3" SVGA DSTN LCD, and 10.4" TFT VGA LCD (65,000 colours) both with with 800 x 600 resolution
- VESA local bus graphics accelerator giving notebook resolution of 800 x 600 and external CRT up to 1024 x 768
- 1.44mb removable FDD built in
- 16 bit stereo sound with built in speakers
- Optional CD-ROM or secondary battery
- BIOS controlled dual level power management facility
- Built in LED status indicators
- Intuitive front mounted trackpad pointing device
- Type IV PC Card slot (Takes 1 x type III and 1 x type II)
- Ni MH battery standard
- Up to 4.5 hours battery life with optional secondary battery
- 1 enhanced serial port, 1 EPP parallel port, external CRT port, external keyboard port, audio connectors
- Full function 84 key UK keyboard
- Multi voltage 110-240v charger power supply
- Weight 3.2kgs with hard drive and battery
- 1 year parts and labour warranty
- Windows 95 or Win OS/2 v3 preloaded and running
- 14 day money back guarantee of satisfaction

**Accura Portable** Top selling modular notebook



- 486DX2-66 CPU upgradeable to 486DX4-100
- 4mb standard memory upgradeable to 20mb
- Quick removable 340mb 2.5" fast IDE hard drive upgradeable to 1.2gb.
- Yamaha audio chip providing Sound Blaster® compatibility with built in speaker and microphone
- 9.5" Mono LCD with 64 grey levels, Dual Scan Passive Colour or TFT active colour displaying 256 colours, quickly interchangeable
- Local bus graphics accelerator with 1mb RAM giving simultaneous LCD/CRT display and CRT resolutions up to 1024 x 768
- Removable 1.44mb floppy disk drive
- BIOS controlled power management with SMM stop clock with suspend to disk function and built in battery meter
- 19mm Logitech trackball built in
- 2 PCMCIA type II and/or 1 type III slot
- Ni MH battery standard (quickly interchangeable)
- 1 serial port, 1 enhanced parallel port (EPP/EPS), external CRT port, external keyboard/mouse port, d/station port
- Full function 86 key UK keyboard
- Multi voltage 90-240v charger power supply (1.5 hour charge time)
- Weight 2.4kgs mono, 2.7kgs colour, carry slip and utility disk included
- 1 year parts and labour warranty and 14 day money back guarantee

Model	Mono	Dual Scan Colour	TFT Active Colour
486DX2-66	£949	£1319	£1649
486DX4-100	£1029	£1399	£1739

**Accura 7600** Value 586



- Intel Pentium® P75 or P90 CPU with 256k level 2 cache
- 8mb standard memory upgradeable to 40mb
- VESA local bus IDE HDD interface with 340mb 2.5" fast IDE hard drive upgradeable to 1.2gb
- Sound Blaster® 16 bit stereo compatibility with built in speakers
- 10.2" DSTN passive colour or 9.5" TFT active colour display
- VESA local bus graphics accelerator giving simultaneous LCD/CRT display and CRT resolutions up to 1024 x 768
- Built in 1.44mb floppy disk drive
- BIOS controlled power management
- 2 PCMCIA type 2 and/or 1 type 3 slot
- Ni MH battery standard (quickly interchangeable)
- 1 serial port, 1 enhanced parallel port (EPP/EPS), external CRT port, external keyboard/mouse port, d/station port
- Full function 86 key UK keyboard and 19mm trackball built in
- Multi voltage 90-240v charger power supply (2.0 hour charge time)
- Dimensions(mm) 283w x 232d x 53h Weight 2.9kgs
- Utility disk set included
- 1 year parts and labour warranty and 14 day money back guarantee

Model	Dual Scan Colour	TFT Active Colour
P75	£1699	£1949
P90	£1799	£2049

**Accura 5000** Premier 586 notebook



- Intel Pentium® P75 or P90 CPU with 256k level 2 cache
- 8mb standard memory upgradeable to 40mb
- 32 bit PCI local bus mode 3 hard drive controller with 340mb 2.5" fast IDE hard drive upgradeable to 720mb.
- Sound Blaster® 16 bit stereo compatibility with built in speakers
- 10.3" STN double refresh (Quad Scan) Passive Colour or 10.4" TFT active colour displaying 256 colours
- PCI 32 bit local bus graphics accelerator with 1mb RAM giving simultaneous LCD/CRT display and CRT resolutions up to 1024 x 768
- Built in 1.44mb floppy disk drive
- BIOS controlled power management with suspend to disk function
- 2 PCMCIA type 2 and/or 1 type 3 slot and infrared comms port
- Ni MH battery standard (quickly interchangeable)
- 1 serial port, 1 enhanced parallel port (EPP/EPS), external CRT port, external keyboard/mouse port, d/station port
- Full function 86 key UK keyboard and 16mm trackball built in
- Multi voltage 90-265v charger power supply (2.0 hour charge time)
- Dimensions(mm) 279w x 218d x 51.5h Weight 3.09kgs
- Carry slip and utility disks included
- 1 year parts and labour warranty and 14 day money back guarantee

Model	Dual Scan Colour	TFT Active Colour
P75	£1899	£2499
P90	£1999	£2599

# Greatest!

**Accura 6000** Power users dream



The Accura 6000 is now available with 100 or 133 mhz CPU's and with a 10.4" SVGA 800 x 600 TFT LCD display. With built 16 bit stereo sound and a ruggedised magnesium alloy case, super fast SCSI-II hard drive, the Accura 6000 is the notebook of the future.

- Intel Pentium® 100/133mhz CPU
- 16k level 1 and 256k level 2 cache
- 8 mb standard memory upgradeable to 128mb (64 bit)
- 32 bit PCI local bus controller with 340mb 2.5" fast SCSI-II hard drive upgradeable to 1.2gb.
- Sound Blaster® 16 bit stereo compatibility with built in speakers and microphone
- 10.4" TFT active colour displaying 65,536 colours, max res 800 x 600
- PCI 32 bit local bus graphics accelerator (WD90C24A2) with 1mb RAM giving simultaneous LCD/CRT display and CRT resolutions up to 1024 x 768
- External 1.44mb ultra-low profile floppy disk drive
- BIOS controlled power management with sleep, suspend & resume functions
- Trackpoint, pointing device integrated into keyboard
- 2 PC card type 1/2 or 1 type 3 slot
- Ni MH battery standard (quickly interchangeable)
- 1 serial port, 1 enhanced parallel port (EPP/EPS), external CRT port, external keyboard/mouse port, d/station port
- Full function 82 key Lexmark UK keyboard
- Multi voltage 110-240v charger power supply (2.0 hour charge time)
- Dimensions(mm) 300w x 216d x 51h Weight 3.4kgs
- Leather carrying case included
- 1 year parts and labour international warranty

Model	TFT Active Colour
P100	£4480
P133	£4810

**Accura Notebooks** some options

750	
Memory upgrade to 8mb	£159
Memory upgrade to 12mb	£299
Memory upgrade to 20mb	£599
Upgrade HDD from 340mb - 520mb	£99
Upgrade HDD from 340mb - 810mb	£279
Upgrade HDD from 340mb - 1gb	£439
Additional main battery	£89

Portable	Memory and HDD upgrades as Accura 750
Additional main battery	£89
Docking station	£375
Car Power Adaptor	£49
Deluxe Carry Case	£39

7600	HDD upgrades as Accura 750
Memory upgrade to 16mb	£309
Memory upgrade to 24mb	£679
Memory upgrade to 32mb	£988
Memory upgrade to 40mb	£1358
Additional main battery	£95
Docking station	£CALL
Car Power Adaptor	£CALL

5000	HDD upgrades as Accura 750
Additional main battery	£95
Docking station (with speakers and floppy drive)	£399

6000 Call for all 6000 options

**Our pledge**

Adams Technology pride ourselves on our products and service. We offer a 14 day money back guarantee\* on all Accura Portables and most systems. A direct technical support line and technical information line are available during business hours. We do our best to ship notebooks within 2-3 days and desktops within 7-10 days. Please don't forget to add VAT to all prices quoted. See previous page for ordering details.

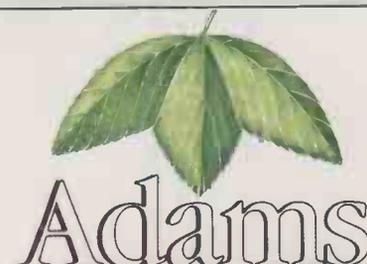
We will keep you up to date with the latest technological advances and where possible offer advantageous upgrades to your Accura Computer

Try something different, try Adams Technology for quality, value for money products and a service second-to-none.



Adams' are the official computer supplier to Williams Renault for 1995

0161 877 8822



ADAMS TECHNOLOGY LTD, CITY POINT, CHESTER RD, OLD TRAFFORD, MANCHESTER M32 0RW UK. Fax: 0161 877 8884

\*Warranty and money back guarantee subject to Adams Technology's terms and conditions

# Overall Systems Test Results



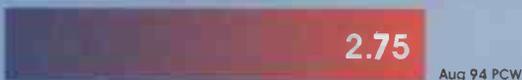
## Gateway Pentium 100MHz



## NexGen P90 by Dan



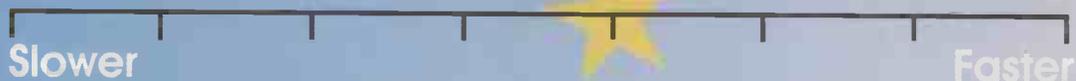
## Twinhead Pentium 60MHz notebook



## HiGrade DX-100MHz notebook



## IBM Aptiva 486 SX 33MHz



All of the above machines were top of their class in recent tests.

# The numbers game

Over six months and more than £1 million later, VNU European Labs is testing over 300 products a month (or a staggering 3600 per year) for our 40 computer magazines and our 1.8 million European readers in 10 countries. Drawing on our extensive database of over 3000 suppliers and vendors, we collect over 220 individual data items and over 110 feature points for every product. That means over 5 gigabytes of data racing at 10 megabits per second over 3Km of labs network cable every single day.

Because we don't want to overload you with information, an army of over 30 journalists and

lab technicians put in more than 1300 hours a week to interpret and distil the data down into the single numbers you see above. But despite the baffling number of numbers we deal with every 365 days, we never forget that you and your needs are number 1. That's why we work with market leading titles such as *Personal Computer World*, *Personal Computer Magazine*, *pplan* and *What PC?* to give you what you want, numbers.

If you would like to find out more about the VNU European Labs use this number to call us 0171 316 9062 and ask for John Barnes.



VNU BUSINESS PUBLICATIONS

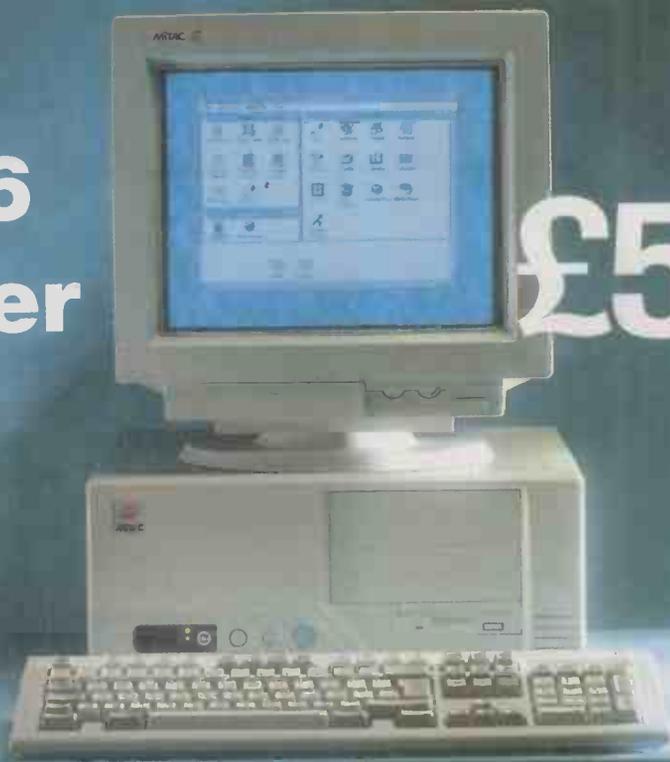
## Nobody reads the computer market like we do

# Mitac

## 486 DXII/66

### Price Breaker

# £599



**T**his new PC from Mitac offers the very latest features at a price our competitors charge for entry level machines. Whatever your PC requirements, the Mitac offers more than enough power, thanks to its 486 DXII CPU running at a blinding 66MHz. Its built-in co-processor makes light of any maths work and an internal 8K cache gives fast data handling within the CPU.

Because the fastest chip is only as good as it's surrounding hardware we've included a 32 bit VESA local bus display card with 1MB of dedicated video memory. Add to this an MPR 1 14" digital colour monitor with on screen display and a maximum resolution of 1024 x 768 in non-interlaced mode and you've probably never seen Windows as fast or as clear as this before.

**Pentium  
75MHz Model  
£999**



- 486 DXII/66 MHz processor
- 4MB RAM expandable to 64MB
- 540 MB HDD
- 32 Bit VESA Local Bus card, 1MB RAM expandable to 2MB
- 3.5" 1.44MB floppy disk drive
- 14" SVGA Colour monitor with digital on screen adjustment, 28 dot pitch, MPR 1
- Expandable desk top case with 4 drive bays and extra 16 bit expansion slot
- MS DOS<sup>®</sup> 6.22, MS Windows<sup>™</sup> 3.11 and a range of software
- 12 months Return To Base Warranty
- 4MB RAM upgrade £120
- Mini Tower version £599

## MULTI MEDIA KIT

- Twin Speed CD Rom Drive • Sound Fx<sup>™</sup> Card Sound blaster compatible 16 bit • Audio Software • Speakers • 5 CD ROM Titles
- The New Grolier Multimedia Encyclopedia – 33,000 articles, 3,000 photos and illustrations, 100's of detailed maps, sound tracks and animations.
- Space Adventure – A space voyage of exploration, 100's of pictures, sounds and a full motion video.
- Undersea Adventure – Ocean graphic tours, a biology lab, global perspectives, films, animations, a virtual 3-D aquarium.
- Quad Speed Option +£80
- Wave Table Sound Card +£80

Speed – Zoom through the history and science of speed from the fastest animals to simulations of the speed of light, includes speed reading courses, speed games, the award winning interactive motion picture "Speed".  
Mega Race – Drive like a maniac. A futuristic TV show that gets higher ratings every time a car explodes, stunning graphics, awesome video footage.

# £150

## TRULY GREEN

The Mitac 486 DXII/66 is a PC with true green credentials, its power saving mode can significantly reduce its power consumption compared with an ordinary PC. Giving lower electricity bills and less pollution, in fact even the packaging is recycled and there are absolutely no CFC's used.



# 01902 871001



Distributed by: Actinet Computers Ltd

Unit 6A, Marlborough Estate, off Thompson Ave., Wolverhampton WV2 3NP. Fax: 01902 871002

Order Line Open, 9am-5.30pm Monday-Friday, 9am-1.00pm Saturdays

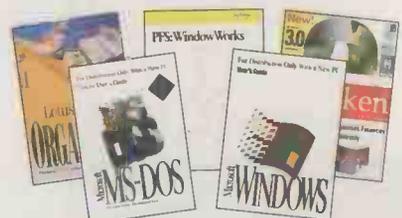
All prices exclude VAT, Delivery and are subject to change without notice E&OE

## READY TO GO

Finally, just to get you started, we've pre-installed

- PFS Windows Works • MS Windows<sup>™</sup> 3.11
- Intuit Quicken 3.0 • Lotus Organiser
- MS DOS<sup>®</sup> 6.22

The Mitac Popular is delivered ready to go!



# If finding the right AST s

**Romtronics** are the centre for everything **AST**, one of the worlds **top five PC manufacturers**, and are professionals at supplying the discerning & computer literate PC buyer with top quality equipment and service.

We know **AST** equipment inside out and can supply everything from a simple new hard drive to a fully configured Manhattan SMP!!

Whether your PC is a five year old Premium or a five day old Premmia you'll find everything you need at **Romtronics**. With unbeatable prices and a service to Match!!

# you just gu

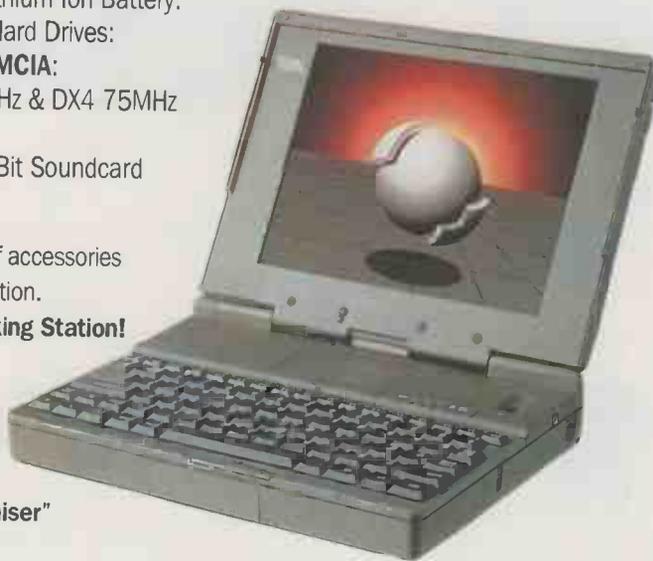


## FEATURES ASCENTIA 950N & 910N SERIES

- 5-10 Hour, Lithium Ion Battery:
- Removable Hard Drives:
- Hot Swap PCMCIA:
- Pentium 75MHz & DX4 75MHz Processors:
- Integrated 16Bit Soundcard (950N)

... And a mass of accessories including Pro-Station. MultiMedia Docking Station!

"All Ascentia notebooks come with DOS Windows and Lotus Organiser"



Powerful. Feature filled. The **Ascentia 950N and 910N** series are AST's most advanced notebook computer. **10.4" screens** in both **TFT and Dual Scan**. SVGA in Pentium Models, 32bit, 1MB Local Bus Accelerated graphics engine Dazzling Colours and Speed

**Ascentia 910N 4/75 CS10 Model 510**  
510Mb Hard Drive, 8MB RAM, 10.3" Dual Scan Colour Screen .....£1899

**Ascentia 910N 4/75 CT10 Model 510**  
510MB Hard Drive, 8MB RAM, 10.4" TFT Colour Screen .....£2475

**Ascentia 950N P/75 CS10 Model 500**  
510MB Hard Drive, 8MB RAM, Integrated Soundcard, 10.4" SVGA, Dual Scan Colour Screen .....£2575

**Ascentia 950N P/75 CTS10 Model 800**  
800MB Hard Drive, 8MB RAM, Integrated SoundCard, 10.4" SVGA TFT Colour Screen .....£3399

The Complete Ascentia Range  
Including The Entry Level Budget Priced 810N Series Is Available  
Call For The Best Deal!!!!

## BRAVO MS SERIES

### Powerful and Expandable

**Bravo MS is the latest and most powerful edition to the highly successful Bravo range:**

Standard (MS) and Mini Tower (MS-T) Chassis Design, Pentium 75Mhz, 100Mhz, & 133MHz Processors.

**Bravo MS P/75 Model 850W**

850MB Hard Drive  
8MB RAM, 256k Cache  
1MB PCI Video .....£1099

**Bravo MS P/75 Model 850C**

850MB Hard Drive, 8MB RAM  
256k Cache, 1MB PCI Video  
Quad Speed CD-ROM .....£1255

**Bravo MS P/100 Model 850W**

850MB Hard Drive  
8MB RAM, 256k Cache  
1MB PCI Video .....£1375

**Bravo MS P/133 Model 1600W**

1.6GB Hard Drive, 16MB RAM  
256k Cache, 1MB PCI Video  
.....£2095



- Windows 95 / WFWG 3.11
- Dual Boot Option**
- 64 Bit PCI Graphics Subsystem
- Quad Speed CD-ROM (certain models)
- Integrated 16Bit Audio. Headset.



Romtronics are a full service reseller and offer a complete range of leading manufacturers software and peripheral products to compliment your AST system.  
For sales and Service call Tel: 0181-863-9001 or fax us on Fax: 0181-424-8868.

# Supplier is just guess work, Assessed right



## FEATURES

- Powerful DX2/66MHz Processor
- Vesa Local Bus
- EPA Energy Star Compliant



## B R A V O L C

### A Superior Blend Of Price And Performance

Bravo LC brings power and expansion to within easy reach of the most discerning pocket.

#### Bravo LC 466/ Model 543W

540MB Hard Drive, 8MB RAM 1MB VESA Local BUS

Mouse, Windows, DOS, Keyboard

14" SVGA-4L Colour Monitor .....£995!

## FEATURES

- Local Bus Graphics
- Fast IDE Hard Drives
- 128MB RAM Max
- On Site Maintenance
- Dual / Quad CD-ROM

## A S T A D V A N T A G E

### Small Office Home Office

AST's ASTounding Advantage is available! Now! A superb selection of software including MS Works and Encarta is bundled with this powerful pre-configured system. Out of the box and switch it on! Hours of excitement for all the Family!

**Advantage 8060P, Pentium 60MHz, Mini Tower**  
420MB, 8MB, DS CD-ROM, Soundblaster 16 .....£999!

**Advantage 6075P, Pentium 75MHz, Desktop**  
540MB, 8MB, Quad CD-ROM, Soundblaster 16, V32Bis Fax / Modem .....£1489!

**Advantage 8090P, Pentium 90MHz, Desktop**  
540MB, 8MB, Quad CD-ROM, Soundblaster 16, V32Bis Fax / Modem .....£1699!

## !!! WARRANTY REPAIRS !!!

**Romtronics Are An Authorised Service Centre.**

**Let us take care of your warranty Repairs: Collection / Delivery Service available**

**Not In Warranty? Call us anyway, We offer a full repair service for many older AST systems**

## P E R I P H E R A L S A N D S O F T W A R E

**ROMTRONICS** are a full service reseller and a sell a vast range of popular peripherals and software to compliment your AST system

HP, Canon, Epson, Lasers and Inkjets: 3COM, Xircom & SMC Ethernet Adapters, Olicom & Madge Token Ring Adapters: NEC, Hitachi, Pioneer Monitors and CD's, Intel Overdrives, Quantum WD, Seagate, Conner Hard Drives, Microsoft, Lotus and Much Much More!

**CALL for ASTounding deals and Low Low prices on any of the above brands!**

**AST**  
COMPUTER

**Romtronics**



**Sales Hotline : Tel - 0181 863 9001 Fax - 0181 424 8868**

**Romtronics: Premier House, 2 Gayton Road, Harrow, Middlesex HA1 2XU**

Prices are based on payment with order and exclude delivery and VAT which will apply at 17.5%. Prices are correct at time of going to press but may alter without notice. E.&OE. We will inform you of any changes when you call.

# 6 OF THE WORLD'S LEADING SOFTWARE

The Software Offer is a unique opportunity to equip yourself with the latest software packages for your PC. You can select up to a bundle of 6 of the world's leading software programs that can cost more than £1,000 for just £69 + Delivery & VAT. Premier packages (top line) count as 2 selections.

PREMIER

These Premier packages count as TWO selections



### Pressworks

The popular desktop publishing program from GST, Pressworks for Windows contains all the tools needed to produce professional quality documents. Counts as two selections.



### Bodyworks 3 for Windows

Explore the system, structures and functions of the body in fascinating detail. This CD multimedia version includes 3-rotating views with detailed animation and video clips and all the features of the disk version. Counts as two selections.



### WordStar for Windows

WordStar for Windows v2 (RRP £399) is one of the UK's leading easy to use word processing package for Windows. As well as being powerful, it is remarkably easy to learn. Superb spellchecker, thesaurus and DTP-like features are included as standard. Counts as two selections.



### PFS: Window Works

PFS:WindowWorks 2, the latest version of the leading Windows integrated business software. Includes 8 great Windows programs! Word processing, Spreadsheets with Lotus 123 & Excel compatibility, Business Graphics, Database for information management & filing. Counts as two selections.



### Designworks for Windows

GST Designworks v2 (RRP £149) is a powerful, easy to use graphics and illustration program. Create drawings, diagrams, logos, charts, art and text for just about anything. Counts as two selections.



### Borland Quattro Pro for Win v5

Borland's acclaimed spreadsheet package has been acknowledged as the best Windows spreadsheet in the world. Counts as two selections.



### TurboCAD for Windows

TurboCAD for Windows is one of the world's leading easy to use design, drafting & CAD package and is ideal for Technical Drawings, home & landscape design etc. RRP £100



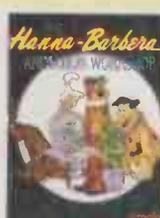
### Lotus Ami Pro for Windows

Lotus Ami Pro for Windows v2 is a powerful word processor for the Windows environment. It includes features such as graphics handling and drawing tools, maths & tables and an excellent Anglo-american dictionary



### Framework XE

Framework XE is a powerful integrated software package for DOS users and features no less than 7 great programs. Comprehensive word processing with spellchecking and mailmerge; Powerful spreadsheet & much more



### Hannah-Barbera Animation Workshop

This amazing edutainment software suite featuring Fred Flintstone & other characters brings cartoon animation to your PC. Includes: Over 200 frames of sample animation. Clipart of your favourite characters. Drawing & painting package. Variable speed playback. User guide etc.



### Quicken

If you need help organising your finances, Quicken v2.0 for Windows is the answer. It looks and works just like your bank statement and cheque book.

Now Version 4.0



### Expert Labels for Windows

Labels, envelopes & Bar Codes all in one simple package. Choose from over 120 standard labels or create your own in any size. Powerful Database & Address book. Includes Quick-save button to ensure no data is lost, 4 Barcode formats etc.



### Pacioli 2000 Accounts

Pacioli 2000 is a full feature DOS integrated accounts package for small to medium sized companies. It includes the various ledgers (nominal, purchase, sales), full stock control, invoicing and budgeting.



### Pool for Windows

Improve your aim without leaving the comfort of your arm chair! Championship Pool for Windows includes four popular games; Straight, 8-Ball, 9-Ball and Billiards for one or more players.



### Chess for Windows

Allows you to choose from four different boards and chessman styles, and over ten different skill levels. Complete with VCR-styled buttons to replay or review recent moves or an entire game



### Fun Pack for Windows

Fun Pack is a collection of seven arcade-style action games for Microsoft Windows. They are similar to classic video games like Pac Man, Asteroids, Breakout, Missile Command etc.



### Home Design for Windows

Redecorate a room, or create a house plan the easy way! Icon based operation allows you to quickly pick up the basics of room-planning, and enables you to create accurate scale drawings of every room in your house.



### Legend Adventure

Legend is the finest role-playing graphics adventure you will find. It includes stunning realism, complex interaction, a deeply absorbing plot, superlative magic system and brilliant 3-D arcade action!



### HG ClipArt 1

Hundreds of colourful images to choose on, on a variety of subjects. Titles include 'Education', 'Food', 'Cartoons' and 'Maps'. Each title counts as one choice.



### Kap'n Karaoke & Free Microphone

Kap'n Karaoke will keep your children occupied for hours as they sing along to professional recordings of some all-time children's favourites. Lyrics light up on screen in time to the music, control over pitch, volume and tempo & even instruments. Easy to master controls. Requires 16-bit sound card.



### Clip Art for Windows

Contains over 500 images in colour and black & white, allows you to add clip art to your newsletters, memos, business documents or personal letters.



### XtraDrive Hard Disk Doubler

New IIT XtraDrive is the best hard disk doubling program available. Using XtraDrive is like installing an additional hard disk within your PC system.



### Landscape for Windows

Landscape the easy way - without lifting a shovel! Create a beautiful outdoor environment, complete with foliage, furniture, pools and even a summer house from landscape object libraries.



### Kid Pack

Kid Pack for Windows is a collection of five educational games for children aged 2-7 years. Designed as a fun way for children to learn about reading, maths, art and music, each program is based on familiar toys and symbols.



### MultiWorks 30

This comprehensive DOS integrated software package includes word processor, database, spreadsheet, time manager, address book communications module, & much more Needs DOS 3.1 or higher.



### Holiday Fonts for Windows

Includes 35 fonts and borders for Windows 3.1 for year-round holiday greetings. Make your own holiday cards, announcements and invitations.

BEST SELLER

# PROGRAMS <sup>£</sup>69 OR SELECT 10 FOR <sup>£</sup>99

All the packages include all disks and manuals and you have complete peace of mind with our 14 day Money Back Guarantee



THESE 5 CA PACKAGES TOGETHER REPRESENT ONE PREMIER PACKAGE (2 SELECTIONS)

### CA-Cricket Presents for Windows

CA-Cricket Presents is the World's most persuasive graphics presentation package. Fast, easy to use and fully integrated, it offers a host of features including a built-in outliner, redesigned graphics templates, and an electronic light table to edit and re-sequence your presentations.

### CA-Textor for Windows

Easy word processor that you will have up and running in minutes. And thanks to its graphical, easy-to-use design, you'll be adding power and persuasion to memos, letters, briefs and reports almost instantly - all with just a click of the mouse.

### CA-Compete! for Windows

Powerful spreadsheet with multi-dimensional modelling & viewing. Unlike standard spreadsheets, CA-Compete! lets you manipulate up to 12 different dimensions and navigate between them instantly with the click of a mouse. RRP £399.

### CA-ACCPAC Simply Accounting

Simply Accounting is the easy way to handle your accounts effectively. Containing everything you need to get up and running straight away.

### CA-Up To Date

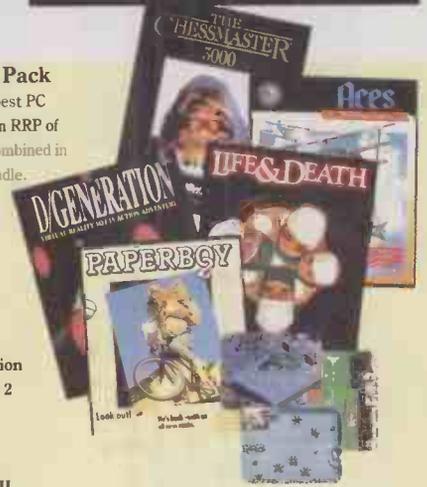
CA-Up To Date is an advanced personal/group information manager. With CA-Up To Date, you can effectively manage appointments, schedules and resources for yourself, and co-ordinate with the entire office.

### 8 Games Pack

Eight of the best PC games with an RRP of over £200! combined in one great bundle.

Counts as two selections.

- Chess master 2100
- Life & Death
- D/Generation
- Paper Boy 2
- Xenon
- Blue Max
- Cadaver
- Speedball II



### Fun School

Fun School for 7 to 11 year olds consists of 6 new and original programs to entertain and educate your children. Stimulating sound, cleverly animated rewards and stunning graphics combine with essential elements of the National Curriculum to delight your children while they learn.



### SuperStar Sports

SuperStar Sports contains seven superb DOS games for one or more players. These include: SuperStar Hockey, Bowling, Darts, Outdoor Soccer, Ping Pong, Air Hockey and Indoor Soccer.



### Fonts for Windows

Expert Fonts for Windows contains a selection of 100 Serif, Sans Serif and display scalable fonts, carefully chosen to ensure you have the right typeface for every job.



### Astronomer for Windows

Allows you to explore the night sky on your PC. Position yourself anywhere in the solar system and view any part of the night sky as it would appear from that location.



### SoundWay Pro for Windows

This great program brings digitized sound right into your computer without the aid of a sound card. It can lighten your day with humorous and appropriate dialogue from popular movies and cartoons.



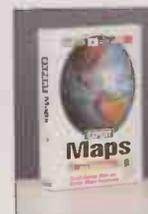
### HG ClipArt 2

Hundreds of colourful images to choose, on a variety of subjects. Titles include 'Business', 'Backgrounds', 'Cartoons+' and 'Xmas'. Each title counts as one choice.



### Rooms for Windows

Xerox Rooms for Windows simplifies, enhances and accelerates the use of Windows by organising your files in a more logical and efficient manner. Rooms - The fastest way to work in Windows!



### Maps for Windows

This complete electronic atlas gives you the opportunity to increase your geographical awareness from Pole to Pole - without leaving your desk! Contains over 200 up to date country & regional maps, & includes an extensive database.



### Play & Learn CD

Play & Learn has been developed for children between the ages of four to ten. Which consists of 10 colourfully animated games and a series of learning modules covering spelling & maths.



### Wallobee Jack 'The Bingi Burra Stone' CD

Help Wallobee Jack & his friends search for the mysterious Bingi Burra Stone in Australia. Sydney Airport & Ayers Rock are just some of the destinations your children will learn about as they try to outwit the nasty dragon & find the precious stone.



### Wallobee Jack 'The Thai Sun Adventure' CD

Your children learn about the Far East with more Wallobee Jack adventures as he & his friends try to stop evil Buffalo Bart from taking over Thailand.



### Shareware CD

The finest collection of the world's leading shareware programs covering virtually every topic. This CD disk contains over 5000 programs that, when uncompressed, exceed 1 Gigabyte in size.



### Time Almanac of the 20th Century CD

Experience history as it happened with this unique multimedia CD reference title. Includes 4000 articles. Newsquiz, every Time 'man of the year' story, 70 full-motion videos, 12 narrated essays and 450 photographs.



### UFO for Windows CD

UFO is the most complete guide to close encounters with over 1200 fully documented UFO sightings with actual photographs. Display, copy and print text and images through the Windows clipboard. A great tool for amateur or the expert skywatchers.



### Dinosaur Museum CD

Transform your computer into a time machine with vivid sound, lavish colours and interactive games. Learn about dinosaur sizes, classification, behaviour and more. Includes hundreds of photographs, movie clips and 2 educational games.



### Zool 2 CD

The latest CD version of this platform game is better than ever. Zool 2 features the Ninja of the Nth dimension, a karate expert living on planet Loox, and his female partner Zool. Their mission is to defeat the evil Kool who wants to conquer the known universe.



### IMSI EZ Language CD

Learn French, German, Spanish, Italian, Russian & Japanese using pictures, words & sound. EZ language is a simple vocabulary & pronunciation tutor on CD. Simple tests at the end of each section help you gauge your success.

**6** selections for **£69**

+ Delivery & VAT (£98.70 inc Delivery & VAT)

or 10 for **£99**

+ Delivery & VAT (£133.95 inc Delivery & VAT)

**LIMITED OFFER**

**PLEASE ORDER EARLY**

This unique subsidised offer is only available to end users of PC systems for a strictly limited period. Programs are only available on 3.5" floppy disks and are for IBM PC compatible computers, unless otherwise stated.

I am under **NO OBLIGATION** to buy anything else from The Software Club. I can return all the packages unopened and unused within 14 days for a full refund.

☎ **01282 777 333**

9am to 5.30pm Mon-Fri only  
Credit card orders only  
Visa, Access, American Express & Switch

SOFT58

All orders will be fulfilled within 28 days unless otherwise specified. The offer is only available whilst current software stocks last. In some cases software packaging and box colours may be cosmetically different to pictures shown. All trademarks acknowledged. Business prices shown. Consumer enquiries welcome. The Software Club is a trading name of Corporate Systems Ltd. Company Reg. No. 2645971 VAT No. 598 0031 32. E80E

The Software Club, Blackburn Road, Simonstone, Burnley, Lancs BB12 7GT



# A WINNING COMBINATION

Victory is frequently the result of teamwork — and IBM® wants you to win. That's why they contracted with NSTL to put hundreds of applications through their laps to ensure their compatibility with OS/2 Warp. So when you see the "Ready for OS/2 Warp - NSTL Tested" seal, you can count on a winning combination.

To learn more about this and other independent testing services, contact NSTL at +1 610-941-9600 or [info@nstl.com](mailto:info@nstl.com). Or call IBM at +1 512-823-6697 for additional information. **NSTL** NSTL is a division of The McGraw-Hill Companies

Ready for

**OS/2<sup>®</sup> WARP**

NSTL Tested

**+1 610-941-9600**

Adobe's™ Acrobat™ for Workgroups  
Allen Communication, Inc.'s Quest Multimedia Authoring  
Aperture™ Technologies, Inc.'s Aperture™  
Baker Hill Corporation's Lending Library™  
Baron Software Services' Name Your Baby!™  
Boca Soft's Wipeout  
Boca Soft's System Sounds for OS/2  
Competence Software's Investment Basics  
Computer Security Consultants, Inc.'s RecoveryPAC  
DUX Software's SimCity Classic™  
DUX Software's American Heritage Dictionary Concise Edition™  
Felsina Software's A-Talk® for Windows  
Gazelle™ Systems' Back-it™ for Windows  
Grolier Electronic Publishing's 1995 Multimedia Encyclopedia  
Intellisoft's™ Accounting Vision/32™

Interplay's™ Mario's® Game Gallery  
Interplay's™ Kingdom™ The Far Reaches  
Merit Studios' Fortress of Dr. Radicki™  
Merit Studios' Fighter Wing™  
Merit Studio's Psychotron™  
MicroDoc Products, Inc.'s Child Development Guide  
MicroLearn Nordic's Game Pack Volume I  
On-Line Data's OnCmd®  
Parsons Technology's Money Counts®  
Pinnacle Technology's Kid Proof/2™  
Reed Software's OS/2 Black Jack  
Stardock System Inc.'s™ Star Emperor™  
Stardock System Inc.'s™ Havoc™  
Starpress Multimedia's 808 Great Letters  
T/Maker's ClickArt Newsletter Art

VNU Business Publications Limited is NSTL's testing partner in the UK.

All product and trademarks are registered trademarks of their respective companies.

# YOU'D THINK SIMPLY COMPUTERS WOULD BE SATISFIED WITH ALL THE AWARDS THEY'VE WON...

Simply Computers won seven 1995 PC Direct Hits Awards, including the Award for:



**OVERALL SERVICE  
EXCELLENCE**



Over the last few months, Simply Computers has racked up a lot of awards and recommendations.

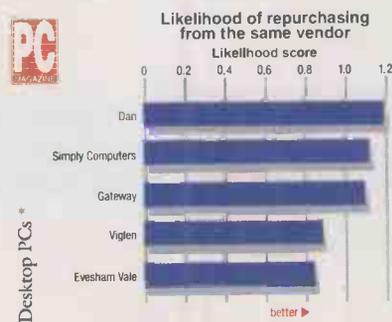
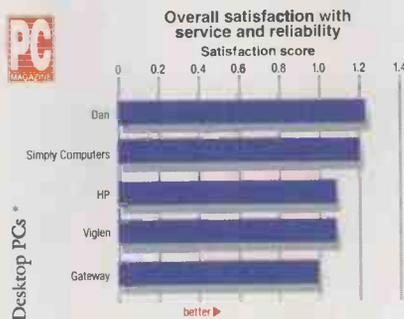
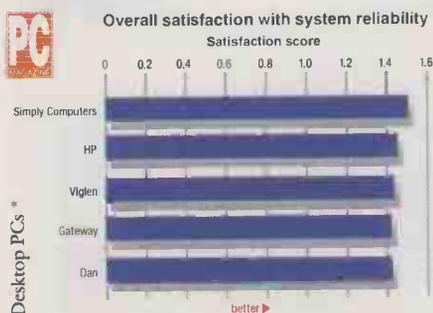
In the recent 1995 PC Magazine Service and Reliability Survey we shone. The survey asked the opinions of 7,000 readers, and as the graphs show, Simply made a

big impression. At the 1995 PC Direct Hits Awards we won more than anyone else - including the highly prized Overall Service Excellence Award. This year, we've also been nominated for Computer Shopper and Personal Computer World

awards. But no matter how many we win, we still want more. The reason is simple. These awards aren't given by journalists or computer guru's. They're given by the public - the people who use our products and services day after day.

site warranties. No wonder we have over 100,000 customers, a 70% repeat business rate and a £35 million turnover.

If you still suspect that our appetite for winning awards isn't as great as it should be, just turn the page and take a look at our brand new Pentium® processor-based



big impression. At the 1995 PC Direct Hits Awards we won more than anyone else - including the highly prized Overall Service Excellence Award. This year, we've also been nominated for Computer Shopper and Personal Computer World

They don't just back us with their votes. They show their support by becoming regular customers, not only because of our superb products and prices, but because we offer reassurance in the shape of a 30 day money back guarantee and superb on-

Windows 95 PC. Configured to work perfectly with new Windows 95, it's going to be an award winner too. For more information call us today on 0181 523 4020.



Jan 1995 Pentium® 60



Nominated Best Hardware Dealer 1995



Nominated Service Excellence & Fair Trading Awards 1994



# ..AT JUST £935 THE NEW WINDOWS 95 SYSTEM LOOKS LIKE ANOTHER WINNER



**A SUPERB 8MB PENTIUM® PROCESSOR BASED PC WITH WINDOWS 95 PRE-LOADED FROM £935\***

A powerful PC carefully configured to make sure you get the very most out of Microsoft's new and revolutionary Windows 95 operating system.

### Pentium® Processor Based

HardDisk	75Mhz	90Mhz	100Mhz	120Mhz	133Mhz
540Mb	£935	£999	£1049	£1095	£1225
850Mb	£970	£1034	£1084	£1130	£1260
1Gb	£1025	£1089	£1139	£1185	£1315



VISIT SIMPLY at HTTP : // [www.rudex2.com/simply.html](http://www.rudex2.com/simply.html)

\*All prices exclude VAT & Delivery. Prices effective as of 1st Nov. 1995. Prices are correct at time of going to press. E&OE. All sales are subject to our standard Terms & Conditions. Pentium is a trademark of Intel corporation.

## WINDOWS 95 SYSTEMS INCLUDE

- **MOTHERBOARD**
  - Latest PCI Motherboard with ZIF Socket 7 for future upgradability
  - Intel Triton Chipset
  - 256K Asynchronous Cache
  - Flash BIOS with Green Support
  - BIOS Support for ISA Plug & Play Extension
- **ON BOARD IDE**
  - Support for Mode 3/4 Enhanced IDE Devices and Bus Mastering
  - Support for up to 4 IDE Devices
- **ON BOARD MULTI I/O**
  - High Speed ESP Parallel Port
  - 2 High Speed 16550 Serial Ports
- **INTEL PENTIUM® PROCESSOR**
  - Pentium® Processor Heatsink & Fan
  - Built-in 16K Cache
- **8MB RAM (EXPANDABLE TO 128MB)**
  - Fast Page Mode RAM
- **1MB TSENG ET4000/W32i PCI GRAPHICS CARD**
  - Tseng Chipset for superb Windows performance
- **14" COLOUR MONITOR**
  - 14" Low Radiation SVGA NI Colour Monitor (MPRII) 12 Months Swap Out Warranty
- **3.5" 1.44MB FLOPPY DRIVE**
- **DESKTOP OR MINI TOWER CASE**
  - 200 Watt PSU
- **FULL SIZE WINDOWS 95 KEYBOARD**
  - With the 3 Extra Windows 95 Keys
- **MS MOUSE V2**
  - Genuine Microsoft Mouse V2
- **WINDOWS 95**
  - Full Manuals and Media
- **5 YEAR WARRANTY**
  - 1st year on-site, remaining 4 years return to base, labour only.

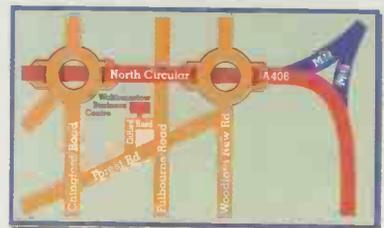
## OPTIONAL EXTRAS

- **SOUND BLASTER 16**
  - 16 Bit Stereo Sound Card
  - CD Quality Audio
  - Enhanced OPL3 Stereo Music Synthesiser
  - 4W Per Channel Output
- **QUAD SPEED CD ROM DRIVE**
  - Access Time < 250 ms
  - Data Transfer Rate > 600kB/s
  - Cache 256K
  - Caddyless Frontloading Tray
- **SPEAKERS**
  - Mains Powered 10 Watt Speakers

Make it a multimedia PC for **£175**

## V34 INTERNAL MODEM

- Internal Fax Modem, BABT Approved.....£157



**Showroom Opening Times:**  
Mon-Fri 10.00am to 6.00pm.  
Sat 10.00am to 4.00pm.

# SIMPLY COMPUTERS

FROM THE PEOPLE WHO LOVE PC'S  
**HOTLINE 0181 498 2130**

Simply Computers Limited,  
28 Walthamstow Business Centre, Clifford  
Road, Walthamstow, London E17 4SX.

PC System Sales 0181 498 2130 - Corporate Sales 0181 498 2150 - General Sales 0181 523 4020

# A COMPLETE 8MB MULTIMEDIA SYSTEM INCLUDING MICROSOFT SOFTWARE

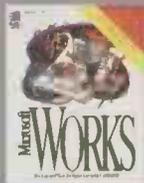
FROM  
**£1075\***



Computer  
BUYER  
RECOMMENDED

PC Plus  
VALUE FOR  
MONEY

January 1995  
Pentium® 60



A Multimedia PC that combines the latest in high performance hardware with a selection of Microsoft's latest world beating titles.

Hard Disk	Intel®		Pentium® Processor Based				
	DX2-66	DX4-100	75Mhz	90Mhz	100Mhz	120Mhz	133Mhz
540Mb	£1075	£1109	£1185	£1249	£1299	£1345	£1475
850Mb	£1110	£1114	£1220	£1284	£1334	£1380	£1510
1Gb	£1165	£1199	£1275	£1339	£1389	£1435	£1565

Software boxes shown for illustrative purposes only. Bundled software does not come with full retail packaging.

## POWERFUL, PORTABLE & PERFECTLY PRICED

FROM  
**£1465\***



An 8Mb RAM,  
540Mb HDD low weight  
notebook with long battery  
life and integrated sound.



Intel®	DX2-66	DX4-100
DSTN	£1465	£1595
TFT	£1899	£2029

## MULTIMEDIA SYSTEMS INCLUDE

### MOTHERBOARD

- Latest PCI Motherboard with ZIF Socket for easy upgradability (Pentium Motherboards include Triton chipset)
- 256K External Cache to speed memory access
- 8Mb Ram (upgradable to 128Mb)
- Enhanced IDE Hard Drives as standard
- Built in PCI IDE Enhanced Controller
- 1Mb Tseng ET4000/w32 PCI Windows Accelerator
- 14" Low Radiation SVGA NI Col Monitor (MPRII)
- 2 Fast (16C550) Serial Ports, 1 Bi Directional Parallel Port
- 3.5" 1.44Mb Floppy Drive
- Full Size Keyboard
- Choice of Desktop or Mini Tower Case
- MS Compatible Mouse
- Windows 95 (Full Manuals & Diskettes)
- 5 Year Warranty (1st Year on Site, remaining 4 years return to base labour only)
- Lifetime Technical Support

### SOUND BLASTER 16

- 16 Bit Stereo Sound Card
- CD Quality Audio
- Enhanced OPL3 Stereo Music Synthesiser
- 4W Per Channel Output

### QUAD SPEED CD ROM DRIVE

- Access Time < 250 ms
- Data Transfer Rate > 600kB/s
- Cache 256K
- Caddyless Frontloading Tray

### SPEAKERS

- Mains Powered 10 Watt Speakers

### SOFTWARE

- MS Works ● MS Money
- MS Encarta 1995 on CD ROM
- MS Golf ● MS Scenes
- MS Dangerous Creatures

### SYSTEM UPGRADES

- 15" SVGA Low Radiation N.I. Monitor.....£60
- 17" SVGA Low Radiation N.I. Monitor.....£275
- Memory per Mb.....£30

### INTERNET UPGRADES

- US Robotics Sportster 14.4 Internal.....£105
- 1Month FREE Internet Access
- US Robotics Sportster 28.8 Internet.....£157
- 1Month FREE Internet Access

### 486 CTX NOTEBOOK

#### All Machines Include:

- 8Mb Ram Expandable to 32Mb
- Removeable 520Mb IDE Hard Drive
- Internal 1.44Mb Floppy Drive
- 1Mb VESA Local Bus Graphics
- 1 Enhanced Parallel Port, 1 Serial Port
- External Monitor Port
- External Keyboard Port
- Integrated 19mm Super Trackball
- 16 bit Sound Blaster Compatible Sound System with built in Speaker and Microphone
- 3 to 6 hour Battery life (NIMH)
- Windows 95 (Full Manuals & Diskettes)
- 2 PCMCIA Ports, 1 Type 2, 1 Type3
- Carry Case
- 36 Months on-site Warranty

### NOTEBOOK OPTIONS

- Additional 520Mb Drive.....£249
- Docking Station.....£385
- Additional 4Mb Memory.....£149

\*All prices exclude VAT & Delivery.

## GUARANTEED QUALITY

Our systems are built using only the best products from some of the world's leading suppliers. What's more, each system has to pass stringent quality controls, including a lengthy burn-in period. All Simply PCs are backed by a comprehensive 5 year warranty including on-site parts and labour for the first 12 months. The remaining 4 years are covered by an RTB (labour only) warranty. There's also lifetime telephone support and a 30 day unconditional money back guarantee.

PC System Sales 0181 498 2130 - Corporate Sales 0181 498 2150 - General Sales 0181 523 4020

SIMPLY COMPUTERS TEL 0181 523 4020 FAX 0181 523 4002





## HARD DRIVES

### 3.5" IDE

#### Conner

Conner CFS635A 635Mb 12ms EIDE.....	£128
Conner CFS850A 850Mb 12ms EIDE.....	£138
Conner CFS1275A 1.3Gb 11ms EIDE.....	£185

Conner Hard Drives covered by 1 year warranty

#### Fujitsu

Fujitsu M1603T 545Mb EIDE 10ms.....	£118
Fujitsu M1606T 1091Mb EIDE 10ms.....	£186

Fujitsu Hard Drives covered by 3 year warranty

#### Maxtor

Maxtor 540Mb 7540AV 12ms EIDE.....	£116
Maxtor 850Mb 7850AV 12ms EIDE.....	£137
Maxtor 1.2Gb 71260AV 12ms EIDE.....	£185
Maxtor 1.6Gb 71620AV 12ms EIDE.....	£315

Maxtor Hard Drives covered by 1 year warranty

#### Quantum

Quantum Trailblazer 840Mb 12ms.....	£138
Quantum Fireball 540Mb 12ms EIDE.....	£119
Quantum Fireball 1Gb 12ms EIDE.....	£185

Quantum Hard Drives covered by 2 year warranty

## Samsung

Samsung PLS-30854A 854Mb 10ms EIDE.....	£129
Samsung PLS-31084A 1.08Gb 11ms EIDE.....	£169
Samsung PLS-31274A 1.27Gb 11ms EIDE.....	£169

Samsung Hard Drives covered by 3 year warranty

#### Seagate

Seagate ST51080A 1080Mb 10.5ms EIDE.....	£185
Seagate ST31270A 1.2Gb 12ms EIDE.....	£195

Seagate Hard Drives covered by 3 year warranty

#### Western Digital

Western Digital AC2635 635Mb 12ms EIDE.....	£122
Western Digital AC2850 850Mb 10ms EIDE.....	£138
Western Digital AC31200 1.28Gb 10ms EIDE.....	£192
Western Digital AC31600 1.6Gb 12ms EIDE.....	£279

Western Digital Hard Drives covered by 3 yr warranty

### 2.5" IDE

#### Seagate

Seagate ST9420AG 420Mb 16ms.....	£199
----------------------------------	------

#### Toshiba

Toshiba MK1824FCV 340Mb 12ms.....	£199
Toshiba MK1924FC 540Mb 12ms.....	£209
Toshiba MK1926FC 810Mb 12ms.....	£425

#### ACCESSORIES

Hard Drive Brackets.....	£5
Removable IDE Hard Drive Rack.....	£25
IDE Hard Drive Cable.....	£5

#### SCSI

#### Conner

Conner CFP1080S 1Gb SCSI 9ms.....	£255
Conner CFP2105S 2Gb SCSI 9ms.....	£495
Conner CFP2107S 2Gb SCSI 8.5ms.....	£565
Conner CFP4207S 4Gb SCSI 9ms.....	£795

Conner Hard Drives covered by 5 year warranty

#### Fujitsu

Fujitsu M1603S 545Mb SCSI-2 10ms.....	£135
---------------------------------------	------

Fujitsu Hard Drives up to 1Gb covered by 2 year Warranty

Fujitsu M1606S 1091Mb SCSI-2 10ms.....	£235
--	------

Fujitsu M2932S 2017Mb SCSI-2 10ms 7200rpm.....	£544
--	------

Fujitsu M2934S 4350Mb SCSI-2 10ms 7200rpm.....	£748
--	------

Fujitsu Hard Drives over 1Gb covered by 5 year Warranty

#### IBM

IBM 1Gb Pegasus 3.5" 11ms.....	£244
IBM 2Gb Starfire 3.5" 9ms.....	£719
IBM 4Gb Starfire 3.5" 9ms.....	£1,096

IBM Hard Drives covered by 5 year Warranty

#### Micropolis

Micropolis 2GB 8.5ms Fast SCSI-2 4221.....	£574
Micropolis 4.2GB 8.5ms Fast SCSI-2 3243.....	£768
Micropolis 9.1GB 12ms Fast SCSI-2 1991.....	£1,465
Micropolis 2GB 8.5ms Audio Visual 4221AV.....	£618
Micropolis 4.2GB 8.5ms Audio Visual 3243AV.....	£818
Micropolis 9.1Gb 12ms Audio Visual 1991AV.....	£1486

Micropolis Hard Drives covered by 5 year Warranty

#### Quantum

Quantum Trailblazer 840Mb 12ms.....	£168
Quantum Fireball 540Mb 12ms.....	£144
Quantum Fireball 1Gb 12ms.....	£208
Quantum Atlas XP32150 2.1Gb 9ms.....	£566



## HARD DRIVES Cont.

Quantum Grand Prix 4.3Gb 8ms.....	£815
-----------------------------------	------

Quantum Hard Drives covered by 2 year Warranty

#### Seagate

Seagate ST31230N Hawk Fast SCSI-2 1Gb 9ms.....	£286
Seagate ST32430N Hawk Fast SCSI-2 2.1Gb 9ms.....	£548

Seagate Hard Drives upto 1Gb covered by 2 year Warranty

Seagate ST32550N Barracuda Fast SCSI-2 2.1Gb 8ms.....	£678
---	------

Seagate ST15150N Barracuda Fast SCSI-2 4Gb 8ms.....	£1088
---	-------

Seagate ST15230N Hawk Fast SCSI-2 4294Mb 9ms.....	£799
Seagate ST410800N Elite Fast SCSI-2 9Gb 10ms.....	£2,185

Seagate Hard Drives over 1Gb covered by 5 year Warranty

## REMOVABLE DRIVES

### Syquest Internal Drives

Syquest EZ 135 Internal.....	£164
135Mb Unformatted Disk for PC (single).....	£16
SQ5200S 5.25" Removable 200Mb HDD(SCSI).....	£278
SQ3270A 3.5" Removable 270Mb HDD(IDE/AT).....	£265
SQ3270S 3.5" Removable 270Mb HDD(SCSI).....	£265

### Syquest External Drives

Syquest EZ 135 External.....	£198
SQ3270 P/P 270Mb Parallel Port Drive.....	£449
SQ3270 EXT 270Mb External SCSI Value Pack.....	£475

(Excludes Interface)

#### Omega

**Zip Drive SCSI £169 Parallel**

Zip Drive SCSI.....	£169
100Mb Zip Disk Per-Formatted for PC (Single).....	£15
100Mb Zip Disk Per-Formatted for PC (5 Pack).....	£65
100Mb Zip Disk Per-Formatted for PC (10 Pack).....	£115

### Syquest Media

SQ400 5.25" 44Mb Cartridge for SQ555.....	£30
SQ800 5.25" 88Mb Cartridge for SQ5110C & SQ5110.....	£34
SQ2000 5.25" 200Mb Cartridge for SQ5200.....	£52
SQ310 3.5" 105Mb Cartridge for SQ3105A & SQ3105S.....	£38
SQ327 3.5" 270Mb Cartridge for SQ3270.....	£42

## ACCESSORIES

### EXTERNAL SCSI CASES

Single 5.25" Drive Case 40W PSU.....	£55
Dual 5.25" Drive Case 60W PSU.....	£69
Quad 5.25" Drive Case 150W PSU.....	£99

### SCSI Cables

Removable SCSI Hard Drive Rack.....	£29
Single Drive Internal.....	£8
Dual Drive Internal.....	£9
Triple Drive Internal.....	£15
Centronic 50 to Centronic 50.....	£16
Centronic 50 to 25 Pin M.....	£18
Centronic 50 to Micro D.....	£29
Micro D to Micro D.....	£29



## OPTICAL DRIVES

Fujitsu 230Mb Optical Drive 3.5 Internal Bare.....	£355
Fujitsu 230Mb Optical Drive 3.5 External Kit.....	£595
Fujitsu 230Mb Optical Drive 3.5 Parallel Kit.....	£685

## Panasonic PD DRIVE

Quad Speed CD ROM and 650 Mb Rewritable Optical Drive in One

**£449**

Panasonic PD Drive Kit Internal.....	£565
Includes SCSI Interface, Host Adaptor & Software	
Panasonic PD Drive External (Bare).....	£645
Includes SCSI Interface, Host Adaptor & Software	
Panasonic PD Drive Kit External.....	£695
Includes SCSI Interface, Cables & Software	
Panasonic PD Media.....	£35
Panasonic LF7304 (Int) 1.5Gb Read/Writable Optical.....	£1,535
Panasonic LF7300 (Ext) 1.5Gb Read/Writable Optical.....	£1,699



## TAPE STREAMERS

### Backpack External

Backpack 900 680Mb Parallel T/S.....	£325
--------------------------------------	------

### Colorado Internal

Jumbo DJ35 350Mb Tape Streamer.....	£70
Jumbo DJ25 680Mb Tape Streamer.....	£115
HP Colorado T1000 800Mb Tape Streamer.....	£115
Jumbo DJ50 1.4Gb Tape Streamer.....	£195

### Colorado External

Trakker JT35 340Mb Tape Streamer.....	£145
Trakker JT25 700Mb Tape Streamer.....	£195

### Iomega Internal

Iomega Ditto 420Mb Tape Streamer.....	£85
Iomega Ditto 800 800Mb Tape Streamer.....	£128

### Iomega External

Iomega 250Mb Parallel Tape Streamer.....	£149
Iomega Ditto 800 800Mb Parallel Tape Streamer.....	£219

### Conner Internal

Conner Tape Store 420 AT.....	£95
Conner Tape Store 800 AT.....	£126
Conner Tape Store 4000 SCSI.....	£384
Conner Tape Store 4000 EIDE.....	£394
Conner 2GB DAT Internal Drive.....	£595
Conner 8GB DAT Internal Drive.....	£659

### Conner External

Conner Tape Store 420 AT.....	£235
Conner Tape Store 850 AT.....	£285
Conner Tape Store 4000 SCSI.....	£585

### Wangtek Internal

Wangtek 250Mb Internal SCSI Tape Streamer.....	£285
Wangtek 500Mb Internal SCSI Tape Streamer.....	£385
Wangtek 1Gb Internal SCSI Tape Streamer.....	£475
WangDat 3100 Internal 2Gb SCSI DAT.....	£515
WangDat 3200 Internal 4-8Gb SCSI DAT.....	£630
WangDat 3400DX Internal 8-16Gb SCSI-2 DAT.....	£695

### Wangtek External

Wangtek 500Mb External SCSI Tape Streamer.....	£539
Wangtek 1Gb External SCSI Tape Streamer.....	£639
WangDat 3100 External 2Gb SCSI DAT.....	£655
WangDat 3200 External 4-8Gb SCSI DAT.....	£695
WangDat 3400DX External 8-16Gb SCSI-2 DAT.....	£809

### Hewlett Packard Internal

HP Surestore 2000i 2Gb.....	£595
HP Surestore 5000i 4Gb.....	£675
HP Surestore 6000i 8Gb.....	£785

### Hewlett Packard External

HP Surestore 2000e 2Gb Bare.....	£711
HP Surestore 5000e 4Gb Bare.....	£795
HP Surestore 6000e 8Gb Bare.....	£948

### Sony Internal

Sony (Internal) SDT 5000 4Gb SCSI-2.....	£649
--	------

### Tape Streamer Media

MC3000XL Tapes for Iomega 700.....	£15
DC2120 Tape Streamer Tape.....	£12
2GB DAT Tapes.....	£12
3M 400Mb Tapes for Iomega Ditto.....	£25



## FLOPPY DRIVES

3.5" 1.44Mb Floppy Drive.....	£19
5.25" 1.2Mb/360K Floppy Drive.....	£34
Teac 3.5" 1.44mb Floppy Drive.....	£28
Teac 5.25" 1.2Mb Floppy Drive.....	£38
Teac 3.5" & 5.25" Dual Floppy Drive.....	£86

### CABLES AND ACCESSORIES

5.25" Floppy Drive Brackets.....	£5
Standard 5 Head Floppy Cable.....	£5
Extra Long 5 Head Floppy Cable.....	£7

VISIT SIMPLY at [HTTP://www.rudex2.com/simply.html](http://www.rudex2.com/simply.html)

General Sales 0181 523 4020 - Software Sales 0181 498 2120 - PC System Sales 0181 498 2130



## CONTROLLERS

Amidisk IDE Extension Adapter.....£49  
(Removes large drive configuration problems and allows use of up to 4 drives)

### IDE ISA

IDE 2FDD/2HDD.....£9  
IDE 2FDD/2HDD 2S,1P,1G.....£12  
Enhanced IDE 2FDD/2HDD 2S,1P,1G.....£19  
IDE 4FDD/2HDD 2S,1P.....£29  
IDE 2FDD(2.88Mb)/2HDD 2S,1P,1G.....£34  
4FDD 2.88Mb Floppy Controller.....£23

### IDE ISA Cache

BusLogic KT510 ISA 16 Bit IDE Cache.....£75

### VESA Local Bus Controllers

BusLogic KT410 VLB 32 Bit IDE Cache.....£95  
BusLogic KT910 IDE Caching Host Adaptor.....£145  
VESA Local Bus IDE 2HDD/2FDD 2S,1P,1G.....£13  
VESA Local Bus EIDE 2HDD/2FDD 2S,1P,1G.....£18  
(mode 3 only)

VESA Local Bus EIDE 4HDD/2FDD, 2S, 1P.....£29  
VESA Local Bus EIDE 4HDD/2FDD, 2S, 1P,1G.....£39  
(mode 3, 4 & 5 up to 10Mb per Sec, CMD Chipset)

VESA Local Bus EIDE 4HDD/2FDD  
2S, (6550) 1P, 1G.....£49  
VL395 SCSI/IDE 2S, 1P, 1G 64K Cache.....£99  
VL220 Mode 3 IDE Cache 6HDD, 2FDD  
2S (6550),1P, 1G 0K.....£79  
VL355 SCSI/IDE-3 SCSI, - 2HDD,2FDD  
2S(6550)1P,1G 0K.....£89  
Promise DC-420VL 512K 2HDD/2FDD  
2S, 1P Max 1Mb.....£89  
DC-680VL 4HDD/2FDD 0K.....£99  
Promise EIDE 4030VL 4HDD/2FDD  
2S (6550) 1P, 1G0K.....£105

### PCI Controllers

PCI IDE Controller (mode 3 & 4).....£35  
DC-5030 IDE Cache Controller(0K)PCI.....£105

### SCSI Controllers

#### Adaptec

## Adaptec

Adaptec Altra Total CD Kit.....£38  
Adaptec Altra Total Connect Kit.....£64  
Adaptec 1542CP ISA SCSI Controller Bare.....£124  
Adaptec 1542CP ISA SCSI Complete Kit.....£157  
Adaptec 2742 EISA SCSI Complete Kit.....£239  
Adaptec 2825 VL Bus IDE/SCSI Total Advantage.....£104  
Adaptec 2842 VL Local Bus SCSI.....£159  
Adaptec 2940 PCI SCSI Kit.....£168  
Adaptec 2940 PCI SCSI Wide Kit.....£236  
Adaptec 3940 PCI SCSI Multi Channel Complete Kit.....£289  
Adaptec 348 MINISCSI Plus (Parallel SCSI Adaptor).....£78  
Adaptec 358 MINISCSI Plus (Enh Parallel SCSI Adaptor).....£108  
Adaptec 460 SCSI PCMCIA.....£148

### BusLogic

BusLogic BT 545C ISA 16 Bit SCSI Adaptor.....£164  
BusLogic KT 545C ISA 16 Bit SCSI Adaptor.....£178  
BusLogic BT 445C VLB 32Bit SCSI Adaptor.....£148  
BusLogic KT 445C VLB 32 Bit SCSI Adaptor.....£152  
BusLogic BT 946C PCI SCSI Adaptor.....£164  
BusLogic KT 946C PCI SCSI Adaptor.....£194  
BusLogic BT 640A MCA 32 Bit SCSI Adaptor.....£225  
BusLogic BT 747C EISA Fastit SCSI Adaptor.....£235  
BusLogic KT 747SC Fast SCSI EISA 32 Bit.....£254

### Future Domain

Future Domain TMC 850 ISA 8 Bit CD Rom Kit.....£29  
Future Domain TMC 1610 MCDI ISA  
16 Bit CD ROM SCSI Kit.....£46  
Future Domain TMC 1610 ISA.....£49  
Future Domain TMC 1680 SUP SCSI.....£98  
Future Domain TMC 3260 PCI SCSI Kit.....£98  
Future Domain MCS 700 MCA Kit.....£106  
Future Domain SCSI 2 Go PCMCIA.....£155

### I/O Controllers

Multi I/O Controller 2S, 1P, 1G.....£9  
Parallel Port Card.....£9  
Enhanced Parallel Port Card.....£15  
Serial Card.....£9  
Serial Card with Fast Uart 16550.....£25  
4 Port RS232 Adaptor.....£78



## CD DRIVES

Panasonic PD Drive.....£449  
(Quad Speed CD ROM/650Mb Rewritable Drive in One)  
Panasonic PD Drive Kit Internal.....£565  
Panasonic PD Drive External (Bare).....£645  
(Includes SCSI Interface, Host Adaptor & Software)

### IDE Interface

## Aztech

### CD Six Speed CD IDE

# £138

Goldstar GCD-R540B Quad Speed CD IDE.....£99  
Mitsumi CRMC - FX400D Quad Speed CD IDE.....£99  
NEC Quad Speed CD IDE (Bare Drive).....£109

## PANASONIC - CR581

### QUAD SPEED CD ROM IDE

# £95

Pioneer DR-UA124X 4x CD ROM EIDE.....£115  
Quad Pro Quad Speed IDE.....£115  
Sony CDU-76E Quad Speed IDE 250ms.....£115

Teac CD-56E Six Speed IDE.....£209

Toshiba XM5302B Quad Speed ATAPI IDE CD.....£109  
Universal IDE ATAPI CD Interface Card.....£13

(All CD Drives are supplied with Manual, Driver Diskette & Cables)

### SCSI Interface

NEC 3XP+ Triple Speed Portable.....£242  
NEC 6Xi Internal Six Speed.....£259  
NEC 6Xe External Six Speed.....£359  
NEC AT SCSI Interface Kit.....£55  
NEC AT Parallel/SCSI Interface Kit.....£95  
Pioneer DR-U124X 4.4x CD-ROM SCSI-2.....£185  
Plextor 4PleX Internal Quad Speed CD ROM Drive  
PX43CS (256k Cache, includes rail, SCSI cable  
& caddy).....£219  
Plextor 4PleX External Quad Speed CD ROM Drive  
PX45CS (256k Cache, includes power cable, SCSI cable &  
caddy).....£319  
Plextor 4PleX External Quad Speed CD ROM Drive  
PC45CH (1Mb Cache, includes power cable, SCSI cable  
& caddy).....£349  
Plextor 6PleX 6 Speed CD-ROM Drive Internal.....£295  
Plextor 6PleX 6 Speed CD-ROM Drive External.....£389

All the above 4PleX drives are SCSI-2 devices and come with a 2 year RTB warranty.

Sony CDU - 765 4x SCSI 250ms.....£139  
Toshiba XM-3601B SCSI Quad Speed  
Bare Internal 4.4x.....£209  
Toshiba KT-3601SA SCSI Quad Speed External Kit.....£435  
Toshiba XM-3701B SCSI-2 6.7 Speed Bare Int CD ROM  
(Random Access 135Ms, 256K Buffer 1000Kbs Data Transfer Rate).....£565  
Toshiba XM-3701SA SCSI-2 6.7 Speed Ext CD ROM.....£689

### PCMCIA CD ROM Drives

Panasonic CD ROM PCMCIA.....£269

### Parallel CD ROM Drives

Backpack CD ROM/4S Quad Speed Parallel.....£249

### JukeBox CD Drives

Nakamichi MBR-7 Dual Speed 7 Disk Stacking.....£259  
Pioneer DRM-624X Quad Speed 6 Disk Jukebox.....£459  
Pioneer 1804X Quad Speed 18 Disk Jukebox.....£1,395

### Writeable CD ROM Drives

JVC XR-W2001 Dual Speed Internal SCSI CD Rec.£1,339  
Kodak Photo CD Writer 225.....£1,935  
Kodak Multi-Write Publishing Software.....£735  
Kodak Writable CD Media.....£8



## CD ROM KITS

### CREATIVE Dual Speed IDE Kit

■ Dual Speed IDE CD Rom Drive  
■ 2 CDs - CD 1 Theme Park,  
CD 2 Descent, Doom, War Craft & Heretic  
**£49**

### CREATIVE Sound Blaster Multimedia Home CD

# £295



■ Sound Blaster 16 ASP Card ■ Speakers ■ MS Golf  
■ Quad Speed IDE Drive ■ MS Ancient Lands  
■ MS Publisher ■ MS Encarta '95 ■ MS Works  
■ MS Bookshelf '94 ■ MS Scenes ■ Syndicate  
■ MS Dangerous Creatures ■ MS Cinemania '95  
■ Ultima VIII ■ Strike Commander  
■ MS Musical Instruments ■ Wing Commander II

### CREATIVE Sound Blaster 16 Discovery 4x Value Pack

■ 18 CD Titles ■ 16 Bit Sound  
■ Speakers ■ Now with Quad Speed CD ROM  
**£265**

### CREATIVE Sound Blaster 16

■ 16 bit Stereo Sound  
■ Quad Speed CD  
■ Screen Beat Speakers  
■ Photo Access CD

# £175

■ 16 bit Stereo Sound  
■ Quad Speed CD  
■ Screen Beat Speakers  
■ Windows 95 Upgrade

# £235

We welcome Official Purchase Orders from customers in the Public Sector/Education establishments and quoted companies. All other orders are accepted on a cash with order basis. We accept cash, cheques (7 days clearance) and most major credit & debit cards.

PLEASE NOTE: Prices are changing so rapidly they can go up or down at any time. We will always endeavour to offer you the best prices. We aim to offer all goods from stock. Orders received before 15.00 will be despatched the same day. Our carriage charges are as follows: 1st Class Recorded Post.....£5. 1st Class Registered Post.....£7; Next - Day Courier.....£10 - £15 (dependant upon the number of parcels). If we haven't got the goods in stock, you will be informed by our salesperson before taking your order. You will be given the expected shipping date. With the exception of Mice and joysticks, all our goods are supplied with 12 months RTB warranty. And there's a 14 day "no-quibble" money back guarantee on all goods except printers. This guarantee only applies to un-opened software packages.



All prices exclude VAT and Delivery.

Prices effective as of 1st November 1995

All sales are subject to our standard terms and conditions.

Prices are correct at time of going to press. E&O.E.

# Simply COMPUTERS

THE PEOPLE WHO LOVE PCs

Telephone: 0181 523 4020

VISIT SIMPLY at HTTP : // www.rudex2.com/simply.html

PC System Sales 0181 498 2130 - Software Sales 0181 498 2120 - General Sales 0181 523 4020

SIMPLY COMPUTERS TEL 0181 523 4020 FAX 0181 523 4002





## MOTHERBOARDS

### MOTHERBOARDS WITH CPU

**ISA**  
80386SX-40Mhz.....£37

**VESA LOCAL BUS**  
SGS DX2-66Mhz 256K VESA Local Bus.....£120  
Intel DX2-66Mhz 256K VESA Local Bus.....£154  
Intel DX4-100Mhz 256K VESA Local Bus.....£183  
AMD 80486DX4-100Mhz 256K VESA Local Bus.....£140

All the above motherboards have ZIF Socket & are Pentium® Overdrive Upgradeable

**PCI**  
SGS 80486DX2-66Mhz 256K PCI Motherboard.....£140  
Intel 80486DX2-66Mhz 256K PCI Motherboard.....£174  
Intel DX4-100Mhz 256K PCI Motherboard.....£203  
AMD 80486DX4-100Mhz 256K VESA Local Bus.....£160  
Pentium® 75Mhz PCI Motherboard 256K Cache.....£250  
Pentium® 90Mhz PCI Motherboard 256K Cache.....£320  
Pentium® 100Mhz PCI Motherboard 256K Cache.....£370  
Pentium® 120Mhz PCI Motherboard 256K Cache.....£420  
Pentium® 133Mhz PCI Motherboard 256K Cache.....£560

All the above motherboards have Plug & Play BIOS & on board enhanced IDE & I/O

Pentium® Triton Chipset 75Mhz  
PCI Motherboard 256K Cache.....£264  
Pentium® Triton Chipset 90Mhz  
PCI Motherboard 256K Cache.....£334  
Pentium® Triton Chipset 100Mhz  
PCI Motherboard 256K Cache.....£384  
Pentium® Triton Chipset 120Mhz  
PCI Motherboard 256K Cache.....£434  
Pentium® Triton Chipset 133Mhz  
PCI Motherboard 256K Cache.....£574

All the Above motherboards have Plug & Play BIOS, Built in EIDE & Multi I/O

Intel Zappa Pentium® 75Mhz 256K Cache.....£329  
Intel Zappa Pentium® 90Mhz 256K Cache.....£399  
Intel Zappa Pentium® 100Mhz 256K Cache.....£479  
Intel Zappa Pentium® 120Mhz 256K Cache.....£599  
Intel Zappa Pentium® 133Mhz 256K Cache.....£695  
Intel Endeavour Pentium® 90Mhz 256K Cache.....£449  
Intel Endeavour Pentium® 100Mhz 256K Cache.....£549  
Intel Endeavour Pentium® 120Mhz 256K Cache.....£699  
Intel Endeavour Pentium® 133Mhz 256K Cache.....£869

All the above motherboards have TRITON chipset, on board Enhanced IDE & I/O & are Intel Manufactured

### MOTHERBOARD WITH NO CPU

486 VESA Local Bus M/B 256K Cache ZIF NCPU.....£75  
(3 VESA, 4 ISA 4 x 72Pin Simms)  
486 VESA Local Bus M/B 256K Cache ZIF NCPU.....£75  
(3 VESA, 4 ISA 4 x 30Pin Simms & 2 x 72Pin Simms)  
486 PCI Multi I/O Motherboard  
256K Cache Zif NCPU.....£95  
486 EISA M/B 256K Cache NCPU.....£219  
Pentium® 75/90/100Mhz Motherboard with  
EIDE & Multi I/O.....£125

## TRITON MOTHERBOARD 75-133MHZ

- Pentium® 90/100/120/133MHz 256K ASYNC Cache
- Intel TRITON Chipset
- Integrated EIDE & Floppy Controller
- Flash BIOS
- Plug & Play (PNP) Support
- Supports conventional SRAM & EDO RAM



**£139**

Pentium® TRITON 90/100/120/133MHz M/B EIDE  
PCI/ISA Super I/O 256K Pipeline Burst Mode  
Cache.....£199  
Dual Pentium® 90/100Mhz 256K Cache Motherboard  
EIDE & Multi I/O.....£245

### CPU's

SGS ST486DX2-66GS.....£35  
Intel 80486DX2-66Mhz CPU.....£79  
Intel 80486DX4-100Mhz CPU.....£108  
AMD 80486DX4-100Mhz CPU.....£65  
Pentium® 75Mhz CPU.....£125  
Pentium® 90Mhz CPU.....£195  
Pentium® 100Mhz CPU.....£245  
Pentium® 120Mhz CPU.....£295  
Pentium® 133Mhz CPU.....£435  
Pentium® 150Mhz CPU.....£POA

### OVERDRIVE CHIPS

Overdrive Chip 486SX2-50.....£76



## MOTHERBOARDS

Overdrive Chip 486DX2-66.....£86  
Overdrive Chip 486DX4-75.....£98  
Overdrive Chip 486DX4-100.....£122  
Pentium® Overdrive 63Mhz.....£179

(Overdrive Chip for 25Mhz Motherboards)

Pentium® Overdrive 83Mhz.....£189  
(Overdrive Chip for 33Mhz Motherboards)

### UPGRADE CHIPS TO 386 TO CYRIX 486

Upgrade 386SX 16/20 to 486SX 32/40.....£128  
Upgrade 386SX 25 to 486SX 50.....£154  
Upgrade 386DX 20 to 486DX 40.....£128  
Upgrade 386DX 25 to 486DX 50.....£154  
Upgrade 386DX 33 to 486DX 66.....£178

### 486 HEAT SINK

486 Heat Sink with Fan.....£9  
Pentium® 75/90/100/120/133Mhz  
Heat Sink with Fan.....£12



## KEYBOARDS AND RODENTS

### KEYBOARDS

102 Key UK Keyboard.....£12  
105 Key Windows 95 Keyboard.....£19  
Cherry G83-6102 Keyboard Soft.....£18  
Cherry G83-6105 Keyboard Soft with Win 95 Keys.....£19  
Cherry G81-3000 Keyboard Soft with Win 95 Keys.....£22  
Cherry G81-3000 Keyboard Soft.....£22  
Cherry G80-3000 Keyboard Click.....£36  
Cherry G84-4100 Notebook Keyboard.....£65  
Cherry G80-5000 Ergo Keyboard.....£195  
Cherry G84-4400 Trackball Notebook Keyboard.....£199

## MOUSE & KEYBOARD OFFER

Cherry G81-3000 Keyboard Soft  
& MS Mouse Version 2 **SAVE £32**  
**£39**

Fujitsu FKB 4720 UK Keyboard.....£27  
Hi Board Windows '95 Keyboard.....£27  
Keytronics Windows '95 Keyboard.....£25

## MS NATURAL KEYBOARD FOR WINDOWS '95 £59

### ACCESSORIES

PS/2 Keyboard Adaptor (AT to PS/2).....£5  
PS/2 Keyboard Adaptor (PS/2 to AT).....£5  
Keyboard Extension Cable.....£8  
Naltech Plastic Keyboard Cover.....£19

### RODENTS

2 Button Mouse MS Compatible.....£8  
Creative Aeroduet (complete with 3D software).....£95  
Genius Easy Mouse.....£8  
Genius Mouse 3.....£14  
Logitech Pilot Mouse Serial.....£16  
Logitech Pilot Mouse PS/2.....£16  
Logitech Pilot Trackball.....£24  
Logitech Mouseman Sensa Mouse.....£36  
(available in four flavours)  
Logitech Mouseman Bus.....£38  
Logitech Cyberman 3D Mouse.....£56  
Logitech Trackman Stationary.....£42  
Logitech Trackman Portable.....£30  
Logitech Trackman Voyager.....£48  
Logitech Trackman Vista.....£42  
Logitech Mouseman Cordless.....£48  
Logitech Trackman Marble.....£54  
Microsoft Home Mouse.....£20  
Microsoft Bus Mouse for Windows 95.....£48

## MS MOUSE V2.0 COMBO WITH INTELLIPOINT £36

Genius 'Easy Painter' Digitizer.....£65



## SOFTWARE AND BOOKS

MS Windows to Win 95 Upgrade on CD.....£59  
MS Windows to Win 95 Upgrade on 3.5".....£59  
MS-DOS to Win 95 Upgrade on 3.5".....£119  
MS-DOS 6.22 Upgrade.....£38  
MS Win for Workgroups 3.11 Upgrade.....£44  
MS-Windows for Workgroups 3.11.....£89



## CO-PROCESSORS

80287-20Mhz Co-Processor.....£45  
387SX-25Mhz/SX-20Mhz/SX-16Mhz CO-P.....£38  
80387SX-33Mhz Co-Processor.....£39  
80387SX-40Mhz Co-Processor.....£39  
80387DX-33Mhz Co-Processor.....£39  
80387DX-40Mhz Co-Processor.....£40



## CASES

## Deluxe Cases



Deluxe Desktop Case with LED.....£35  
Deluxe Mini Tower Case with LED.....£35  
Deluxe Slim-Line Case.....£49  
Deluxe Large Mini Tower Case with LED.....£59  
Deluxe Midi Tower Case.....£59  
Deluxe Desktop Multi Media Case 200 Watts.....£75  
Deluxe Full Tower Case with LED.....£75  
All the Above cases come with Screws & Cables & 200 Watt PSU

### REPLACEMENT PSU's

200W PSU for Desktop/Minitower.....£25  
230W PSU for any case.....£29  
300 Watt PSU for any case.....£39



## LEISURE

### JOYSTICKS

Warrior 5 Joystick.....£9  
Warrior 5 Plus Joystick.....£12  
Mach 1 Joystick.....£12  
Mach 1 Plus Joystick.....£16  
Mach 2 Joystick.....£21  
CH Flightstick.....£27  
CH Flightstick Pro.....£48  
CH Jtestick Joystick.....£23  
CH Virtual Pilot Flight Yoke.....£54  
CH Virtual Pilot Pro Flight Yoke.....£62  
CH Pro Pedal for Flight Sims.....£65  
Gravis Analog Joystick.....£24  
Gravis Professional Analog Joystick.....£32  
Gravis PC Game Pad & FIFA  
International Soccer (CD).....£35  
Gravis Firebird Flight & Weapon Control System.....£59  
Gravis Phoenix Flight & Weapon Control System.....£95  
Logitech Wingman.....£23  
Logitech Wingman Extreme.....£29

MS Sidewinder Joystick.....£19  
MS Sidewinder Joystick 3D Pro.....£35  
MS Sidewinder Joystick & Fury.....£POA

Dual Joystick Splitter Cable.....£9  
Quickshot Skymaster.....£19

### GAME CARDS

Gravis Game Card (50Mhz Max).....£25  
CH Gamecard III Auto up to 80Mhz.....£28  
CH Gamecard III MCA 50Mhz.....£32  
JCD Gamecard 11 PCMCIA Dual Joystick Interface.....£45  
IBM Game Card & Joystick 50Mhz.....£19

### Professional Input Devices

**IMNOVA PC GOLF**  
**Virtual Golf Club £119**

VISIT SIMPLY at HTTP : // www.rudex2.com/simply.html

General Sales 0181 523 4020 - Software Sales 0181 498 2120 - PC System Sales 0181 498 2130



## DESKTOP MEMORY

AST	2Mb	4Mb	8Mb	16Mb	32Mb
1remmia LXP/60, Bravo LC486, NewBravo 486			£244	£454	
Bravo 386SX/20, Bravo 286/16 & Advantage Plus.		£249			

COMPAQ	2Mb	4Mb	8Mb	16Mb	32Mb
386/20e/25E/S					
Expansion Board		£205			
Module		£158			
Deskpro286/386N, S20/20N, M & I Series		£145	£285		
Proliant 1000 5/60, 2000 & 4000 Deskpro XE, Systempro XL				£556	£1,150
Prolinea 3/25S & Prolinea 4 Series		£143	£277		

DELL	2Mb	4Mb	8Mb	16Mb	32Mb
316SX, 320SX, 325SX	£63				
P&D		£137		£539	
L, M, T		£119		£529	
TE, DE, DE/2, SE, DSA		£165	£279		
Latitude		£135			

ELONEX	2Mb	4Mb	8Mb	16Mb	32Mb
PC386XSM, SXB, 386/16, B/33.(KITS)	£64	£129	£249		
PC386 V/E, 486 V/E (KITS)		£139	£279	£464	
WS Range (KITS)		£139	£269	£489	
PC433M 450m, 466M (KITS)		£122	£279	£469	
LT386SX/P (KITS)	£64	£135			
PC500 Series			£279	£469	
Elonex 560F EISA (KITS)			£329	£499	

HEWLETT PACKARD	2Mb	4Mb	8Mb	16Mb	32Mb
Vectra 386/25PC, 486PC, 486S/20 (KITS)		£159	£299		
HP Valueline 486 Netserv Series			£289		
Module				£599	

IBM	2Mb	4Mb	8Mb	16Mb	32Mb
50,660,50Z, 55SX, 65, 56SX, SLC					
Expansion Board		£249			
Module		£149			
Model 70, 80 Expansion Board		£259			
Module		£149			
Ambra, Hurdla, Sprinter & Enterprise	£65	£145			
PSI Pro, Willow Series, Valuepoint		£138			

GATEWAY	2Mb	4Mb	8Mb	16Mb	32Mb
PC 45X-33 Module		£129		£475	
PC 4DX-33V, PC 4DX-66V					
Module		£129		£475	£950
PC 4D-66, PC 4D-100 (KITS)			£299		£1199

**GATEWAY PC P5-60, PC P5-66 64Mb (KITS) £2695**

PACKARD BELL	2Mb	4Mb	8Mb	16Mb	32Mb
Legend 200/316SX (KITS)	£69	£144			
Legend 600, 900 (KITS)		£129	£279		
486 Local Bus					
Module	£85	£149			
Force Range XL410/416/48616Mb (KIT)					£459



## PRINTER MEMORY

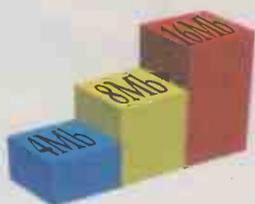
CANON	2Mb	4Mb	8Mb
LBP4 Expansion board		£78	
Module		£135	
LBP-811		£109	£179
Notebook		£139	£179

HEWLETT PACKARD	2Mb	4Mb	8Mb
Laserjet 4, M, Si, SiMX, Deskjet 1200C, 1200C/PS/Designerjet 600		£149	£259
Laserjet 11P, Laserjet 111, Laserjet 111P			
Laserjet 111D, Laserjet11D, Laserjet 11		£175	

If you do not see your computer, laptop, notebook or printer please call for details. All prices subject to market fluctuations.

## WINDOWS 95 PERFORMANCE

PERFORMANCE



MEMORY

Simply Computers stocks a huge range of proprietary memory products - at very competitive prices. In fact we stock so much we can't list every machine in the limited space available here.

All our memory products are very easy to install and come complete with comprehensive instructions. And you can add to that, a 5 year warranty on all memory products plus an unrivalled range of technical support services.

**IF YOU WANT TO GET MORE OUT OF WINDOWS 95, GET MORE MEMORY**

Windows 95 is the revolutionary new operating system from Microsoft. But if you want to make the most of this revolution, make sure your PC has got enough memory.

Order your memory products from Simply Computers. Call 0181 498 2110 today.

VISIT SIMPLY at [HTTP://www.rudex2.com/simply.html](http://www.rudex2.com/simply.html)



## GENERIC MEMORY

30 Pin Memory	Price
256K Simms 70ns.....	£10
1Mb x 9 Sipps 70ns 9 or 3 Chip.....	£39
1Mb x 9 Simms 70ns 3 Chip.....	£28
1Mb x 9 Simms 70ns 9 Chip.....	£30
4Mb x 9 Simms 70ns 3 Chip.....	£96
4Mb x 9 Simms 70ns 9 Chip.....	£109

72 Pin Memory	Price
1Mb x 32 Simms (4Mb) 70ns.....	£92
2Mb x 32 Simms (8Mb) 70ns.....	£184
4Mb x 32 Simms (16Mb) 70ns.....	£348
1Mb x 36 Simms (4Mb) 70ns.....	£104
2Mb x 36 Simms (8Mb) 70ns.....	£206
4Mb x 36 Simms (16Mb) 70ns.....	£398

EDO RAM	Price
4Mb EDO Simms 70ns.....	£118
8Mb EDO Simms 70ns.....	£222
16Mb EDO Simms 70ns.....	£484

## SIMM SAVERS



Instruction Manual  
Lifetime Warranty  
Hot Line Support  
Guaranteed Compatibility  
Suitable for most PCs

Allows 8 x 30 Pin SIMMS to be utilised in 1 72 Pin Socket.....£55

Allows 4 x 30 Pin SIMMS to be utilised in 1 72 Pin Socket.....£39



## MEMORY KITS

For most of the following manufacturers PC's:

AMSTRAD, COMMODORE, DAN TECHNOLOGY, DEC, ICL, KAMCO, MITAC, MBC, MJN, OLIVETTI, OLYMPIC, TANDON, TIKO, TIME, VALE, VIGLEN, WATFORD.

2Mb Kit.....	£62
4Mb Kit.....	£120
8Mb Kit.....	£239

Please telephone to see whether your machine is compatible.



## NOTEBOOK MEMORY

AMSTRAD	2Mb	4Mb	8Mb
ANB 386SX		£169	

AST	2Mb	4Mb	8Mb
Power Exec EL, 4/33SL, SLC		£159	£319

COMPAQ	2Mb	4Mb	8Mb
Contura 3/20, 3/25, 4/25, 4/25C, 4/25CX		£159	£295
LTE Lite 4/33C, 4/25C, 4/25, 4/25E, 386/20, 2525C, 25E		£163	£326

IBM	2Mb	4Mb	8Mb
Ambra Trekka	£89		
L40SX,N33SX	£82	£159	
Thinkpad 300/350/355/500/700/710/720/750/755C		£159	£339

NEC	2Mb	4Mb	8Mb
Ultralite 111	£155		£299
Ultralite Versa 20, 20C, 25, 25P, 25C		£189	£345

TOSHIBA	2Mb	4Mb	8Mb
T2000/SX/SXC/2200SX, 2200SX, 1800, 1850		£155	£289
T1950, CS, CT, 4600, 4600C		£179	£319
T4400C & SX, SXC 64, SXC, DXC		£165	£329



# MEMORY BITS

**FULL TECHNICAL SUPPORT AVAILABLE**

**EASY TO INSTALL**

**5 YEAR WARRANTY ON ALL MEMORY PRODUCTS**

**ALL PRODUCTS SUPPLIED WITH COMPREHENSIVE INSTRUCTIONS**

**INCREASE YOUR MEMORY AND GET MORE OUT OF WINDOWS 95**

**TELEPHONE 0181 498 2110 TO SPEAK TO OUR MEMORY EXPERTS**

All prices exclude VAT and Delivery. Prices effective as of 1st November 1995. All sales are subject to our standard terms and conditions. Prices are correct at time of going to press. E&OE.

**SIMPLY COMPUTERS**  
THE PEOPLE WHO LOVE PCs

Telephone: 0181 498 2110

SIMPLY COMPUTERS TEL 0181 523 4020 FAX 0181 523 4002



Software Sales 0181 498 2120 - Memory Sales 0181 498 2110 - General Sales 0181 523 4020



## SOUND CARDS

### CREATIVE

Sound Blaster	
Sound Blaster 16 Value IDE	£59
Sound Blaster 16 Pro IDE & PAN	£65
Sound Blaster 16 Pro AdSP IDE & PAN	£69
Sound Blaster AWE 32 Value Edition IDE	£96
Sound Blaster AWE 32 Full Edition IDE & PAN	£149
Wave Blaster II	£89
Creative BlasterKeys	£105
Creative BlasterKeysKit	£275

(Sound Blaster AWE 32, 49 Key (full size) keyboard, Software - Midi Orchestrator Plus, Melody Maestro Jr & E-mu Soundfont Libraries)

#### NEW LOWER PRICES

Orchid	
Orchid SoundDrive 16 EZ	£55
Orchid SoundDrive 16 EZ + SCSI	£65
Orchid Gamewave 32 Plus	£69
Orchid Soundwave 32 Pro	£128
Orchid Soundwave 32 Pro SCSI	£138

(Free NASCAR Racing CD while stocks last)

Orchid Wavebooster 2Mb + CueBase Lite	£65
Orchid Wavebooster 4Mb + CueBase Lite	£89
Orchid Wavebooster 4Mb + FX + Midisof.	£99
Orchid NuSound PnP	£115

Gravis	
Gravis Ultrasound Max Card	£130
Gravis Ultrasound Midi Kit	£26
Gravis Ultrasound ACE Wavetable Add-in Card	£75

Miro	
MiroSOUND FM10	£62
MiroSOUND PCM10	£81
MiroSOUND PCM1 PRO	£128
MiroSOUND PCM12	£138
MiroSOUND PCM20 Radio	£190

Microsoft	
Microsoft Windows Software & Microphone	£39

Aztech	
Sound Galaxy Nova 16 Extra	£68
Sound Galaxy Pro 16 - 2	£58
Sound Waverider 32+	£88
Sound Waverider 32+ Kit	£275

Others	
Portable Sound Plus	£129

(Sound Blaster compatible connects to Parallel Port)

SPEAKERS	
Small Speakers	£5
Screen Beat 4 Speakers	£9
Screen Beat 5 Speakers	£10
Screen Beat 3 Speakers	£12
Screen Beat Pro 50	£29

Creative

### CREATIVE

Creative 300 10W Speakers	£69
Creative 20W Speakers	£75

Labtec CS-600 Speakers	£19
Small Mains Powered Amp Speakers	£19

LARGE 80w Mains Powered £49 AMP SPEAKERS



Pro Digital Speakers	£29
Soundisk SD-100 Speakers for 5.25"	£15
Sony Multimedia PC Speakers SRS-PC30	£45
Sony Multimedia PC Speakers SRS-PC50	£65
Yamaha Multimedia Sub Woofer	£75
Yamaha Multimedia Speakers YST-M5	£36
Yamaha Multimedia Speakers YST-M10	£43
ZIFI 2 Speakers	£24
ZIFI Pro 2 Speakers	£38

ACCESSORIES

Headphones	£5
Microphone	£9
Creative Microphone	£17



## MULTI-MEDIA CARDS

### CREATIVE

Creative MP400 (MPEG Player)	£125
Creative TV-Coder External	£109
Creative Video Blaster RT300	£225

#### NEW LOWER PRICES

Aztech	
Video Galaxy Gamma	£155
Video Galaxy Gamma MPEG Upgrade	£119
Video Galaxy Teletext Upgrade Module	£38
Video Galaxy Oscar (MPEG Playback board)	£189

**Hauppauge!**

**WIN/TV CELEBRITY**

**£255**

■ Frame Grabbing on the fly ■ Teletext  
 ■ NTSC/PAL Compatible  
 ■ Scaleable viewing window from icon to full screen

Hauppauge Win/TV Cinema 95	£179
Hauppauge Win/TV Prisma	£149

Miro	
Mirovideo 2Mb 20TD Live PCI or VLB	£295
Mirovideo Mouse	£285
Mirovideo DC1 (With Video Studio)	£339
Mirovideo DC1 (With Adobe Premiere)	£439
1Mb MiroVIDEO 12PD PCI or VLB	£89
2Mb MiroVIDEO 12PD PCI or VLB	£129
MiroMPEG Maker	£185

Orchid	
Orchid 1Mb Kelvin MPEG VLB	£249
Orchid 2Mb Kelvin MPEG VLB	£295
Orchid Vidiola	£249
Orchid Vidiola Premium	£569
Orchid Vidiola Pro	£439

Sigma Design	
Reelmagic Full Version	£325
Reelmagic Lite	£199

Rombo	
Rombo Media Pro Plus HI-RES	£209
Rombo Media Pro Plus	£189
Rombo PC Tuner	£65
Rombo TV Buster External	£45
Rombo TV Buster Internal	£45
Rombo TV Tuner with Teletext	£99

Videologic	
Videologic 1Mb 928 Movie ISA	£125
Videologic 1Mb 928 Movie ISA Sound	£155
Videologic 1Mb 928 Movie VLB	£125
Videologic 1Mb 928 Movie VLB Sound	£155
Videologic 1Mb 928 Movie with MPEG Player ISA	£355
Videologic 1Mb 928 Movie with MPEG Player VLB	£355
Videologic 1Mb 928 VRAM Upgrade Kit	£69
Videologic 2Mb PCI Movie	£229
Videologic Captivator Pro	£165
Videologic Captivator Pro & TV	£209
Videologic MPEG Player for VMC	£209
Videologic Mediator XLC PC to TV Converter	£165

Videolabs	
Flexcam Desk Top TV Camera	£499

Flexcam is a high resolution, integrated colour camera and microphone.

Others	
Compro LaserWave Movie Studio - MPEG Video Board	£239
Intel Smart Recorder Pro	£295
Spea Showtime (MPEG Player)	£299

#### VIDEO CONFERENCING

**CREATIVE LABS**

**SHAREVISION PC 3000**

**£995**

Intel	
Intel ProShare Premiere Edition SFW	£199
Intel ProShare Video System 200	£1,849



## MODEMS

### US Robotics SPORTSTER

US Robotics Sportster 14.4 Fax EXT	£105
US Robotics Sportster 14.4 INT	£105
US Robotics Sportster 28.8 V34 Fax EXT	£157
US Robotics Sportster 28.8 V34 Fax INT	£157

(Now With Free Internet Access Software)

US Robotics Courier V34 Int	£238
US Robotics Courier V34 Ext	£238
US Robotics Worldport Dual Standard Cellular	£125
US Robotics Worldport - Dual Standard Cellular V34 PCMCIA	£159

### SiMPLY Modems

Simply 14400 PCMCIA Fax Modem	£219
Simply V34 External Fax Modem	£149
Simply V34 Internal Fax Modem	£149
Simply 14400 Internal Fax Modem	£69
Simply 14400 External Fax Modem	£99

Simply Modems are BABT approved and come with Windows software.

Hayes	
Hayes Optima 28.8 V.FC & Fax	£385
Hayes Optima 28.8 V.FC & Fax Value Pack	£689

2 Hayes Optima 28.8 +2 Enhanced serial Ports (FREE UPGRADE TO V34)

Hayes Optima 14.4 + Fax144	£249
Hayes Optima 14.4 + Fax144 PCMCIA	£199
Hayes Accura 28.8 + Fax VFC V32bis V 34	£175
Hayes Accura 14.4 + Fax V32bis	£99

Creative	
PhoneBlaster Communications Centre V34	£238

Features: 14.4 Fax/Modem, music on hold, pager notification, remote access. Send data files during a conversation. 16 bit stereo recording and playback, IDE CD ROM Interface.

Motorola

### MOTOROLA

3400 Online Internet Solution with Data/Fax Modem	£165
V34, 28,800 bps 1 month free access to CompuServe	
3400 Pro 28.8 Data/Fax Modem	£155

Pace

Pace Netlink V32	£99
------------------	-----

Complete Internet Access Pack containing Pace MobiFax144, FREE 21 Days direct connection time Plus all Software needed.

Pace Netlink Gold V34	£185
-----------------------	------

Complete Internet Access Pack containing Pace MobiFax144, Free 21 Days direct connection time Plus all Software needed.

Pace Microlin fx34 PC Internal V34 Fax Modem	£158
Pace Linnex 34 Plus fx Desktop V34 Fax Modem	£158
Pace Microlin fx34 V34 Pocket Fax Modem	£158
Pace Microlin NB34 PCMCIA V34 Fax Modem	£178
Pace Linnex Message Desk V32 Fax Modem	£168

(Voice functionality integrated with Data and Fax. Fax Back & Fax forward with enhanced audio standard. Internal Microphone)

Pision Daecom	
Gold Card V34 + Fax PCMCIA Modem	£315
Gold Card V32 bis + Fax PCMCIA Modem	£215

Cables	
9 to 25 Pin Modem Cable	£9
25 to 25 Pin Modem Cable	£9

#### AUTOMATIC FAX MACHINES

Avro Pacific

**Fax Friend**

**Automatic Fax & Data Switch**

**£49**

Andest	
Andest MSL Manager 1100 Fax/Phone	£89
Andest MSL Manager 3300	£105
Andest MSL Manager 3300M	£125
Andest MSL Manager 7700	£145

(The above Modems are APPROVED for connection to telecommunications systems specified in the instructions subject to the conditions set out in them).

VISIT SIMPLY at HTTP://www.rudex2.com/simply.html

General Sales 0181 523 4020 - Software Sales 0181 498 2120 - PC System Sales 0181 498 2130



## VGA CARDS

Generic	ISA	VLB	PCI
256K VGA 800 x 600 16C	£18		
512K VGA 1024 x 768 156C	£24		
1Mb Trident 8900D 1024 x 768 256C	£39		
1Mb Cirrus Logic 16.7 Win Accelerator	£42		
1Mb Tseng ET4000 16.7m Colours	£65		
1Mb Cirrus Logic 5429 Win ACC		£48	
1Mb Cirrus Logic 5434			£58
1Mb Tseng ET4000/W32		£79	£75
1Mb Cardex 90C33		£79	
2Mb Tseng ET4000/W32P		£109	£108
1Mb Advanced Logic AL2301			£65
2Mb Cirrus Logic 5434			£98
Diamond	ISA	VLB	PCI
1Mb Diamond Stealth 64 Dram 2000			£82
1Mb Diamond Stealth 64 Dram 2001			£82
1Mb Diamond Stealth 64 Video Dram 2000			£85
2Mb Diamond Stealth 64 Dram 2001			£122
2Mb Diamond Stealth 64 Dram 2000			£125
2Mb Diamond Stealth 64 Video Dram 2000			£136
2Mb Diamond Stealth 64 Video Vram 3200			£179
2Mb Diamond Stealth 64 Video Vram 3000			£195
4Mb Diamond Stealth 64 Video Vram 3000			£319
Hercules	ISA	VLB	PCI
1Mb Hercules Dynamite Pro	£135		£135
2Mb Hercules Dynamite Pro		£145	£195
2Mb Hercules Graphite Terminator 64		£235	£265
4Mb Hercules Graphite Terminator 64		£345	£379
1Mb Hercules Stingray			£98
1Mb Hercules Stingray Pro Video			£78
1Mb Hercules Stingray 64 Video			£95
2Mb Hercules Stingray 64 Video			£145

### MATROX

2Mb Matrox Millennium WRAM	£215
4Mb Matrox Millennium WRAM	£320

Windows 95 compatible Plug & Play

Orchid	ISA	VLB	PCI
1Mb Orchid Kelvin 64	£86		
1Mb Orchid Kelvin EZ		£65	£65
1Mb Orchid Kelvin 64		£80	£89
1Mb Orchid Fahrenheit 64		£89	£99
2Mb Orchid Kelvin 64	£116	£112	£119
2Mb Orchid Fahrenheit 64		£128	£139
2Mb Orchid Fahrenheit Pro 64		£225	£225
4Mb Orchid Fahrenheit Pro 64		£295	£295
Taxan	ISA	VLB	PCI
1Mb Taxan GTS WinBoost	£114	£119	£119
2Mb Taxan GTS WinBoost	£145	£145	£145
2Mb Taxan WinTurbo 64	£245	£245	£245
4Mb Taxan WinTurbo 64	£395	£395	£395
Number Nine	ISA	VLB	PCI
1Mb 9FX Vision 330		£95	£95
2Mb 9FX Vision 330		£139	£139
1Mb 9FX Motion 531		£135	£135
2Mb 9FX Motion 531		£179	£179
2Mb 9FX Motion 771		£225	£225
4Mb 9FX Motion 771		£339	£339
2Mb Imagine 128 1280		£375	£375
4Mb Imagine 128 1280		£475	£475
4Mb Imagine 128 1600		£610	£610
8Mb Imagine 128		£1,039	£1,039
Spea	VLB	PCI	
2Mb Spea V7 Mercury P64 VLB	£208		
STB	VLB	PCI	
1Mb STB Powergraph 24	£115		
2Mb STB Powergraph 64		£149	
2Mb STB Velocity 64V MPEG		£219	
4Mb STB Velocity 64V MPEG		£319	
2Mb STB Nitro 64		£145	
Videologic	VLB	PCI	
1Mb GrafixStar 300	£95	£99	
2Mb GrafixStar 300	£135	£139	
1Mb GrafixStar 500 inc AVI scaling	£128	£135	
2Mb GrafixStar 500 inc AVI scaling	£175	£189	
2Mb GrafixStar 700 inc AVI scaling	£265	£269	
4Mb GrafixStar 700 inc AVI scaling	£375	£389	

### MONITORS

14" Mono VGA Monitor	£69
14" Crystal Colour SVGA Interlaced	£159
15" Crystal Colour Monitor N-I MPRII	£228
17" Crystal 17HQ 1280 x 1024 N-I	£498
CTX	
14" CTX 1451CLR N-I MPRII	£165
15" CTX 1565CD SVGA MPRII	£235
17" CTX 1765CD SVGA MPRII 28 1024 x 768	£438
17" CTX 1785GM SVGA MPRII 26 1280 x 1024	£488
LMT 1000 16 Grey Scale LCD VGA Screen 9.4"	£485
LMT 5020 4096 Colour LCD VGA Screen 9.4"	£1,965

All the above monitors come with one year on-site Warranty

**Iiyama (IDEK)**

15" Iiyama Vision Master FST MF-8115	£279
--------------------------------------	------



## MONITORS Cont.

### 17" IIYAMA VISION MASTER FST MF-8617E

## £520

17" Iiyama Vision Master FST Pro MT9017E	£585
21" Iiyama Vision Master FST MF8221E	£1,165
21" Iiyama Vision Master FST MT9021E	£1,250

(All 21" Monitors Bundled with Colorific Kodak SFW)

**NEC**

NEC Multisync XV14 14" 1024 x 768 N-I	£215
NEC Multisync XV15 15" 1280 x 1024 80Hz	£274
NEC Multisync XV17 17" 1280 x 1024 80Hz	£569
NEC Multisync XE15 15" 1280 x 1024 80Hz	£405
NEC Multisync XE17 17" 1280 x 1024 80Hz	£719
NEC Multisync XE21 21" 1280 x 1024 75Hz	£1,335
NEC Multisync XP17 17" 1280 x 1024 76Hz	£925
NEC Multisync XP21 21" 1600 x 1200 70Hz	£1,698

**Nokia**

Valuegraph 449E090P 15" SVGA FST	£299
Multigraph 449M092P 15" FST TCO Trinitron	£355
Valuegraph 447V090 17" SVGA FST	£469

(With built in Stereo Amplifier and Speakers)

Multigraph 447M090 17" FST Trinitron	£629
Multigraph 447X092P 17" FST Trinitron	£769
Multigraph 447M092P 17" FST Trinitron	£685
Multigraph 447X090 17" FST Trinitron	£829
Multigraph 445M090 21" FST	£1,299
Multigraph 445M092P 21" FST TC	£1,449
Multigraph 445X092P 21" FST	£1,799

**Panasonic**

15" Panasync (TX-T1562) 1024 x 768 NL	£279
17" Panasync (TX-D1733) 1280 x 1024 NL	£495
17" Panasync (TX-D1733FU) 1280 x 1024 NL	£555

(Including Built in Speakers)

17" Panasync (TX-D1752) 1280 x 1024 NL	£675
20" Panasync (TX-D2051) 1280 x 1024 NL	£999
21" Panasync (TX-D2151) 1280 x 1024	
NI 1600 x 1281	£1,359

2 year On-Site Warranty with exchange on Panasonic Monitors

**Philips**

14" Philips Mono Monitor 14M	£89
14" Philips Enhanced VGA Color Monitor 14C	£179
15" Philips Brilliance Autocolor Colour Monitor 15B	£254
15" Philips Brilliance Autocolor N-I Colour Monitor 15A	£275

(Built in Stereo for Multimedia Applications)

17" Philips Brilliance Autocolor Colour Monitor 17A	£669
---	------

(Built in Stereo for Multimedia Applications plus plug N play compatibility)

17" Philips Autocolor Colour Monitor 17C	£429
--	------

(Built in Stereo for Multimedia Applications)

17" Philips Autocolor Colour Monitor 17B	£560
17" Philips Trinitron Monitor 17T	£599
20" Philips Autocolor Colour Monitor 20C	£775
20" Philips Autocolor Colour Monitor 20T	£1,299
21" Philips Autocolor Colour Monitor 21B	£1,439
21" Philips Brilliance Autocolor - Colour Monitor with Cyberscreen Technology 21A	£1,749

**Radius**

### RADIUS 17" PRECISION VIEW 1280 X 1024 (RAD092)

## £659

17" PrecisionColour 1360 x 1200	£815
20" IntelliColor Display/20e 1360 x 1024 (RAD081)	£1,399
21" SuperMatch 21 - T XL 1600 x 1200 (RAD086)	£1,599

### Samsung

14" Syncmaster 3NI 800x600 CVM	£165
14" Syncmaster 3NE 1024x768 CVP	£179
15" Syncmaster 15GLE 1024x768	£255
15" Syncmaster 15GLI 1280x1024 Plug & Play	£299
17" Syncmaster 17GLI NI 1280x1024	£499
17" Syncmaster 17GLSI NI 1280x1024 76Hz	£599

(15" & 17" monitors come with a 3 year on site warranty)

**Sony**

Sony 15" CPDSF1 1024 x 768 NI 25	£309
Sony 17" GDM-17SEI SVGA N-I	£809
Sony 20" GDM20 SEV 1280 x 1024 N-I	£1,315
Sony 20" GDM20 SE1 1280 x 1024 N-I	£1,395
Sony CSS-B100 Computer Speaker System	£75

**Taxan**

14" Taxan Ergovision 400LR Interlaced	£185
14" Taxan Ergovision 410LR N-I	£195
14" Taxan Ergovision 420LR N-I	£235
15" Taxan Ergovision 580 + LR 1280x1024 N-I	£285
17" Taxan Ergovision 880 LR 1280x1024 N-I	£505
17" Taxan Ergovision 885 LR 1600x1200 N-I	£625
17" Taxan Ergovision 895 LR 1600x1200 N-I	£819
20" Taxan Ergovision 1080 LR 1600 x 1200 N-I	£910
21" Taxan Ergovision 2100 LR 1600 x 1200 N-I	£1,530

**Viewsonic**

14" Viewsonic 14ES 1024 x 768 N-I	£178
15" Viewsonic 15ES 1280 x 1024 NI	£239
17" Viewsonic 17-2 1280 x 1024 NI	£655
20" Viewsonic 20G 1600 x 1200 N-I	£985
21" Viewsonic 21PS 1600 x 1200 N-I	£1,329

**Accessories**

Universal Monitor Drawing Dust Cover	£11
14" Anti Glare Screen Filter	£29



## SCANNERS

**Andest**  
Andest FaxScanner (Win).....£59  
(Converts your fax machine into an A4 scanner)

**Avro Pacific**

### SCANAFAX £29

Makes Your Fax Machine into a Scanner  
\*BABT APPROVED

Scanafax & Delrina Lite	£39
-------------------------	-----

(makes your fax machine into a scanner)

**Epson**

Epson LapCAT GT300	£290
Epson GTX6500 SCSI	£459

(Photoshop LE, OmniPage Direct)

Epson GTX8500 Parallel	£489
------------------------	------

(Photoshop LE, OmniPage Direct)

Epson GTX8500 SCSI	£565
--------------------	------

(Photoshop LE, OmniPage Direct)

Epson GTX9000 SCSI	£665
--------------------	------

(Photoshop LE, OmniPage Direct)

Epson GT18500 SCSI (Adobe Photoshop V3)	£765
Epson GT19000 SCSI (Adobe Photoshop V3)	£848
Epson GTX9000 Parallel	£613

(Photoshop LE, OmniPage Direct)

Epson Bi-Directional Parallel Port	£35
------------------------------------	-----

**Genius**

Scanmate/256	£65
Scanmate Colour	£125

**Hewlett Packard**

### HP HEWLETT PACKARD

HP 4c Colour Scanner	£614
HP 4s Colour Scanner	£227
HP 4si Colour Scanner	£1,602

**Logitech**

Logitech Scanman 32 WIN	£55
Logitech 256 Scanner	£69
Logitech Easy Touch Scanner	£99
Logitech Scanman Colour	£139
Logitech PageScan	£285
Logitech Scan Pad	£12

**Microtek**

Scan Maker II	£295
---------------	------

**Nikon**

Nikon Scantouch LE	£915
Nikon Coolscan	£985

**Sicos**

Sicos Colour Page Scanner	£225
---------------------------	------

**Trust**

Trust 1200dpi Flatbed Scanner	£285
Trust 2400dpi Flatbed Scanner	£385

**Other**  
ScanFX - Scanner, Fax, Copier.....£379  
(Colour/BW 1200 x 1200dpi Scanner with Fax & Copying. Comes with Wordscan OCR & Picture Publisher LE)

**Umax**

### UMAX VISTA T-630 £299

300 x 600 dpi COLOUR SCANNER

Page Office	£275
Vista S8 400 x 800dpi Colour Scanner	£525
UC 1260 Colour Scanner	£749
Gemini D16 Dual Lens Flat Bed Scanner	£765
Powerlock 600 x 1200dpi Colour Scanner	£1,945

All prices exclude VAT and Delivery.  
Prices effective as of 1st November 1995  
All sales are subject to our standard terms and conditions.  
Prices are correct at time of going to press. E&OE.

# SIMPLY COMPUTERS

THE PEOPLE WHO LOVE PCs

Telephone: 0181 523 4020

VISIT SIMPLY at HTTP : // www.rudex2.com/simply.html

PC System Sales 0181 498 2130 - Software Sales 0181 498 2120 - General Sales 0181 523 4020

SIMPLY COMPUTERS TEL 0181 523 4020 FAX 0181 523 4002



## UPS

### UPS Systems

#### APC

APC BK250i-250 VA Backup.....	£75
APC BK400i-400VA Backup.....	£115
APC BK600i-600 VA Backup.....	£145
APC BK900i-900 VA Backup.....	£269
APC BK1250i-1250 VA Backup.....	£339
APC Smart UPS 250i.....	£169
APC Smart UPS 400i.....	£195
APC Smart UPS 700i.....	£239
APC Smart UPS 900i.....	£365
APC Smart UPS 1000i.....	£389
APC Smart UPS 1250i.....	£495
APC Smart UPS 1400i.....	£539
APC Smart UPS 2000i.....	£895
APC BackUPS Pro 280.....	£99
APC BackUPS Pro 420.....	£149
APC BackUPS Pro 650.....	£209
PowerChute Software 4.2 Novell.....	£49
PowerChute Software 4.2 LAN Manager.....	£49
PowerChute Software 4.2 Unix.....	£69

#### Upsonic

## UPSONIC®

### STATION 28

280 VA Off-Line UPS  
•ECONOMICAL POWER PROTECTION  
•NETWORK INTERFACE

£89



Station 40 400 VA Off-line UPS.....	£109
Station 60 600 VA Off-line UPS.....	£140
Station 90 900 VA Off-line UPS.....	£265
Station 140 1400 VA Off-line UPS.....	£359

### LAN 60

600 VA Line Interactive UPS  
•BOOST UPS VOLTAGE REGULATION  
•SINEWAVE OUTPUT  
•BATTERY TEST FACILITY  
•NETWORK INTERFACE

£205



LAN 40 400 VA Line Interactive UPS.....	£189
LAN 75 750 VA Line Interactive UPS.....	£269
LAN 100 1000 VA Line Interactive UPS.....	£399

### SYSTEM 100

1000 VA Line Interactive UPS  
•TRUE ON-LINE TECHNOLOGY  
•EXTENDED RUN TIMES  
•BATTERY TEST FACILITY  
•INTELLIGENT NETWORK MANAGEMENT INTERFACE

£599



System 60 600 VA On-line UPS.....	£449
System 200 2000 VA On-line UPS.....	£1,049

All of the above include communications Interface

All Upsonic Products Come With a 2 Year Warranty



## NETWORK CARDS

### Simply Network

Simply NE2000 Compatible 16 Bit BNC.....	£19
Simply NE2000 Compatible 16 Bit RJ45.....	£19
Simply NE2000 Compatible 16 Bit Combo Card ISA.....	£25
Simply NE2000 Compatible 32 Bit Combo Card VLB.....	£79
Simply NE2000 Compatible 32 Bit Combo Card PCI.....	£89
Simply NE3210 Compatible EISA 32 Bit Combo Card.....	£159
Simply NE2000 Boot Rom.....	£5

All the Above Cards are Novell Approved



## NETWORK CARDS Cont.

#### Novell

Novell NE1000 8 bit ISA.....	£74
Novell NE2000 Plus 16 Bit BNC.....	£49
Novell NE2000 Plus 16 bit RJ45.....	£49
Novell NE2000 Plus 3 16 bit Combo Card.....	£59
Novell NE2000 Plus 5 Pack 16 bit either RJ45 or BNC.....	£260

#### 3Com

3COM Etherlink III 3C509B ISA BNC.....	£65
3COM Etherlink III 3C509B ISA RJ45.....	£65
3COM Etherlink III 3C509B ISA RJ45 / BNC Combo.....	£75
3COM Etherlink III - 3C509 ISA BNC or RJ45 5 Pack.....	£305
3COM Etherlink III - 3C509 ISA BNC or RJ45 Combo 5 Pack.....	£345
3COM Etherlink III 3C579 EISA BNC.....	£139
3COM Etherlink III 3C579 EISA RJ45.....	£139
3COM Etherlink III 3C589 PCMCIA RJ45.....	£109
3COM Etherlink III 3C589 PCMCIA RJ45 & BNC.....	£139

#### SMC Ethernet

SMC Elite Ultra ISA RJ45.....	£59
SMC Elite Ultra ISA BNC.....	£59
SMC Elite Ultra ISA Combo RJ45 & BNC.....	£63
SMC PCI Ethernet Adaptor.....	£99
SMC PCI Ethernet Adaptor 5 Pack.....	£479
SMC Elite Ultra ISA RJ45 6 Pack.....	£335
SMC Elite Ultra ISA BNC 6 Pack.....	£335
SMC Elite Ultra ISA Combo RJ45 & BNC 6 Pack.....	£375
SMC Elite Ultra EISA 32C BNC & RJ45.....	£155
SMC EtherEZ ISA RJ45.....	£59
SMC EtherEZ ISA BNC.....	£59
SMC EtherEZ ISA Combo RJ45 & BNC Win 95 Plug & Play.....	£63
SMC EtherEZ ISA Combo RJ45 & BNC.....	£63
SMC EtherEZ ISA RJ45 or BNC 5 Pack.....	£305
SMC EtherEZ ISA Combo RJ45 & BNC 5 Pack.....	£335

#### D-Link

## D-Link®

D Link DE6000CT Pocket Adapter BNC/RJ45.....	£59
D Link DE6200CT Pocket Adapter BNC/RJ45.....	£89
D Link DE6500CT PCMCIA Ethernet TP.....	£99
D Link DE220C Ethernet Card BNC.....	£39
D Link DE220T Ethernet Card TP.....	£39
D Link DE220CT Ethernet Card BNC/TP.....	£45
D Link DE320CT MCA Ethernet Card BNC/TP.....	£85
D Link DE400 EISA Ethernet Card BNC/TP/AUI.....	£129
D Link DE530CT PCI Ethernet Card BNC/TP.....	£99
D Link DT220 Token Ring ISA.....	£229

#### Intel

INTEL Etherexpress ISA 16 BNC.....	£64
INTEL Etherexpress ISA 16 RJ45.....	£73
INTEL Etherexpress ISA Flash Combo.....	£89
INTEL Etherexpress ISA 16 BNC 5 Pack.....	£385
INTEL Etherexpress ISA 16 RJ45 5 pack.....	£385
INTEL Etherexpress ISA Flash Combo 5 pack.....	£445



## PRINT SERVERS

#### Print Servers

Chase Research IOPRINT2 BNC 4 Port 2S 2P.....	£495
Chase Research IOPRINT2 RG45 4 Port 2S 2P.....	£495
Chase Research IOPRINT2 Jr RG45 Parallel.....	£195
Chase Research IOPRINT2 Jr BNC Parallel.....	£195
Chase Research IOPRINT Jr Combo Parallel.....	£225



## CABLES AND CONNECTORS

#### Connectors

BNC Connector with Boot.....	£1
BNC T-Connector.....	£5
BNC Terminator.....	£4
BNC In-Line Coupler.....	£2
RJ45 Connector with Boot.....	£1
Single BNC Outlet (FacePlate).....	£4
Dual BNC Outlet (FacePlate) & Back Box.....	£6
Dual RG45 Outlet (FacePlate).....	£12
EAD Thinwire Tap Outlet.....	£24
EAD Thinwire drop Lead 2M.....	£26
EAD Thinwire drop Lead 5M.....	£36

#### Professional Tools

BNC Crimp Tool.....	£29
Ethernet Cable Stripper BNC.....	£15
RJ45 Crimp Tool.....	£75
RJ45 & BNC Cables made to order.....	P.O.A.



## HUBS & REPEATERS

#### Ethernet Hubs

### SIMPLY Hubs

Simply 8 Port TP Hub (8 x RJ45, 1 x AUI).....	£124
Simply 12 Port TP Hub (12 x RJ45, 1 x BNC, 1 x AUI).....	£169
Simply 16 Port TP Hub (16 x RJ45, 1 x BNC, 1 x AUI).....	£249
Simply 24 Port TP Hub (24 x RJ45, 1 x BNC, 1 x AUI).....	£354

#### 3Com

### 3Com®

3CI6670 12 port FMS II Hub (12 x RJ45, 1 x AUI).....	£389
3CI6671 24 port FMS II Hub (12 x RJ45, 1 x AUI).....	£689
3C625 FMS II Link Cable.....	£29

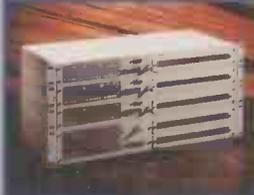
#### D-Link

### D-Link®

D Link DE-805TP SNMP  
5 Port with Keyboard  
Port Power Cable

£77

D Link DE-809TC 8 Port Hub with BNC.....	£129
D Link DE-812TP + 12 Port Hub with BNC & AUI.....	£175
D Link DE-816TP 12 Port Hub with BNC & AUI.....	£235
D Link DE-824TP 24 Port Hub with BNC & AUI.....	£359



D Link DE-1200 SNMPP  
12 Port RJ45

£300

D Link DE-1400-45  
Port Stackable Hub.

£469

D Link DE-1600 SNMPP  
12 Port RJ45

£550

#### SMC

SMC Tiger Hub TP6 Port.....	£165
SMC 3812 14 Port Hub.....	£495

#### Switches

SMC TigerSwitches	
24 Port Ethernet Switch with dual 100Base Tx ports.....	£5550
24 Port Ethernet Switch with dual 100Base Fx ports.....	£5945
12 Port Ethernet Switch with dual 100Base Tx ports.....	£3855
12 Port Ethernet Switch with dual 100Base Fx ports.....	£4245
24 Port Ethernet Switch with unconfigured slot.....	£4555
12 Port Ethernet Switch with unconfigured slot.....	£2885
24 Port Ethernet Switch.....	£4555
Dual 100Base FX slide in daughter card.....	£970
Dual 100Base TX slide in daughter card.....	£970

#### Repeaters

D-Link Repeater 2 Port BNC/AUI (DE-802).....	£269
D-Link Repeater 4 Port BNC/AUI (DE-804).....	£325
D-Link Repeater 8 Port 8 x BNC 2 x AUI.....	£555

#### Allied Telesis

Allied Telesis 2 Port Repeater BNC/BNC (ATMR125).....	£239
Allied Telesis 4 Port Repeater 4 BNC & 1 AUI (AT3004SL).....	£435
Allied Telesis 8 Port Repeater 8 BNC & 1 AUI (AT3008SL).....	£529

#### Transceivers

Allied Telesis Micro Transceiver BNC/AUI (ATMX10S).....	£35
Allied Telesis Micro Transceiver UTP/AUI (AT210TS).....	£35



## NETWORK SOFTWARE

#### Artisoft

Lantastic Single User.....	£59
Lantastic 2 User Starter Kit.....	£245
Lantastic Extra User S/W.....	£115

#### Novell

Novell Personal Network.....	£44
Novell Personal Network 5 User.....	£184
Novell Personal Expansion Kit.....	£128
Novell Network 3.12 5 User.....	£395
Novell Network 3.12 5 User on CD.....	£400
Novell Network 3.12 10 User.....	£965
Novell Network 3.12 25 User.....	£1,445
Novell Network 3.12 50 User.....	£1,945
Novell Network 3.12 100 User.....	£2,873
Novell Network 3.12 250 User.....	£4,799
Novell Network 4.1 5 User.....	£415
Novell Network 4.1 10 User.....	£945
Novell Network 4.1 25 User.....	£1,465
Novell Network 4.1 50 User.....	£2,039
Novell Network 4.1 100 User.....	£2,859
Novell Network 4.1 250 User.....	£5,925
Novell Network ManageWise 1.0 5 User.....	£749

#### Microsoft

MS Win for Workgroups 3.11.....	£89
MS Win for Workgroups Upgrade.....	£40
MS Win NT 3.51 Workstation CD/CDisc.....	£235
MS Win NT Server V3.5 CD.....	£485

VISIT SIMPLY AT HTTP : // www.rudex2.com/simply.html

General Sales 0181 523 4020 - Software Sales 0181 498 2120 - PC System Sales 0181 498 2130

**PRINTERS**

**EPSON<sup>®</sup>  
STYLUS 820**

- High Quality Black and White Inkjet Printing
- Optional 720 DPI Colour Kit Available
- 720 DPI ■ Easy to use Manual Settings
- Fast Return to Application ■ 100 Sheet Paper Feeder
- Automatic Selection of Image Settings
- Sample Paper Pack included ■ 3 Year Warranty

**£208**

**EPSON**



**STYLUS COLOUR IIS**

- 3 Colour Inkjet ■ Two Printers in one
- 720 DPI ■ Automatic Selection of Image Settings
- Interchangeable Printer Heads for Colour & B&W
- Easy to use ■ Fast Return to Application
- 100 Sheet Paper Feeder
- Sample Paper Pack included ■ 3 Year Warranty

**£258**

**EPSON**



**STYLUS COLOUR II**

- 4 Colour Inkjet ■ Full CMYK printing ■ 720 DPI
- Easy to use ■ Fully Compatible with Mac & Windows
- Auto Selection of Image Settings ■ Fast Print Speed
- Fast Return to Application ■ 100 Sheet Paper Feeder
- Sample Paper Pack included ■ 3 Year Warranty

**£288**

**Epson**

Epson LX300 9 Pin Dot Matrix.....	£94
Epson LX1050+ 9 Pin Dot Matrix.....	£179
Epson FX870 9 Pin Dot Matrix.....	£242
Epson FX1170 9 Pin Dot Matrix.....	£299
Epson LQ300 24 Pin Dot Matrix.....	£148
Epson LQ570+ 24 Pin Dot Matrix.....	£209
Epson LQ1070+ 24 Pin Dot Matrix.....	£294
Epson LQ870 24 Pin Dot Matrix.....	£368
Epson LQ1170 24 Pin Dot Matrix.....	£428
Epson Stylus 820.....	£208
Epson Stylus 820 Colour Kit (C832162).....	£68
Epson Stylus 1000.....	£329
Epson Stylus Pro A4 Printer.....	£638
Epson Stylus Pro XL Colour A3 Oversize.....	£1,539
Epson SQ870 Ink Jet Printer.....	£444
Epson SQ1170 Ink Jet.....	£598
Epson EPL-3000 4PPM Laser Printer.....	£365
Epson EPL-9000 8PPM A3 Laser Printer 600dpi.....	£1,195
Epson EPL-9000PS 8PPM A3 Postscript Laser 600dpi.....	£1,375

**PRINTERS Cont.**

**HP HEWLETT PACKARD DESKJETS**

HP Deskjet 600 Mono (upgradable to colour).....	£208
HP Deskjet 660C.....	£273
HP Deskjet 850C.....	£330
HP Officejet.....	£465

HP Deskjet 1600C.....	£815
HP Deskjet 1600CM.....	£1218
HP Deskjet 340 with 30 Page Sheetfeeder.....	£172

HP Deskjet Colour Kit.....	£28
----------------------------	-----

**HP HEWLETT PACKARD LASERJET**

HP Laserjet 5L.....	£345
HP Laserjet 5P.....	£575
HP Laserjet 5MP.....	£718

HP Laserjet 4 Plus.....	£969
HP Laserjet 4M Plus.....	£1,294
HP Laserjet 4Si.....	£2,085
HP Laserjet 4Si MX.....	£2,958
HP Laserjet 4V A3 Laser Printer.....	£1,360
HP Laserjet 4MV A3 Postscript Laser Printer.....	£1,975
HP Colour Laserjet.....	£4,195

**Paintjets**

HP Paintjet XL300.....	£1,585
HP Paintjet XL300 Postscript.....	£2,575

**HP HEWLETT PACKARD SUPPORT PACK**  
3 years On-Site maintenance

Support Pack Portable, 340.....	£40
Support Pack Deskjet/Deskwriter 540, 600.....	£40
Support Pack Deskjet/Deskwriter Colour 660/850.....	£65
Support Pack Mono Scanjet.....	£85
Support Pack Officejet.....	£102
Support Pack 1200C/PS, Pjets, 1600C/GM,4L, 5L.....	£105
Support Pack 5L (H5500A).....	£112
Support Pack 5P, 5MP, Colour Scanjets.....	£142
Support Pack HP4 + 4M+.....	£180
Support Pack 4V 4MV.....	£235
Support Pack 4Si/MX.....	£530
Support Pack Colour Laserjet.....	£1280



**Canon**

Canon BJ30 Mono Portable Printer.....	£139
Canon BJ200e Bubblejet Printer.....	£155
Canon BJC70 Colour Portable Printer.....	£219
Canon BJ230 Printer.....	£236
Canon BJ300 80 Column Bubblejet.....	£355
Canon BJ330 136 Column Bubblejet.....	£389
Canon BJC4000 Colour.....	£217
Canon BJ600e Colour Inkjet.....	£320
Canon BJC800 Colour Bubblejet.....	£995

**Brother**

Brother HL-630 6PPM Windows Printer.....	£315
Brother HL-631 6PPM (1Mb) Windows Printer.....	£345
Brother HL-660 600dpi Windows 6PPM Laser.....	£455
Brother HL1260 1200dpi 12PPM B&W Laser.....	£885

**Kyocera**

Ecosys FS-400 4ppm.....	£359
Ecosys FS-1550 10ppm.....	£875
Ecosys FS-1600 10ppm.....	£1069
Ecosys FS-3400 18ppm.....	£1395
Ecosys FS-3600 18ppm.....	£1789

**Lexmark**

Lexmark Winwriter 150c Printer.....	£269
Lexmark Winwriter 400 Laser Printer.....	£550
Lexmark Winwriter 600 Laser Printer.....	£704
Lexmark Optra R 1200 dpi 2Mb Laser Printer.....	£1023
Lexmark Optra L 1200 dpi 4Mb Laser Printer.....	£1447
Lexmark Optra Rx 1200 dpi 4Mb Laser Printer.....	£1568
Lexmark Optra Lx 1200 dpi 4Mb Laser Printer.....	£2012
Lexmark Optra Lxi 1200 dpi 8Mb Laser Printer.....	£2398

**Mitsubishi**

**MITSUBISHI Personal Colour Printer (PCP)**

- Thermal Wax Transfer Printer
- 300dpi ■ Transparencies or plain paper
- Full colour page in 60 seconds.

**£459**

Mitsubishi CP-J10 Inkjet Printer.....	£225
Mitsubishi DiamondScript 210 Colour Printer.....	£1,890
Mitsubishi Colour Sublimation Printer S3410-30.....	£3,699
Mitsubishi Colour Thermal - Transfer Printer G6710-10.....	£4,099
Mitsubishi Colour Sublimation Printer S3600-30.....	£4,699
Mitsubishi DiamondScript 230 Colour Printer.....	£5,350
Mitsubishi A3 Colour Sublimation Printer S6600-30.....	£9,299

**PRINTERS Cont.**

**NEC**

NEC Superscript 610 Plus 6PPM Laser.....	£255
NEC Superscript 660 6PPM Laser.....	£379
NEC Superscript 660i 6PPM Laser.....	£555
NEC Superscript Colour 3000 1PPM Laser.....	£668

**OKI**

**OKI**

**OKI Inkjets**

OKIJET300C 300 dpi.....	£239
-------------------------	------

**OKI Laser Printers**

**OKI OL400W 4PPM**

**£265**

**OKI OL610EX 6PPM 300dpi 2Mb**

**£392**

OKI OL600ex 6PPM 300dpi 1Mb Laser Printer.....	£306
OKI OL400EX 4PPM 600dpi 1Mb Laser Printer.....	£380
OKI OL810ex 600dpi Laser Printer.....	£649

**OKI Dot Matrix**

**Dot Matrix**

**OKI ML320**

**£324**

OKI ML 520 Dot Matrix Printer.....	£356
OKI ML 590 Dot Matrix Printer.....	£454
OKI ML 3410 Dot Matrix Printer.....	£876

**Olivetti**

Olivetti JP360C Inkjet (Upgradeable to Colour Inkjet).....	£199
--	------

**Panasonic Dot Matrix**

Panasonic KX-P-1150 9 Pin Dot Matrix.....	£89
Panasonic KX-P-2023 24 Pin Mono Dot Matrix.....	£109
Panasonic KX-P-2135 24 Pin Colour Printer.....	£129
Panasonic KX-P-2124 24 Pin Mono Dot Matrix.....	£198
Panasonic KX-P-3626 24 Pin Mono Dot Matrix.....	£269

**Panasonic Laser**

Panasonic KX-P-6100 6ppm GDI Laser Printer.....	£265
Panasonic KX-P-6150 6PPM PCL Laser Printer.....	£317
Panasonic KX-P-4430 5PPM Laser Printer.....	£519
Panasonic KX-P-4440 10PPM Laser Printer.....	£719

**Star**

Star Wintype 4000 Laser Printer.....	£288
--------------------------------------	------

**Pentax**

**PENTAX**

**PocketJet 300 DPI 4PPM Thermal Mono Printer.**

Ultra Compact - 10"x2"x1" only 17.5 oz weight.

**£349**

**Accessories**

Universal Printer Drawstring Dust Cover Large.....	£10
Universal Printer Drawstring Dust Cover Small.....	£9

All prices exclude VAT and Delivery.

Prices effective as of 1st November 1995

All sales are subject to our standard terms and conditions.

Prices are correct at time of going to press.E&OE.

**SIMPLY COMPUTERS**

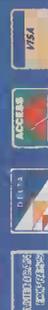
THE PEOPLE WHO LOVE PCs

Telephone: 0181 523 4020

VISIT SIMPLY AT HTTP : // www.rudex2.com/simply.html

General Sales 0181 523 4020 - Software Sales 0181 498 2120 - PC System Sales 0181 498 2130

SIMPLY COMPUTERS TEL 0181 523 4020 FAX 0181 523 4002





## ACCOUNTS

Inuit Quickbooks V3.0	£82
Quickbooks UK for WindowsTM - basic free accounting, the fastest way to manage your business. The UK's best selling accounting package for small business	
Quicken 4 Deluxe Business Pack	£45
Quicken 4 Deluxe Home Pack	£45
Pegasus Solo	£65
Pegasus Solo Payroll	£41
Sage Instant Accounting	£85
Sage Instant Payroll	£65
Sage Accountant V3	£190
Sage Accountant V7	£159
Sage Accountant Plus V3	£270
Sage Accountant Plus V7	£240
Sage Bookkeeper V3	£84
Sage Bookkeeper V7	£55
Sage Financial Controller V3	£349
Sage Financial Controller V7	£319
Sage Network Financial Controller V7	£499
Sage Network Financial Controller	£549
Sage Payroll	£139
Sage Payroll II V5	£135
TAS Books	£75
TAS Books Multi User	£169
TAS Books Payroll	£78
<b>PERSONAL FINANCE</b>	
Inuit Quicken 4 for Windows on 3.5" or CD	£26
Inuit QuickInvoice	£29
Inuit QuickTax Return 1995	£25
MS Money V4 for Windows 95 on CD and 3.5"	£25
TaxCalc for Windows	£38



## BUDGET SOFTWARE

Cosmi Just Lotto (Aim to beat the National Lottery - It Could Be You!)	£15
Cosmi Just Pools (If you can't beat the Lottery try the pools)	£15
Cosmi Garden Architect	£11
Cosmi Windows Arcade Solid Gold	£15
Cosmi 3D Virtual Reality Room Planner	£11
Cosmi CHAOS! Screensaver	£7
Cosmi Forms Maker for Windows	£15
GST Wine Cellar	£16
GST Video Library	£16
GST Instant Recipes	£16



## CAD

Autocad Release 2 LT for Windows on 3.5" or CD	£365
Autosketch V2 for Windows on 3.5"	£94
Drafix Cad V2.1	£45
Easy Cad V4	£85
Key Cad Complete Win on 3.5"	£29
Planix for Windows (Office Design)	£85
Planix for Windows (Architect)	£39
TurboCAD V2.0 Windows	£54
Visual CADD V1.2	£159
FastCad FloorPlan Plus 3D	£62
FastCad 3D Design Plus 2.0	£88
FastCad Estimator Plus	£44



## CHARTS AND FORMS

Labels Unlimited for DOS	£29
Labels Unlimited for Windows	£29
Family Tree Maker	£35
Form Tool Gold V2	£43
Delrina Perform for Windows	£43



## COMMUNICATIONS

Carbon Copy V3 for Windows	£73
Carbon Copy Plus V4.1 for DOS	£73
Computer's Value Pack	£16
Delrina Wincomm Pro	£53
Lotus Notes Starter Pack Windows V3.2	£599
Norton PC Anywhere for Win V2	£94
Norton PC Anywhere for DOS Host & Remote	£95
Reachout - Modem Host & View	£79
Procomm Plus V2.1 Win	£55

### COMMUNICATIONS/INTERNET

<b>Quarterdeck</b>	
WebAuthor on 3.5"	£39
WebServer on 3.5"	£39
Internet Suite on 3.5"	£39
SurfWatch for Windows on 3.5"	£39
SurfWatch for Windows 95 on 3.5"	£39

<b>VENTANA</b>	
World Wide Web for Windows on CD & 3.5"	£33
Internet Membership Kit for Windows on CD	£35
Internet Publishing Kit for Windows CD & 3.5"	£68

<b>COMMUNICATIONS FAX</b>	
Delrina Winfax Pro V4.0	£49
Delrina Winfax Pro Upgrade	£32
Delrina Winfax LAN Starter Kit	£175
Wordperfect ExpressFax Plus	£29
Network Superfax 5.1 UK 5 Users	£149
Network Superfax 5.1 UK Unlimited Users	£325



## DATABASES

<b>ALPHA 5</b>	
HOME & BUSINESS VERSION Create Quick & Powerful Database <b>£35</b>	
Borland Database V5 for Windows on CD	£225
Borland Database V5 Competitive Upgrade	£125
Claris Filemaker Pro V2.1	£80
DataBase V5 Windows	£98
Lotus Approach 3.0 Windows	£82
MS Access V2.0	£225
MS Access V2.0 CCP Upgrade	£80
<b>MS ACCESS for Windows 95 on 3.5" £225</b>	
<b>MS ACCESS for Windows 95 CCP Upgrade £84</b>	
MS FoxPro V2.6 Win	£69
MS FoxPro V2.6 Win Professional	£278
MS Visual FoxPro V3 for Win 95 on 3.5"	£121
MS Visual FoxPro V3 for Win Comp Upg on CD or 3.5"	£62
MS Visual FoxPro V3 for Win Prof CD or 3.5" CCP	£311
MS Visual FoxPro V3 for Win Prof Comp Upg on CD or 3.5"	£181
Paradox V5 Win	£228
Superbase 95	£135



## EDUTAINMENT

<b>BODYWORKS on CD</b>	
<b>£29</b>	
Chemistry Works on 3.5"	£39
Mavis Beacon V2 for Windows on 3.5"	£19
Adult Cover Girl Strip Poker (cert 18)	£19
Adult The Joys of Sex (cert 18)	£29
Adult The Essential Guide to Better Sex (cert 18)	£20
DK Anne Hooper's Ultimate Sex Disc (cert 18)	£28
Astrion Nile passage to Egypt on CD	£25
Astrion Ocean Planet on CD	£25
Antica BBC Romeo & Juliet on CD	£30
Antica Great Artists on CD	£30
Antica ITN European Video Atlas	£29
Antica Interactive Periodic Table	£29
Antica World War II Archive	£68
Antica World War II Encyclopedia	£68
Compton's Interactive Encyclopaedia 1995 MPC	£39
Corel All-Movie Guide	£36
Corel World's Greatest Classic Books	£36
Creative Labs A Brief History of Time	£25
Creative Labs American Visions	£25
Europress Alice's Adventure in Wonderland	£16
Grolier Encyclopaedia 1995 V7	£69
Guildsoft 3D Body Adventure	£27
Guildsoft 3D Dinosaur Adventure	£27
Guildsoft Science Adventure	£27
Guildsoft Undersea Adventure	£27
Guildsoft Berlitz Think and Talk German, French, Spanish or Italian (7 CD's)	each £89
Guildsoft 7000 Clipart Images	£12
Guildsoft 4000 Icons	£12
Guildsoft 500 Fonts for Windows	£12
Huthinsons Multimedia Encyclopedia 95 on CD Win	£39

<b>MS Home</b>	
MS Encarta 96 for Windows CD Only	£36
MS 500 Nations	£19
MS Ancient Lands	£19
MS Cinemania 96 for Windows on CD	£19
MS Cooking With Julia Childs on CD	£19
MS Dangerous Creatures	£19
MS Dinosaurs	£19
MS Dogs	£19
MS Explorapedia The World of Nature	£19
MS Fine Artist	£19
MS Golf for Windows V2 on CD	£19
MS How The Leopard Got its Spots	£19
MS Isaac Asimovs The Ultimate Robot for Windows	£19
MS Mozart The Dissonant Quartet	£19
MS Musical Instruments	£19
MS The Ultimate Frank Lloyd Wright for Windows	£19
MS Wine Guide on CD	£19
MS World of Flight for Windows on CD	£19
MS Art Gallery	£26
MS Easyball/World of Nature for Windows on CD	£26
MS Magic School Bus/Human Body	£26
MS Magic School Bus/Solar System	£26
MS Music Central 96 for Windows 95 on CD	£26
MS Beethoven 9th Symphony	£29
MS Incredible Cross Section Stayaway	£29
MS Bookshelf 1995	£39
MS Composers Collection for Windows	£32
<i>(Contains 3 CD-ROMS, Mozart, Beethoven &amp; Schubert)</i>	

Multimedia Dogs - CD	£30
Multimedia Cats - CD	£30
My First Amazing Dictionary	£25
My First Encyclopedia	£25
World Atlas V5 MPC	£25
Guinness Book of Records 1994	£33
Kodak Photo CD Access	£16
Oxford English Dictionary V2	£375
Concise Oxford Dictionary	£32
Oxford Compendium on CD-ROM	£50
Oxford Reference Shelf on CD-ROM	£50
Oxford Science Shelf	£26
Oxford Thesaurus	£31
Mindscape Oceans Below	£15
DK The Way Things Work	£38
DK Ultimate Human Body	£33
DK Encyclopedia of Nature	£33
DK Encyclopedia of Science	£33
DK History of the World	£33
DK World Reference Atlas	£25
DK PB Bears Birthday Party	£25
DK Virtual Reality - BIRD	£25
DK Virtual Reality - CAT	£25
World Library - Library of the Future	£59
World Library Greatest Book	£26



## DESKTOP PUBLISHING

Aldus Pagemaker Classic	£49
Aldus Pagemaker V5.0 Win	£375
Corel Ventura V5 Win on 3.5"	£235
Corel Ventura V5 Win on CD	£195
MS Publisher for Windows V2.0	£62
<b>MS Publisher V3 for Windows 95 on 3.5" £62</b>	
MS Publisher V3 for Windows 95 on CD	£65
MS Publisher Design Pack	£28
MS PagePlus V3.0	£59
PagePlus V3.0	£45
GST Pressworks 2	£25
GST Pressworks 2 Power Pack	£50
<i>(Includes Pressworks, Headline Fonts, Clipart Portfolio, Power Table)</i>	
GST Designworks 3 for Windows 95 on 3.5" or CD	£49
GST Designer Fonts	£15
GST Headline Font Collection	£15
GST Clipart Portfolio	£20
Adobe Type Manager V3	£49
Corel Gallery on CD	£25
Corel Gallery 2 on CD	£45
Corel Photo Libraries	£21
Lotus Smartpics	£89
Visual 3D Clipart - Business Library	£83
Visual 3D Clipart - Architects Library	£35
Visual 3D - Textures for Professionals	£75
Word Perfect Clip Art Home	£21
Word Perfect Clip Art Office	£21
Word Perfect Clip Art Premium Collection	£49



## GRAPHICS

<b>DESIGN</b>	
Adobe Type Manager WP	£42
Corel Draw 3.0 on CD	£42
Corel Draw 3.0 on 3.5" & CD	£62
Corel Draw 4.0 on 3.5" & CD	£105
Corel Draw 4.0 on CD	£84
Corel Draw 5.0 on 3.5"	£355
Corel Draw 5.0 CD ROM Only	£279
Corel Draw 6.0 on CD Only	£275
Corel Draw 3.0or 4.0 to 6.0 Upgrade on CD	£239
Corel Draw 5.0 to 6.0 Upgrade on CD	£149
Corel Draw 3.0 to 5.0 Upgrade on 3.5" & CD	£270
Corel Draw 3.0 to 5.0 Upgrade on CD	£199
Corel Draw 4.0 to 5.0 Upgrade on CD	£115
Corel Draw 4.0 to 5.0 Upgrade on 3.5" & CD	£145
Corel Flow	£45
Corel Photopaint V5	£55

**MACROMEDIA**  
**New FreeHand 5**  
Includes 500 URW fonts and 10,000 pieces of clip art  
32-bit native Supports Windows 3.1, NT and Windows 95  
**£335**

Micrografix Designer V5	£275
PC Paintbrush	£25
Photofinish V3	£35
Visio V4.0 Windows 95 Compatible on 3.5" & CD	£94
Visio Upgrade to V4.0 on 3.5" & CD	£58
Visio Express for Office	£39
Visio Express for SmartSuite	£49
Visio Stencil - Advanced Flowcharts	£39
Visio Stencil - Advanced Network Diagrams	£39
Visio Stencil - Software Diagrams	£39
Visio Stencil - Marketing	£39
Visio Stencil - Advanced Electrical Engineering	£39
Visio Stencil - Advanced Space Planning	£39
Visio Stencil - Chemistry	£39
Visio Stencil - Chemical Engineering	£39
Visio Stencil - Biotechnology / Medicine	£39
Visio Stencil - Mechanical Engineering	£39
Visio Stencil - Petroleum Engineering	£39
Visio Stencil - Home Planning	£39
Visio Stencil - Landscape Planning	£39
Visual Software - Simply 3D (Converts Corel Draw drawing to 3D)	£69
Simply 3D Corel Draw 3 Bundle	£69
Visual Software - Visual Reality	£219

<b>GRAPHICS PRESENTATIONS</b>	
Gold Disk Astound V2	£145
Gold Disk Astound V2 Trade Up Version	£85
Autodesk Animator Pro	£439
Autodesk Animator Studio	£395
Asymetrix Mediablitz	£55
Asymetrix Toolkit	£110
Asymetrix Toolkit Database Connection	£159
Asymetrix Multimedia Toolkit 3 CBT Edition	£459
Gold Disk Multimedia Magic	£35
Gold Disk Animation Works	£65
Gold Disk Animation Works Interactive	£79
Gold Disk Video Director V2	£75
Harvard Graphics V3	£234
Harvard Graphics V4 for Windows 95 on 3.5"	£195
Harvard Graphics Upgrade for Windows	£89
Harvard ASAP on 3.5"	£94
Harvard CharXL V2 for Windows 95 on 3.5"	£135
Lotus Freelance V2.01	£258
MS Powerpoint V4.0	£225
MS Powerpoint V4.0 CCP Upgrade	£82
MS Powerpoint for Windows 95 on 3.5"	£75
MS Powerpoint for Win 95 Comp Upg on 3.5"	£107
MS Powerpoint for Win 95 on 3.5" CCP Upg	£82

<b>IMAGES &amp; IMAGE EDITING</b>	
Adobe Photoshop V3	£382
Adobe Premier Software V4	£339
Corel Artshow V4.0	£19
<b>Corel Photo CDs (Over 100 Titles Available) £17</b>	

**MACROMEDIA**  
**Introducing Director Multimedia Studio:**  
**Four unbeatable tools, one great price!**  
Macromedia Authoring ■ Multimedia Authoring  
Macromedia SoundEdit 16/Sound Forge ■ Digital Sound Production  
Macromedia Macromedia! ■ 3D Graphic Design  
Adobe Premiere ■ QuickTime Video Processing  
**Separately £2640 Together £1599**

VISIT SIMPLY at HTTP : // www.rudex2.com/simply.html

General Sales 0181 523 4020 - Software Sales 0181 498 2120 - PC System Sales 0181 498 2130

## INTEGRATED PACKAGES

Corel CD Office Companion	£65
Claris Works V3.0	£79
Europress Mini Office for Windows on CD	£25
Lotus SmartSuite V3.1	£295
Lotus SmartSuite V3.1 Competitive Upgrade	£175
Lotus SmartSuite V3.1 Upgrade on 3.5"	£158
Lotus SmartSuite V3.1 Upgrade on CD	£158
Lotus SmartSuite V4 for Windows on CD or 3.5"	£293
MS Office V4.2 on 3.5" or CD	£331
MS Office V4.2 CCP Upgrade	£164
MS Office V4.2 Competitive Upgrade	£218
MS Office Pro V4.3 on 3.5" or CD	£423
MS Office Pro V4.3 CCP Upgrade	£245
MS Office Pro V4.3 Competitive Upgrade	£265
MS Office for Windows 95 on 3.5" or CD	£325
MS Office for Win 95 Competitive Upgrade on 3.5"	£162
MS Office for Win 95 CCP Upgrade on 3.5" or CD	£139
MS OfficePro for Win 95 on 3.5" or CD	£425
MS OfficePro for Win 95 Comp Upg on 3.5" or CD	£245
MS OfficePro for Win 95 CCP Upgrade on 3.5" or CD	£204
MS Works for Windows 95 on 3.5" Only	£54
MS Works V3.0 Upgrade	£46
MS Works V3.0 Windows (Now includes FREE MS Money)	£82
Novell PerfectOffice V3 Professional CD	£349
Novell PerfectOffice V3 Professional Upgrade CD	£179
Novell PerfectOffice V3 Professional Upgrade 3.5"	£189
Novell PerfectOffice V3 Standard	£155
Novell PerfectOffice V3 Standard Competitive Upgrade	£155
Novell PerfectOffice V3 Standard Upgrade	£119
Wordperfect Works WIN	£50

## KIDS DISNEY

Disney Lion King Screen Scenes on 3.5"	£19
Disney Mickey & The Crew Screen Scenes on 3.5"	£19
Disney Lion King Print Studio on 3.5"	£25
Disney Mickey & The Crew Print Studio on 3.5"	£25
Disney Aladdin Activity Centre on CD	£29
Disney Lion King Animated Storybook on CD	£29

Fun School 3 for under 5's	£15
Fun School 3 for 5-7's	£15
Fun School 3 for 7-11's	£15
Fun School 4 for under 5's	£15
Fun School 4 for 5-7's	£15
Fun School 4 for 7-11's	£15
Fun School in Time 8-11 on 3.5" or CD	£17
Fun School Dreamland 4-7 on 3.5" or CD	£17
Fun School in Space on 3.5" or CD	£17
Fun School Paint and Create on CD	£17
Fun School Maths on CD	£17
Fun School Spelling on CD	£17
Fun School Young Scientist on CD	£17
Europress Flying Fingers	£19
Guidosoft Chadwick & the Sneaky Egg Thief	£19
Guidosoft Gus & the Cyberbuds	£19
Guidosoft Gus goes to Cyberopolis	£19
Mavis Beacon for Kids on 3.5" or CD	£25
MS Creative Writer for Windows on 3.5" or CD	£19
MS Creative Writer & Creative Artist Bundle on CD	£32
MS Fine Artist for Windows on 3.5" or CD	£19
Corel WIN Toymakers	£14
Corel Red Rhino	£14
Corel Wild Cards	£20
Corel Adventures with Edison	£19
Corel Blue Tortoise	£19
Corel Nikolai's Trains	£19
Corel Wild Board Games	£19
GST Kids Fonts Collection	£12

## LANGUAGES

Borland C++ V4.5 on CD	£229
Borland C++ V4.5 Competitive Upgrade on CD only	£129
Borland C++ Visual Solutions	£62
Borland Turbo C++ V3 for DOS	£55
Borland Turbo C++ V4.5 for Windows on CD	£60
Borland Turbo Pascal for Windows	£78
Borland Turbo Pascal for DOS	£75
Borland Delphi for Windows on CD Only while stocks last	£153
MS Macro Assembler	£95
MS Visual Basic V4 for Windows 95 on 3.5"	£72
MS Visual Basic V3 for Windows Professional	£191
MS Visual Basic Professional V4 for Windows 95 on CD or 3.5"	£339
MS Visual Basic Professional Version Upgrade on CD	£120
MS Visual Basic for DOS Standard	£85
MS Visual Basic for DOS Professional	£90
MS Visual C++ V2 Windows and NT on CD	£249

## LEISURE

Apollo Europe 1 on CD & 3.5"	£25
Attica The Story of the World Cup on CD	£29
Bernard of Hollywood's Marilyn Monroe	£35
Mavis Beacon on 3.5"	£18
Doom on 3.5"	£29
Doom on 3.5"	£19
JigSoft on 3.5"	£19
3D Garden Designer 2	£13
MS Arcade	£13
MS Return of Arcade	EPOA
MS Entertainment Pack BEST	£15
MS Flight Simulator V5.1 for DOS on CD	£24
MS Flight Simulator V5 for DOS on 3.5"	£24
MS Flight Simulator New York	£12
MS Flight Simulator Paris	£12
MS Space Simulator for DOS on 3.5"	£24
MS Golf on 3.5" for Windows	£12
MS Golf Course Pinchurst	£12
MS Golf Course Banff	£12
MS Sound Bits MGM	£13
MS Sound Bits Hanna Barbara	£13
MS Sound Bits Music Clips	£13
US Gold Scrabble on 3.5"	£19

## OPERATING SYSTEMS

IBM OS/2 Warp V3 3.5 Kit	£50
IBM OS/2 Warp V3 CD Kit	£44
IBM OS/2 Warp V3 3.5 Upgrade Kit	£40
IBM OS/2 Warp V3 CD Upgrade Kit	£27
IBM OS/2 Warp Connect Upgrade Any Operating System	£59
IBM OS/2 Warp Connect Upgrade From OS/2 Warp	£49
MS DOS 6.22 Upgrade	£38
MS Windows to Win 95 Upgrade on CD	£58
MS Windows to Win 95 Upgrade on 3.5"	£58
MS-DOS to Windows 95 on 3.5"	£112
MS-DOS to Windows 95 1 User Lic	£109
MS Plus for Windows 95 on CD	£28
MS Plus for Windows 95 on 3.5"	£28
MS Plus add-on for Windows 95 - Exploits the power of your PC to maintain and enhance the look of your system. Tools include Systems Agent, Compression, Desktop themes, Multimedia Pinball, Internet Explorer, Font Smoothing and more	
MS Windows 3.1	£64
MS Windows 3.1 Upgrade	£39
MS Windows NT 3.51 Workstation CD/Disc	£218
MS Windows NT Server V3.5 CD	£475
CRT Easy Tutor on CD Rom	£25
Novell DR DOS V7	£49

## OCR

OmniPage V5 for Windows	£239
OmniPage Pro	£375
Textbridge for Windows	£69
Textbridge for Windows Professional Edition	£269
Wordscan Plus	£375
Character Eyes 2.5 Standard	£49
Character Eyes 2.5 Professional	£169

## PROJECT MANAGEMENT

BusinessPlan Builder	£88
CA Superproject V3.0 Windows	£455
MS Project V4.0 for Windows	£279
MS Project Upgrade to 4.0	£85
Symantec Time Line	£315

## PERSONAL MANAGEMENT

Berkeley Systems Express	£29
Lotus Organizer V2.1	£79
Sidekick for Windows V2	£29

### SIDEKICK 95 for Windows 95

£28



Word Perfect Infocentral	£55
MS Schedule+ for Windows 95 on 3.5"	£68

Contact Management	
Symantec ACT! V2	£149
Symantec ACT! V2.1	£199
Sage Telemagic	£175

## ROUTE PLANNERS

MS AutoRoute Express UK & Ireland V4 for WIN on CD	£39
MS AutoRoute Express UK & Ireland V4 for WIN on 3.5"	£31
MS AutoRoute Express Europe V4 for WIN on CD	£39
MS AutoRoute Express Europe V4 for WIN on 3.5"	£31

## SPREADSHEETS

CA Supercalc for Windows	£59
CA Supercalc for Dos	£69
Lotus 1-2-3 V5.0 Win	£219
Lotus 1-2-3 V4.0 DOS	£288
MS Excel V5.0	£225
MS Excel V5.0 CCP Upgrade	£88
MS Excel V5.0 Competitive Upgrade	£128
MS Excel for Win 95 on 3.5"	£225
MS Excel for Win 95 Competitive Upg on 3.5"	£107
MS Excel for Win 95 CCP Upg on 3.5"	£82
MS Excel Cross Platform CCP Upgrade	£70
Quattro Pro V6 for Windows	£149

## UTILITIES

386 Max V7.5	£45
Central Points Anti-Virus for Windows	£69
Central Points Anti-Virus for DOS	£75
Central Points Backup for DOS	£63
Checkit Pro	£59
Dashboard 3.0 for Windows	£28
Dashboard 95 for Windows 95	£78
Corel CD Creator	£124
Corel SCSI V2	£59
Dataseq	£50
Dr Solomons - Anti-Virus Toolkit 7 for DOS (Only Updates)	£59
Dr Solomons - Anti-Virus Toolkit 7 for Windows (Only Updates)	£62
Dr Solomons - Anti Virus Toolkit 7 for DOS (Monthly Updates)	£119
Dr Solomons - Anti Virus Toolkit 7 for Win. (Monthly Updates)	£145
Cybermedia First Aid for Windows	£33
Cybermedia First Aid on 3.5" for Windows 95	£39

Future - Bubble Help	£15
Magnaram	£39
Norton Antivirus V3 Win	£97
Norton Antivirus for Windows 95 on 3.5"	£59
Norton Antivirus for Windows 95 Trade Up on 3.5"	£29
Norton Backup V3 Win/DOS	£85
Norton Desktop V3 Win	£89
Norton Utilities V8	£85
Norton Utilities for Windows 95 on CD	£99
Norton Utilities for Windows 95 on 3.5"	£95
Norton Utilities for Windows 95 Trade Up on 3.5"	£55
Norton Navigator 95 (5 user)	£35
Norton Speed Drive	£48
Laplank for Windows	£75
On File	£29
PC Tools V2 Win	£75
PC Tools Pro for DOS	£73
Quarterdeck Cleansweep	£26
Quarterdeck Gamerunner	£31
Quarterdeck QEMM V7.5	£44

## RAM DOUBLER for Windows on 3.5" £49

Ram Exam	£17
Stakker V4	£55
Stakker V4 Upgrade	£36
Stakker V4.1 for Windows 95 on 3.5"	£39
Stakker V4.1 for Windows 95 Upgrade on 3.5"	£26
SoftRAM for Windows 95 on 3.5"	£55
Micro Help Uninstaller™ V3	£33
WinDelete	£35
Winprobe	£59
Win '95 Advisor	£29
Xtree Gold V4 for Windows V4	£66

## WINDOWS SCREEN SAVERS

Berkeley After Dark	£19
The Flintstones Screen Saver	£14
Berkeley Star Trek	£21
Berkeley The Simpsons	£21
Berkeley Totally Twisted Screen Saver	£19
Opus and Bill on the Road Again	£23
Disney Lion King Screen Saver on 3.5"	£19
Disney Mickey & Crew Screen Saver	£19
MS Scenes Impressions	£14
MS Scenes Sports Extremes Collection	£14
MS Scenes Hollywood Collection	£14
MS Undersa Collection	£14
MS Scenes Brain Twister Collection	£14
Beavis & Butthead Screensaver	£16
Telstar Pamela Anderson	£15

## WORD PROCESSING

Accent Express V2	£35
Accent Express (Special Edition) V2	£101
Accent Professional V2	£189
(Multi Language Word Processing for Windows)	
Lotus Ami Pro V3.1	£84
Lotus Ami Pro V3.1 Competitive Upgrade	£135
Lotus Ami Pro V3.1 Upgrade	£84
Lotus Word Pro '96	£188
MS Word V6.0	£225
MS Word V6.0 CCP Upgrade	£85
MS Word for Windows 95 on 3.5"	£225
MS Word for Windows 95 Competitive Upgrade	£107
MS Word for Windows 95 CCP Upgrade on 3.5"	£82
Word Perfect V6.1 for Windows	£159
Word Perfect V6.0 for Win Competitive Upgrade	£85
Word Perfect V6.0 for Windows Upgrade	£69
Word Perfect V6.0 for DOS	£12
Word Perfect V6.0 for DOS Competitive Upgrade	£115
Word Perfect V6.0 for DOS Upgrade	£74
Word Perfect Grammatik	£25
Wordstar for Windows	£27

All prices exclude VAT and Delivery.  
 Prices effective as of 1st November 1995  
 All sales are subject to our standard terms and conditions.  
 Prices are correct at time of going to press. E&OE.  
 14 DAY MONEY-BACK GUARANTEE ONLY APPLIES TO UNOPENED SOFTWARE PACKAGES

# SIMPLY COMPUTERS

THE PEOPLE WHO LOVE PCs

Telephone: 0181 498 2120



# NEC

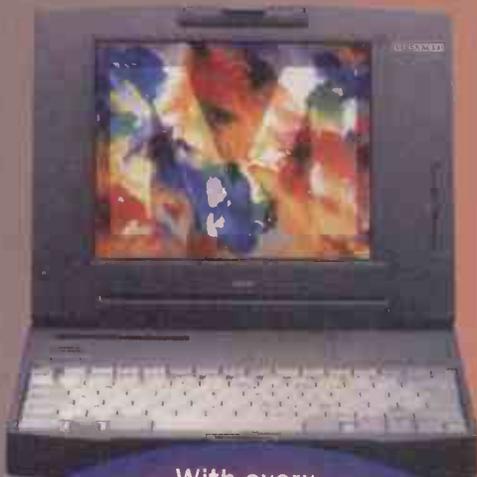
## POWERMATE V SERIES

PowerMate V466 8M6 M540 **£949**  
 PowerMate VP75 8M6 M540 **£1205**

## VERSA SERIES

### (NOTE BOOKS)

Versa S/33D 4Mb M210 **£995**  
 Versa S/50C 4Mb M260 **£1725**  
 Versa V/50D 4Mb M250 **£1550**  
 Versa V/50C 4Mb M340 **£2015**  
 Versa V/75C 4Mb M540 **£2415**  
 Versa M/100C 8Mb M540 **£3020**  
 Versa M/100T 8Mb M540 **£3195**  
 Versa M/100S 8Mb M540 **£3490**  
 Versa P/75C 8Mb M810 **£3450**  
 Versa P/75S 8Mb M810 **£3710**

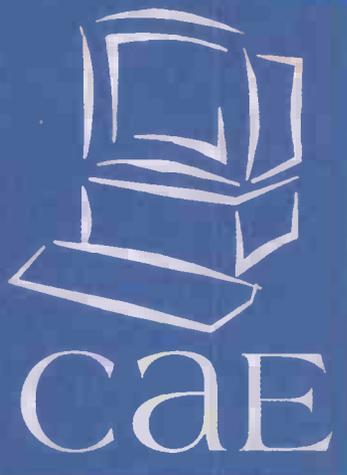


With every  
**Versa V Series Notebook**  
 you will receive a NEC docking  
 station *absolutely free!*  
**Worth £425 RRP**

WHILE STOCKS LAST

## NEC MEMORY

Versa 4Mb E,V,M & P **£175**  
 Versa 8Mb E,V,M & P **£345**  
 Versa 16Mb E,V,M & P **£685**  
 Versa 32Mb E,V,M & P **£1365**  
 Versa S Series 4Mb **£175**  
 Versa S Series 8Mb **£345**  
 PowerMate 4Mb D,M & V **£125**  
 PowerMate 8Mb D,M & V **£255**  
 PowerMate 16Mb D,M & V **£495**



## MONITORS



Monitor XV14 **£219**  
 Monitor XV15 **£294**  
 Monitor XE15 **£410**  
 Monitor XE17 **£724**  
 Monitor XP17 **£954**  
 Monitor XE21 **£1194**  
 Monitor XP21 **£1835**

## LASER PRINTERS



SuperScript 610 *plus* **£299**  
 SuperScript 660 **£425**  
 SuperScript 660*i* **£610**

## COLOUR THERMAL PRINTERS

SuperScript Color 3000 **£705**

## 24 PIN DOT MATRIX PRINTERS

Pinwriter P2Q **£104**  
 Pinwriter P3Q **£190**  
 Pinwriter P62 **£337**  
 Pinwriter P72 **£404**

## CD-ROMS READERS



Multispin 3Xp *plus* **£256**  
 Multispin 6Xi **£279**  
 Multispin 6Xe **£367**  
 Multispin 2Xc Change **£315**



**01923 210923**



**01923 210305**

CAE OFFICE SYSTEMS  
 VICTORIA HOUSE  
 49 CLARENDON ROAD  
 WATFORD, HERTS. WD1 1HP

Access



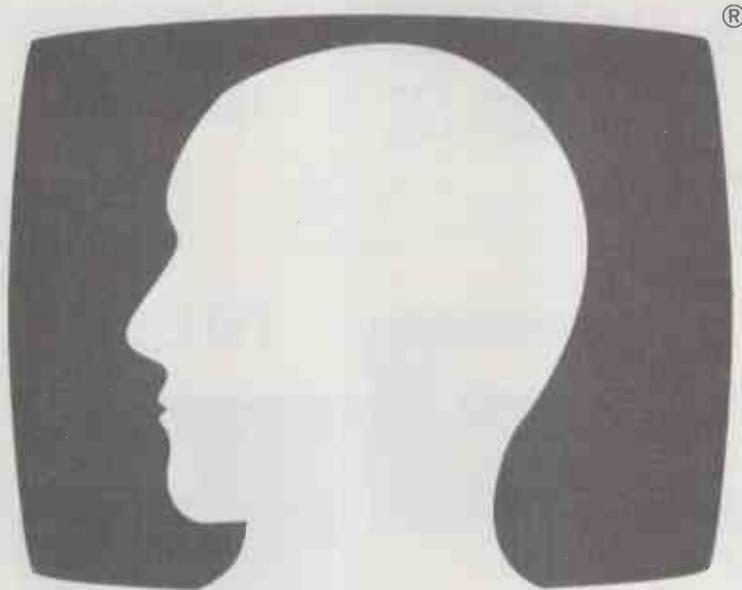
**ALL PRICES EXCLUDE  
 VAT & DELIVERY.**

PRICES AND

SPECIFICATIONS SUBJECT TO  
 CHANGE WITHOUT NOTICE. E&O

**PLEASE CALL FOR OTHER  
 MANUFACTURERS PRICES  
 AND FULL RANGE OF  
 CONSUMABLES**

# Expand Your Memory...



...it's as easy as

Memory Type / Size ▶	30 Pin		72 Pin PARITY		72 Pin NON PARITY	
	1Mb	2Mb	4Mb	8Mb	16Mb	32Mb
<b>30 Pin</b>	£27	-	£89	-	-	-
<b>72 Pin Parity</b>	-	-	£99	£199	£359	£699
<b>72 Pin Non Parity</b>	-	-	£84	£163	£299	£625
<b>EDO</b>	-	-	£99	£199	£395	£call

## Amstrad

7 Series  
9 Series

- A** Optiplex
- B** Precision Non-Pentium Pentium

## AST

Bravo LC, LRMS, MT  
Premmia 486

- C** Elonex
- B** PC433m, 450m, 466m  
PC500 Series, PC560

## Compaq

ProLinea 4/25, 4/33, 4/33s,  
4/50, 4/66, MT, P75  
Presario all models

- B** Escom
- DX2/66, P60, P75, P100
- B** Evesham
- Vale Popular, Prestige,  
Premier, Platinum

## Dan

95s, Premum, Windows,  
Dantium, Ultimate

- C** IBM
- Aptiva 300 Series  
700 Series
- C** Valuepoint  
PS/2

## Dell

Performance L, M, T  
ME  
Dimension XPS  
XPS Pentium  
Omniplex

- C** Gateway
- PC4sx33, DX33v, 66v, P/v  
P4D
- B** P575, 90, 100, 120, 133
- C** EDO
- D**

## C Highmead

- C** DX2/66, DX4/100
- B** P75, P90, P100

## Hewlett Packard

- B** Vectra/Netserver
- C** LF/LM  
N2, M2, XM2, VL2

## Mitac

- C** DX2/66, DX4/100, P60
- C**

## MJN

- C** DX2/66, DX4/  
100, P75, P100
- C**

## Opus

- C** DX2/66, DX4/100, Triton, C
- Prelud, Premier, Prestige

## Simply Computers

- C** DX2, DX4, P60, 75, 90
- B**
- B**

## Viglen

- C** Genie 486VLB, PCI
- C** Pentium Series EX
- D** Pentium Series EDO

## Watford Electronics

- C** Aries 486SX2, 486DX2

## ORDER INFORMATION

Simply find your  
computer in the list

Use the ABC pricing

Call our memory experts

14 days no quibble  
Money back offer



5<sup>yr</sup> 5 year warranty




**CLICK**

a trading division of Novatech

The Click Logo is a Registered Trademark of Novatech  
All other Trademarks acknowledged.

Click Blueprint 1400 Dundas Spur Portsmouth PO3 5RW

**(01705) 666500**

**3 9 3**  
PERSONAL COMPUTER WORLD

E&OE

## Printers

### brother

**Lasers**

HL630 300dpi	£317
HL631 300dpi 1 Mb	£344
HL660 600dpi	£459
HL1260 600dpi 12ppm *	£889

### Canon

**Inkjets**

BJ30	£138
BJ70 Colour	£217
BJ200ex	£159
BJ230	£235



### BJC4000 Colour £217

BJC600e	£317
BJ300	* £344
BJ330	* £388
BJC800 A3 Colour	* £988
BJC820 A3 Colour	* £1219

**Lasers**

LBP430W	* £358
LBP1260	* £888

### EPSON

**Dot Matrix**

LX300	£92
LX1050	£178
FX870	£242
FX1170	£297
LQ300	£147
LQ570+	£209
LQ870	£371
LQ1070+	£291
LQ1170	£429
DFX5000+	£1148

**Inkjet**

Stylus 820 <b>New!</b>	£199
Stylus 2s Colour <b>New!</b>	£249



### Stylus Colour 2 720dpi £288

Stylus Colour Pro A4	£638
Stylus Colour Pro XL A3	£1374

**Lasers**

EPL3000	* £337
EPL9000 12ppm A3	* £1124
EPL9000PS 12ppm A3	* £1514

No of \* = No of years On-Site Maint.

## Printers

### hp HEWLETT PACKARD

**Inkjet for PC**

DeskJet 340 <b>New!</b>	£168
DeskJet 340 Battery Pack	£27
DeskJet 340 Infrared Adapter	£28
DeskJet 340 Colour Kit	£28
<b>DeskJet 600 <b>New!</b></b>	<b>£205</b>



### DeskJet 660C £271

DeskJet 850C	£328
DeskJet 1600C	£817
DeskJet 1600CM PS	£1218
<b>Inkjet for Apple Mac</b>	
DeskJet 340 + Mac Kit <b>New!</b>	£195
DeskWriter 600 <b>New!</b>	£212
DeskWriter 660C	£282

**Lasers**

LaserJet 5L <b>New!</b>	£344
-------------------------	------



### LaserJet 5P £569

<b>LaserJet 5MP</b>	<b>£719</b>
LaserJet4+	£968
LaserJet 4M+ Pscript	£1294
LaserJet 4V A3	£1363
LaserJet 4MV Pscript A3	£1963
LaserJet 4Si *	£2053
LaserJet 4Si MX *	£2923
LaserJet Colour	£4178

### Plotters



DesignJet 230 A4-A1 *	£1385
DesignJet 230 A4-A0 *	£1907
DesignJet 250C A4-A1 *	£1736
DesignJet 250C A4-A0 *	£2385
DesignJet 230/250 legs only A1	£195
DesignJet 230/250 legs & bin A0	£219
DesignJet 600 A4-A1 *	£2645
DesignJet 600 A4-A0 *	£3159
DesignJet 750C A4-A1 *	£3676
DesignJet 750C A4-A0 *	£4350
DesignJet 755CM A4-A0 *	£Call
3 Years HP On-site Support	£395

No of \* = No of years On-Site Maint.

## Printers

### LEXMARK

**Lasers**

Opra R	* £958
Opra L	* £1367
Opra RX	* £1467
Opra LX	* £1898
Opra LXi	* £2293

### NEC



**Lasers**

SuperScript 610 Plus *	£267
SuperScript 660 *	£388
SuperScript 660i *	£509
SuperScript Color3000 *	£649

### Panasonic

**Dot Matrix**

KX-P1150	£87
KX-P2023	£108
KX-P2135 Colour	£126
KX-P2124	£198
KX-P3626	£252

**Lasers**

KX-P6100	* £265
KX-P6150	* £305
KX-P4430	** £489
KX-P4440	** £699

### SHARP

**Lasers**

JX9200 300dpi WPS	£249
J9210 600dpi WPS	£319

Sharp Lasers require Windows 95

### star

**Lasers**

Wintype 4000	£288
--------------	------

### QMS

**Lasers**

PS1060 A4 600x600 12Mb	£1576
PS1660 A3 1200x600 12Mb	£2199

### X RANK XEROX

**Lasers**

4505	600 dpi 5ppm 2Mb	£583
4505ps	PostScript 6Mb	£899
4510	600 dpi 10ppm 2Mb	£789
4510ps	PostScript 6Mb	£1127
4520	600 dpi 20ppm 4Mb	£1905
4520mp	PostScript 8Mb	£2820
3006	fax/print/copy/scan	£881
PC connectivity Kit		£89

No of \* = No of years On-Site Maint.

## Printer Ribbons

**AMSTRAD**

DMP2000/3000/3160	2+ 12+	1.80 1.70
PCW9512	RN	2.30 1.99

**EPSON**

LQ100,LQ150 Original	DN 5.25	4.95
LQ300/570/850/870	DN 3.05	2.75
LQ1070/1170	DN 3.50	3.10
LX300/400/850	FN 2.85	2.55
LX1050,FX1170	FN 3.10	2.75

**PANASONIC**

KXP1123/1124	RD 2.30	2.20
2123/2124 BLACK	RD 3.95	3.70
2123/2124 COL	RD 7.95	7.50

**STAR**

LC10/100	FN 1.60	1.40
LC24-1/2/300,XB24	DN 2.30	2.10

## Ink Cartridges

**CANON**

BJ10E,BJ20	1+ 6+	14.75 13.95
BJ200/BJ230		16.95 15.45
BJ300/BJ330		13.00 12.00
BJ30/BJ70 BCI10BK 3 Pk		10.00 9.00
BJ70 BCI11BK 3PK		
BJ70 BCI11C 3PK		
BJC600 Black Long Life	9.00	8.00
BJC600 Colours	8.00	7.00
BJC4000 BC21Black	8.00	7.00
BJC4000 BC21Colour	14.00	13.00
BJC4000 BC20 Black	23.00	21.00

**EPSON**

Stylus 400,800,1000	10.00	9.00
Stylus 800,1000 Long Life	19.00	17.00
Stylus Colour Black	12.00	11.00
Stylus Colour	29.00	27.00

**HEWLETT PACKARD**

DeskJet 310,320	16.75	15.95
DeskJet 500,520,540,560	19.75	18.95
DeskJet 560 51625A Col	21.00	19.00
DeskJet 660 51629A Blk	22.00	20.00
DeskJet 660 51649A Col	23.00	21.00
DeskJet 850 51645A Blk	21.00	19.00
DeskJet 850 51641A Col	20.00	18.00
DeskJet 1200 Black	19.00	18.00

## Laser Toner

**BROTHER**

HL4,HL6	1+ 3+	48.00 46.00
HL8		49.00 47.00
HL630,631,660		27.00 26.00
HL1260		71.00 69.00

**HEWLETT PACKARD**

LaserJet IIP,IIIP	1+ 3+	48.00 46.00
LaserJet II,III,IIID		49.00 47.00
LaserJet 4L,4ML,4P		46.00 44.00
LaserJet 4,4M,4+		71.00 69.00
LaserJet 4V,4MV		91.00 89.00

**NEC**

SuperScript 610,660	78.00	76.00
---------------------	-------	-------

**STAR**

Laser 5 All Models	67.00	65.00
WinType 4000	68.00	62.00

**Free Carriage on all Consumables!**  
**Only Orders over £50+vat go Next Day**  
**We have Huge Range of Consumables**  
**Please Call if yours is not Listed**

# 8 Years. 150,000 satisfied customers.

# Next Day Delivery\* if you order before 4.30pm



## Scanners

### ADDUP

HandHeld 32 Grey Scale	£39
HandHeld 24 bit Colour	£79

### AGFA

StudioScan Adobe PhotoShop LE	£468
StudioScan II SI Adobe PhotoShop LE	£595
ARCUS II Full Adobe PhotoShop	£2109

All AGFA Scanners Include FotoLook, FotoSnap, FotoTune and OmniPage Direct OCR software  
Please specify MAC or PC version when ordering

### EPSON Scanners



**GT Scanner Packages for PC & Mac**  
Includes all interfaces, cables & software required +

#### GTX includes:

● Adobe Photoshop LE	
● Omni Page Direct OCR	
GTX8500 PC Parallel	£489
GTX8500 PC SCSI	£565
GTX8500 Apple Mac	£569
GTX9000 PC Parallel	£595
GTX9000 PC SCSI	£665
GTX9000 Apple Mac	£598

#### GTI package includes:

● Adobe Photoshop full version	
GTI8500 PC SCSI	£739
GTI8500 Apple Mac	£683
GTI9000 PC SCSI	£848
GTI9000 Apple Mac	£789

### HEWLETT PACKARD

ScanJet 4S <i>New!</i>	£227
------------------------	------



**ScanJet 4C *New!*** £607

Please specify Interface - PC, MCA, or MAC

### LOGITECH

ScanMan 256 PC	£69
ScanMan EasyTouch	£105
ScanMan Colour	£139
PageScan Colour	£289

### MUSTEK

600CX 600dpi	£289
1200CX 1200dpi	£369
800SP 800dpi Single Pass	£Call
1200SP 1200dpi Single Pass	£Call

• Flatbed Colour SCSI Scanners  
Inc Interface cables & software

### PLUSTEK

ScanPlus 6000 Colour	£179
----------------------	------

A4 Sheet fed Includes Pict Pub LE+ WordScan OCR



## Modems

### MOTOROLA *New!*

New 28.8 Modem on its own or complete with Internet pack	
3400 Pro PC	£142
3400 Pro Online Internet Pack	£155

### PACE

	Internal	External
Microlin FX32+	£136	£149
Microlin FX34	£209	£229
Microlin FX32+ PCMCIA		£189
Microlin FX34 PCMCIA		£259
Mobifax 32+ 14.4 + Fax		£92
Linnet Message Centre		£172

### US ROBOTICS



### Sportster 28.8+ fax £155

Sportster 14.4 + fax	£102
Sportster 14.4 + fax Internal	£104
Sportster 28.8 + fax Internal	£158
Worldport 14.4 + CellPhone	£121
Worldport PCMCIA V34	£159
Courier v34 External	£239
Courier v34 Internal	£239

### ZOOM

14.4 Internal	£85
14.4 External	£92
28.8 Internal	£139
28.8 External	£158

### Modem Cable 9 or 25 pin £9

APPROVE connection to telecommunication systems specified in the instructions. Subject to the conditions set out in them.



## Faxes

### SAMSUNG

SF40	*	£159
SF500	*	£182
SF800	*	£246
SF1505	*	£229
SF2800	*	£292

### HEWLETT PACKARD

### Scanner Fax & Printer in One



### OFFICEJET LX £469

3Yrs On-Site Warranty	£100
-----------------------	------



## How to Order...

Our friendly staff will take your order over the phone. We aim to make your purchase as effortless as possible. Call us now on (01705) 664144.

### Fax or Post

Please make sure you read the following.

### Delivery

£5 +VAT per order. for software only orders  
£10 +VAT per order for all other orders  
UK Mainland next working day.  
If you require delivery on Saturday or off the mainland please call for price.

\*If you pay by credit card before 4.30pm for items in stock we will despatch that day for delivery the next working day. (UK Mainland only. Excludes outlying areas and orders placed on Saturday.)

### VAT

Please add VAT at 17.5% to all prices.  
(ie £100 item + £10 delivery + £19.25 VAT = £129.25)

### Payment

#### Credit Cards

We make no surcharge for credit card use.  
We will not debit your card before the day of despatch.  
We despatch same day when you order before 4.30pm.



#### Cheques

Please allow 7 working days for cheques to clear before despatch. Proforma invoices will be supplied on request.

#### Bank Transfers Welcome

Please ask for details.

#### Government & Education

We welcome official orders from all Government bodies. Our terms for these orders are strictly 30 days from invoice date.

### Terms & Conditions

Goods are not supplied on a trial basis. You must check specifications and compatibilities with manufacturers before buying. Prices and specifications may change without notice. Goods are offered subject to our standard conditions of sale - available on request. E & OE. Partners DRM & J Furby

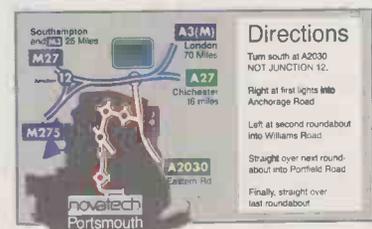


### Opening Hours

Monday to Friday 9am to 5.30pm. Saturday 9.30am to 4.30pm.  
Personal collections are welcome. We hold large stocks but are unable to demonstrate any of the products listed here.

Novatech  
Blueprint 1400  
Dundas Spur  
Portsmouth  
PO3 5RW

Sales (01705) 664144  
Fax 664244  
After Sales 662299



## Hard Drives

**CONNER IDE**  
CFS420A 420Mb 13ms £92

### SEAGATE IDE



ST3660A 545Mb 14ms £103  
ST5850A 850Mb 11ms £129  
ST31220A 1Gb 12ms £161

### SEAGATE SCSI

**Hawk**  
ST31230N 1050Mb 10ms £295  
ST32430N 2147Mb 10ms £589  
ST15230N 4294Mb 10ms £734  
**Baracuda**  
ST32550N 2147Mb 8ms £657  
ST15150N 4294Mb 8ms £1109

### WESTERN DIGITAL IDE



AC-2635 635Mb 10ms £115  
AC-2850 850Mb 10ms £136  
AC-31200 1.2Gb 10ms £179

## Other Drives

**IOMEGA**  
ZIP Drive 100Mb Ext Parallel £129  
ZIP Drive 100Mb Ext SCSI £129  
100 Mb PC Formatted 1 Pack £14  
100 Mb PC Formatted 5 Pack £49

## Other Drives

5.25" 1.2Mb £33  
3.5" 1.44Mb £18

## Interface Cards

### CONTROLLER CARDS

IDE 2Hdd 2Fdd 1Parr 2 Ser 1Game£14  
IDE 4Hdd 2Fdd 1P/1G/2 16550 Serial  
Mode 3+4 VL Bus £22

### ADAPTEC SCSI Controllers

1515 Kit ISA Hdd £59  
1542C kit ISA Hdd/Fdd £159  
1640kit PS/2 MCA Hdd/Fdd £189  
2742kit EISA Hdd/Fdd £224  
2842kit VL Bus Hdd/Fdd £152  
2940kit PCI Hdd £159  
T460kit PCMCIA fast SCSI2 £179

## Soundcards

### CREATIVE LABS



Sound Blaster 16 Value IDE £59  
Sound Blaster 16 Pro IDE £64  
Sound Blaster 16 Pro AdSp £104  
Sound Blaster AWE32 Value IDE £97  
Sound Blaster AWE32 IDE £147

### ORCHID

Soundrive EZ SCSI £59  
GameWave 32 Plus £65  
SoundWave 32 Pro £119  
SoundWave 32 Pro SCSI 2 £131  
NuSound Plug n Play Win 95 £109

### ZIFI SPEAKERS

Zi-Fi Speakers £25  
Zi-Fi Pro Speakers £39

## Graphics Cards

### DIAMOND

Stealth 64 1Mb Dram £84  
Stealth 64 2Mb Dram £128  
Stealth 64 2Mb Video Vram £209  
Stealth 64 4Mb Video Vram £307

Please specify VLB or PCI

### NUMBER 9

9FX Vision 330 1Mb £86  
9FX Vision 330 2Mb £126  
9FX Motion 531 1Mb £121  
9FX Motion 531 2Mb £163

Please specify VLB or PCI

9FX Motion 771 2Mb PCI Only £219  
9FX Motion 771 4Mb PCI Only £327  
Imagine 128 4Mb 1280 PCI £469  
Imagine 128 4Mb 1600 PCI £605  
Imagine 128 8Mb PCI £1029

### ORCHID

Fahrenheit 64 1Mb VLB £89  
Fahrenheit 64 1Mb PCI £95  
Fahrenheit 64 2Mb VLB £128  
Fahrenheit 64 2Mb PCI £133  
Fahrenheit Pro 64 2Mb VLB £208  
Fahrenheit Pro 64 2Mb PCI £214  
Fahrenheit Pro 64 4Mb VLB £284  
Fahrenheit Pro 64 4Mb PCI £291



Kelvin 64 1Mb £80  
Kelvin 64 2Mb £113

Please specify ISA, VLB, or PCI

## CD Kits

### CREATIVE LABS

**MultiMedia Home CD4x** £269  
16 Bit SoundBlaster Card with AdSP  
Quad Speed IDE CD Rom  
StereoSpeakers  
Microsoft Publisher 2 with Design Pack  
Microsoft Works, Encarta 95,  
MS Cinemania 95, Bookshelf 94  
Ancient Lands, Golf, Dangerous Creats  
MS Musical Instruments, Undersea  
Pagan Ultima 8, Wing Commander 2  
Syndicate Plus, Strike Commander

### GameBlaster Quad Internal

AWE32 SoundBlaster £287  
Quad Speed IDE CD Rom  
StereoSpeakers  
10 CD Titles

## CD Drives

### CREATIVE LABS

563 MultiMedia Upgrade £62  
Includes Grolier Ency + PhotoStyler

### GOLDSTAR

GC5R520D Dual Speed IDE £69  
GC5R540D Quad Speed IDE £104

### MITSUMI

FX400D Quad Speed IDE £99  
Interface for above £12

### PANASONIC

CR562 Bare Drive £68  
Interface Kit inc Cables £8  
CR574 Bare Quad Speed IDE £113  
Quad Pro Quad Speed IDE £118  
Quad Pro IDE Interface kit £9  
CR504 Bare Quad Speed SCSI £149  
Quad Pro Quad Speed SCSI £149  
LF1004B PD Quad CD + Optical £459  
LF1004BK PD CD + Optical Kit £498  
Optical Cartridges for PD System £39

### PIONEER

DR-UA124X Quad IDE £125  
DR-U124X 4.4 speed SCSI £184  
DRM-624X 4.4sp SCSI Multi CD £427

### PLEXTOR

Quad Speed SCSI internal £198  
Quad Speed SCSI external £269  
Six Speed SCSI internal £309  
Six Speed SCSI external £389

### TOSHIBA

XM3601B int 4.4 speed SCSI £213

## Joysticks

### CH

Flight Stick £27  
Flight Stick Pro £49  
Virtual Pilot Yoke £63  
Multi I/O with Game Port £14

## Network cards

### 3COM Etherlink III3C509B

Connection	Bus	1 Pack	5 Pack
BNC	ISA	£66	£293
RJ45	ISA	£65	£276
BNC & RJ45	ISA	£75	£325

## Memory

### 30 Pin

1Mb 70ns £27  
4Mb 70ns £89

### 72 Pin Non Parity

1x32 4Mb 70ns £84  
2x32 8Mb 70ns £163  
4x32 16Mb 70ns £299  
8x32 32Mb 70ns £625

### 72 Pin Parity

1x36 4Mb 70ns £99  
2x36 8Mb 70ns £199  
4x36 16Mb 70ns £359  
8x36 32Mb 70ns £699

### 72 Pin EDO

1x32 4Mb £99  
2x32 8Mb £199  
4x32 16Mb £395  
8x32 32Mb £Call

## OverDrives

### DX4 OverDrive

25Mhz to 75Mhz £86  
33Mhz to 100Mhz £112

Please state if you have an empty Overdrive socket or require a chip replacement when ordering

### Pentium OverDrive

to fit 486 25Mhz £149  
to fit 486 33Mhz £169

## Tape Streamers

### COLORADO

DJ-35 350Mb Internal £74  
DJ-25 700Mb Internal £119  
DJ-50 1.4Gb Internal £170



### T1000 400/800 Mb TRAVAN

FC-20 Tape Controller £109  
Trakker 350Mb External £146  
Trakker 700Mb External £198  
350 Mb Tapes £18  
700 Mb Tapes £22

Please Call for Quantity Tape Prices

## Mice

### LOGITECH

Pilot Serial Mouse £17  
Mouseman Combo £33  
Mouseman Cordles £49  
Trackman II £43  
Trackman Portable £35

### MICROSOFT

Mouse 2 Serial & PS/2 Intellipoint £35  
Home Mouse £29

# £5 for Next Day Delivery\* on Software

## Monitors

### GoldStar

GS1455D 14" 800x600	£137
GS1468DM 14" 1024x768 NI LR	£168
GS1505DM 15" 1024x768 NI LR	£219
GS1527DM 15" 1024x768 NI LR	£249
GS1727DM 17" 1024x768 NI LR	£455

### NEC

#### Value Series

XV15 15" 1024x768 NI LR	£279
XV17 17" 1024x768 NI LR	£559

#### Efficiency Series

XE15 15" 1024x768 NI LR	£389
XE17 17" 1024x768 NI LR	£697
XE21 21" 1152x870 NI LR	£1329

#### Professional Series

XP17 17" 1152x870 NI LR	£909
XP21 21" 1360x1024 NI LR	£1749

### PHILIPS

14M 14" VGA Mono LR	£89
14C 14" 1024x768 I LR	£163
15B 15" 1024x768 NI LR Stereo	£272
17C 17" 1024x768 NI LR Stereo	£423
17T 17" 1280x1024 Trinitron	£546
20C 20" 1280x1024 NI LR	£779

### SONY



<b>CPD-15SF1 1024x768 NI LR</b>	<b>£305</b>
CPD-17SF1 1024x768 NI LR	£589
GDM 17SE1 1280x1024 NI LR	£808
GDM 20SE1 1280x1024 NI LR	£1403

### TAXAN

400LR 14" 1024 x 768 Interlaced	£183
410LR 14" 1024 x 768 Non Int	£193
420LR 14" 1024 x 768 Non Int	£232



<b>580+ LR 15" 1024 x 768 NI</b>	<b>£259</b>
880LR 17" 1024 x 768 Non Int	£503
885LR 17" 1024 x 768 Non Int	£559
895LR 17" 1024 x 768 Non Int	£785
1080LR 20" 1280 x 1024	£869
2100LR 21" 1200 x 1600	£1489

## Software

### Adobe

Adobe Illustrator v4	£260
Adobe Photoshop v3.0	£382
Aldus Page Maker Classic	£52
Aldus Page Maker 6	£389
Aldus Photostyler v1.1	£386

### COREL®

Corel Draw 3 CD	£42
Corel Draw 4 CD	£84
Corel Draw 5 CD	£287



<b>Corel Draw 6 32-bit CD</b>	<b>£259</b>
Corel Draw 3&4 - 6 Upg CD	£217
Corel Draw 5 - 6 Upg CD	£137
Corel Gallery 2	£51
Corel Flow	£46

## DorlingKindersley

### Children's Software

P.B Bears Birthday Party	£23
First Incredible Amazing Dictionary	£23
The Way Things Work	£33

### Reference

Ultimate Human Body	£33
Cross Section Stowaway	£23
World Reference Atlas	£39
Anne Hoopers Ultimate Sex Dlsc	£28

### Eyewitness Series

Encyclopaedia of Nature	£33
Encyclopaedia of Science	£33
History of the World	£33

### Intuit



Quicken Deluxe Home Pack 4	£46
Quicken Deluxe Business Pack 4	£46
Quicken for Windows 4.0	£27
Quicken for Windows 4.0 CD	£27
Quicken for DOS	£33
Quick Books v 3.0	£82
QuickTax 95	£27

## Software

### Microsoft

#### Windows 3.1 Applications

Access v2.0	£228
Access v2.0 CCP Upgrade	£84
Access v2.0 Developer Tool Kit	£235
Project 4	£293

#### Entertainment

Flight Simulator 5.1 CD or 3.5"	£24
Golf CD or 3.5"	£24
Space Simulator	£27

#### Reference & Exploration CD

AutoExpress UK+Eire Win 3.5"	£31
AutoExpress UK+Eire Win CD	£41
Ancient Lands CD	£19
Art National Gallery	£27
Bookshelf 1995	£42
Cinemanía 1995	£19
Dogs	£19
Encarta 1995	£58
Explorapedia	£19
Musical Instruments	£19
Wine Guide	£19

#### Children's Software

Creative Writer CD	£19
Fine Artist CD or 3.5"	£19

#### Languages

Visual C++ + Standard	£62
Visual Basic Standard	£84
MS Visual Basic Pro	£197



Windows 3.x to Windows 95 3.5"	£59
Windows 3.x to Windows MLP	£55
MS-DOS to Windows 95	£111
MS Plus! for Windows 95	£26

#### Windows 95 Applications

Office 95 standard	£329
Office 95 Std version upg	£139
Office 95 Std competitive upg	£162
Office 95 Pro	£428
Office 95 Pro version upg	£204
Office 95 Pro competitive upg	£245
Word v7 95	£226
Word v7 95 version upg	£82
Word v7 95 competitive upg	£106
Excel v7 95	£226
Excel v7 95 version upg	£82
Excel v7 95 competitive upg	£106
Publisher 95	£61
Works 4.0	£53

## Software

### Lotus®

123 for Windows 5 + Approach	£219
123 + Approach Upgrade	£119
Word Pro 96	£82
SmartSuite 4 Upg	£162

### NOVELL

Netware v3.12 5 User	£403
Netware v3.12 10 User	£909
Netware v3.12 25 User	£1351
Netware v4.1 5 User CD	£424
Netware v4.1 10 User CD	£973
Netware v4.1 25 User CD	£1436
Perfect Office 3.0 Comp Upg	£145
Perfect Office 3.0 Version Upg	£119
WordPerfect for Windows 6.1	£165
WP Windows 6.1 Version Upg	£62

### SAGE

#### SAGE STERLING for DOS

Accountant	£160
Accountant Plus	£242
Financial Controller	£319
Financial Controller LAN	£506
Payroll II	£139

#### STERLING 3 for Windows

Accountant 3	£190
Accountant Plus 3	£272
Financial Controller 3	£354
Financial Controller + 2 LAN	£549
Payroll for Windows	£139
Instant Accounting for Windows	£83
Instant Payroll for Windows	£69



Accountant 3	£190
Accountant Plus 3	£272
Financial Controller 3	£354
Financial Controller + 2 LAN	£549
Payroll for Windows	£139
Instant Accounting for Windows	£83
Instant Payroll for Windows	£69

## Utilities

Dr Solomons Anti Virus Windows	£70
Laplinsk Pro v 5 Dos	£59
Laplinsk Pro v 5 Windows	£84
Norton Anti Virus Windows 95 Upg	£27
Norton Anti Virus Windows 95	£53
Norton Utilities Windows 95 Upg	£48
Norton Utilities Windows 95 3.5"	£85
Norton Utilities Windows 95 CD	£89
Norton PC Anywhere v5 dos (HR)	£92
Norton PC Anywhere Windows	£92
QuarterDeck CleanSweep	£27
QuarterDeck Qemm v7.5	£45
QuarterDeck MagnaRam	£27
RMH SoftRAM	£46



turn back to our

## How to Order...

section at the beginning of this ad.  
...or simply dial the number below.



## Look to the future with Microsoft, Windows 95 is here. NEXT DAY £5

With the Microsoft® Windows® 95 operating system, you can unlock the potential of your computer. Make it work even easier and faster. Open it wide to exciting new possibilities. And even make it more fun.

### Everything you do is easier and faster

**Easier.** Navigate your system quickly with easy-to-use tools, including the Start button, task bar, and Windows Explorer.

**Plug and Play.** Plug and Play frees you from manually setting up Plug and Play compatible hardware devices such as CD-ROM drives and scanners.

**Long File Names.** Use longer, more descriptive filenames up to 250 characters long.

**Faster.** Enjoy improved performance in all major areas, including faster file and disk access, and faster printing, thanks to the 32-bit architecture of Windows 95.

**Compatible.** Works with your current software - 16 bit programmes and drivers for Windows, Windows for Workgroups, and MS-DOS are compatible with Windows 95.

### A world of new possibilities.

**Multitask.** Work on several tasks at once with fast, new 32-bit programmes that support preemptive multitasking and multithreading.

**The Microsoft Network.** Sign on to The Microsoft Network. It's an easy-to-use online service with e-mail, news, Internet access, and more.

**One-Stop In-Tray.** Microsoft Exchange is your one-stop in-tray that makes it easy to view and work with such things as electronic mail from multiple sources, faxes, documents, and bulletin boards.

**Network-Ready.** Windows 95 is network-ready, providing easy 32-bit access to network resources.

**Mobile.** Get the most from your portable PC with features such as dial-up networking, Battery monitor and Plug and Play support for PCMCIA cards and docking stations.

### Whatever you do, you'll enjoy it more.

**More Fun.** Your entire computing experience will be more enjoyable because you can accomplish everything more quickly, easily, and directly.

**Better Games.** Play today's hottest games on Windows 95, thanks to better, faster graphics support for windows based action games.

**Better Video.** Enjoy larger, smoother video than ever before for more fun multimedia experiences.

### MS Windows 95

Windows 3.1x upgrade CD or 3.5"	£59
Dos Upgrade 3.5"	£111
MS Plus for Windows 95 CD	£26



To run Microsoft Windows 95, you will need. A Personal Computer with a 386DX or higher processor - We recommend 486DX33 as minimum. 4Mb of memory - We recommend 8Mb minimum. Typical hard disk space required is between 50-55Mb. 3.5" high density disk drive or CD-ROM drive. VGA or higher resolution graphics card.

### Now that you have Windows® 95, .....here's a big Plus.

Microsoft Plus I is the perfect companion to the Windows 95 operating system. It makes accessing the Internet as easy as using Windows 95. With Microsoft Plus! your PC is self-tuning and looks great.

## Microsoft® Office for Windows® 95 makes it easier than ever to focus on your job instead of your software.



### Microsoft Office 95 The Ultimate Business Tool

Get your work done easier and faster. IntelliSense™ technology does routine tasks for you with enhanced AutoCorrect and much more. Type a help request in your own words and the Answer Wizard gives you the answer you need. Share information more easily with improved OfficeLinks, including the Office Binder feature that groups files automatically, so you can use them again as a single files. Gain one-click access to files and programs with the Microsoft® Office Shortcut Bar. Manage and organize files quickly with high-performance Find Fast indexing tools. Get your work done faster with full 32-bit performance. Upgrade to Microsoft Office for Windows 95 today.



MS Excel for Windows 95 was designed exclusively for your needs and requests. Whether you're working on a simple summary, charting sales trends, or performing advanced analysis, Microsoft Excel helps you to work the way you want to get your job done easily.



MS Word for Windows 95 helps make everyday writing tasks more automatic and complex tasks simple. It also provides tools to create and distribute documents in an increasingly connected world.



With Microsoft Schedule+ for Windows 95, manage calendars, tasks, and contacts for yourself or share them within workgroups. It's the time manager that puts time on your side.



The flexible features in the Microsoft PowerPoint presentation graphics program for Windows 95 adapt to your needs, so you can create a professional-looking presentation that delivers your message in any situation.

### Microsoft Office Pro 95 Includes Microsoft Access Too!



MS Access® for Windows 95 provides all levels of users the flexibility to manage, locate, and share information easily with tools to help you get started or improve the design of what you already have.

### MS Office for Windows 95

	Full Version	CCP Upgrade	Trade In
STD	£329	£139	£162
PRO	£428	£204	£245

All prices exclude VAT and Delivery  
Please turn to our How to Order...  
Section for Details

# Freedom to choose

PCW 1295

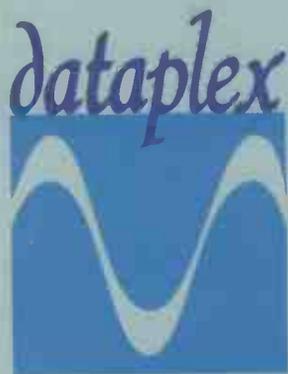
We've been supplying the *Freedom* range of Notebook computers for the last five years and we are proud to announce the latest in the line - the *Freedom P5200*.

Offering an incredible array of features, we believe the P5200 gives you greater freedom than ever to work the way you choose. And all at an unbelievable price!

If you would like more information please call and ask for a full-colour brochure.



	P5200-75	P5200-90	P5200-100	P5200-120	P5200-133
Dual scan colour (11.3")	£1,995	£2,095	£2,195	£2,395	£2,595
TFT Active colour (10.4")	£2,425	£2,525	£2,625	£2,825	£3,025



## Dataplex Computers Limited

129 Bath Road, Slough, Berks SL1 3VW

Tel: 01753 535557

Fax: 01753 511122

19 High Street, Old Town, Swindon, Wilts SN1 4AS

Tel: 01793 488448

Fax: 01793 420025

Intel, Intel Inside and Pentium are trademarks of the Intel Corporation.  
MS-DOS and Windows are trademarks of Microsoft Corporation.

- Intel Pentium processor
- 75MHz clock speed, upgradable to 133MHz
- 8Mb RAM, expandable to 32Mb
- 256K write-back cache memory
- 500Mb 2.5" removable hard disk, upgradable to 1.3Gb
- 11.3" dual scan colour LCD display
- PCI SVGA graphics card 2Mb
- Removable 1.44Mb 3.5" floppy drive (can be replaced with MPEG module)
- CD-ROM drive (dual-speed, tray-loading)
- FM synthesiser 16-bit stereo sound card (compatible with Microsoft sound system and Sound Blaster)
- Built-in twin speakers and microphone
- Infra-red comms port (IrDA-compliant SIR file transfer)
- Built-in trackpad and joystick
- Enhanced IOE/EPP/ECP controller
- Removable, rechargeable NiMH 23W battery
- Auto-switching 50W AC/DC adaptor (charges battery while system is on)
- PCMCIA type 3 slot
- DOS 6.22 + Windows 3.11 or Windows 95
- Carrying bag
- Dimensions: 300mm x 227mm x 54mm, 3.5kg (7.7lb)

### Options

- Additional 8Mb DIMM Module ..... £299.00
- Additional 16Mb DIMM Module ..... £459.00
- Windows '95 CD Version ( Full ) ..... £79.00
- Windows '95 CD/Disks upgrade ..... £59.00
- Upgrade HDD from 510Mb to 810Mb ..... £155.00
- Upgrade HDD from 510Mb to 1.3 Gig ..... £299.00
- Additional 510Mb HDD ..... £225.00
- Additional 810Mb HDD ..... £349.00
- Additional 1.3 Gig HDD ..... £499.00
- HDD Housing Kit ..... £39.00
- PCMCIA ETHERNET Card ..... £149.00
- PCMCIA FAX/MODEM (14.400) ..... £159.00
- PCMCIA FAX/MODEM (28.800) ..... £199.00
- PCMCIA CD ROM (Panasonic) 2 x Speed ..... £295.00
- Parallel Port CD ROM (Panasonic) 2 x Speed ... £189.00
- MINIDOCKING ..... £139.00
- 57.6W External Battery ..... £129.00

### Conditions of Sale

All prices exclude VAT and delivery charges.  
E&OE all prices subject to change without notice.  
Opening hours MON-FRI 9.30-5.30. SAT 9.30-4.30  
Please add £2.50 + VAT for consumables and £14.00 + VAT for all other items for next day  
No surcharge on Credit Cards.

**399**  
PERSONAL COMPUTER WORLD  
DECEMBER 1995



As Western Systems is part of one of the largest computer related group of companies in the world, it enables us to provide products incorporating the latest technology while maintaining extremely competitive prices. Western Systems provide solutions for the professional, the enthusiast and the 1st time buyer. Our policy of building specifically to order allows high "value for money" solutions which are impossible to beat in the price / performance stakes.

## Tailored For You!

Choose the system to suit your own individual needs

### "The Basis" Multimedia

A powerful, fun to use, multimedia learning centre at an incredible price

#### 486 DX2-66Mhz

- Western Systems Basis PC
- Low profile desktop case
- 540Mb Hard disk drive
- 4Mb RAM
- 14"SVGA MPRII NI monitor
- Double Speed CD ROM drive
- 16 bit FM soundcard
- Stereo speakers

1 Mb graphics accelerator card  
2 Serial ports, 1 Parallel port, 3.5" Floppy drive,  
102 key keyboard, Microsoft compatible mouse,  
MS-DOS® 6.22, MS-Windows™ 3.11,

Grolier Multimedia Encyclopedia®, MegaRace®

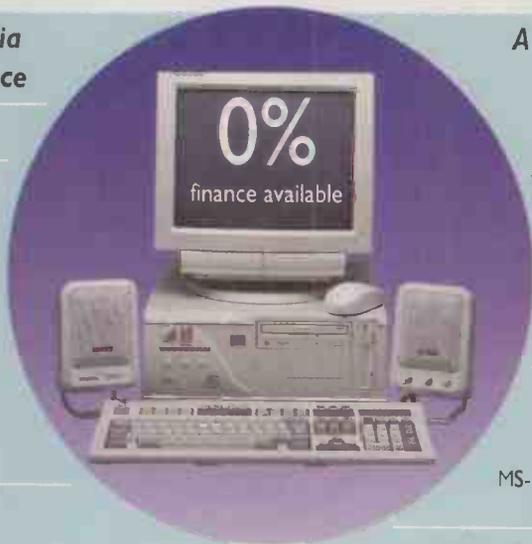
**NEW LOW PRICE !!**

**£659**



**2X DUAL**

0% FINANCE



### Multimedia For Family & Education

A cost effective multimedia solution with scope for future upgrades

#### 486 DX2-66Mhz

- Western Systems Crusader Pro PC
- 540Mb Hard disk drive
- 4Mb RAM
- 14"SVGA MPRII NI monitor
- Double speed CD ROM drive

1 Mb PCI graphics accelerator card  
2 Serial ports, 1 Parallel port, 3.5" Floppy drive,  
102 key keyboard, Microsoft compatible mouse,  
MS-DOS® 6.22, MS-Windows™ 3.11, 16 bit sound card  
8 Watt active speakers,

Lotus Ami Pro, Lotus Organizer, Grolier 95  
Multimedia Encyclopedia®, World Atlas®,  
The Journeyman Project Turbo™, Cyberia™ TE,  
Tie Fighter™ TE, Spectre™ VR TE, Blown Away™ TE,  
Nova Storm™ TE.

**£795**



**2X DUAL**

0% FINANCE

PCI Local Bus

### Selected Options & Upgrades

#### FOR BASIS and FAMILY & EDUCATION SYSTEMS

	Add to system price
■ DX4-100Mhz Processor;	£55
■ Additional RAM; (Per Mb)	£30
■ 15" Monitor;	£79
■ 17" Monitor;	£299
■ 850Mb Hard disk drive;	£35
■ 1Gb Hard disk drive;	£85
■ Microsoft® Windows™ 95	£35

All Western Systems Crusader Pro, Power and Power Pro PCs are supplied with Lotus Ami Pro, Lotus Organizer, MS DOS® 6.22, MS Windows™ 3.11 and 12 months ON SITE warranty. The Basis System is supplied with MS DOS® 6.22, MS Windows™ 3.11 and 12 months RTB warranty



Upgrade Available Upgrade Available

**FREE\*** GSM/DIGITAL MOBILE PHONE WORTH £200 AVAILABLE WITH EVERY ORDER

\* Subject to status



PC PRO June 1995  
Western Systems Power  
"Overall the Power is a no-nonsense speedy machine..... an excellent platform to build on."



PC DIRECT May 1995 © Ziff Davis UK Ltd  
Western Systems Crusader 486DX2-66  
"This PC is no slouch, even compared to some 60Mhz Pentiums. With it's excellent build quality the Western Systems 486DX2-66 is Ideal."



COMPUTER BUYER May 1995  
Western Systems Multimedia  
"So what's best?.....We just have to go for the Western Systems, as a first time buy we've never seen better."



WHAT PC? July 1995  
Western Systems Multimedia  
A very attractive system, with plenty of goodies thrown in. Keep up the good work Western Systems.



**WESTERN FINANCE**  
Monthly payment scheme (subject to status) is available to private purchasers. Example payment calculation for system costing £795+VAT: £795+£15 (delivery charge)+VAT at 17.5%=£951.75 total cash price. Based on a 20% deposit of £190.35 followed by 36 monthly payments of £27.66 (APR 19.9%). Western Systems (Europe) Limited is a licensed credit broker.



Western Systems' focus is on the high quality of products and service it provides. This strong commitment to quality has resulted in Western Systems' Computers fully complying with the requirements of ISO9002. All Western Systems PC's are manufactured at our 35,000 ft<sup>2</sup> headquarters in Ruislip, West London from components selected & extensively tested by our Research & Development team.

## Multimedia For Home Office

A powerful Pentium® based system with Fax, Modem, Answering machine, Voicemail, FM Radio and plenty of software

### Intel™ Pentium® 75Mhz

Western Systems Power PC  
540Mb Hard disk drive  
8Mb RAM  
14" SVGA MPR II NI monitor  
Quad speed CD ROM drive

1 Mb PCI graphics accelerator card  
2 Serial ports, 1 Parallel port, 3.5" Floppy drive,  
102 key keyboard, Microsoft® compatible mouse,  
MS-DOS® 6.22, MS-Windows™ 3.11, 16 bit  
Sound card 20 Watt active speakers, 14.4 bps  
Fax Modem, FM Radio card, PC Answering  
Machine with Voicemail

Lotus Ami Pro, Lotus Organizer, MS-Works™  
Multimedia Edition, Grolier 95 Multimedia  
Encyclopedia®, Managing your Money™, Macromedia  
Action!® SE, Macromedia Clipmedia® SE

# £1245



## Power Pro For Home Entertainment

PC • TV • MPC3 Multimedia • HI-FI • FM Radio • Fast Fax / Modem • Answering Machine • Voicemail • Music Maker with FREE Midi Keyboard

### Intel™ Pentium® 100Mhz

Western Systems Power Pro PC  
Triton chipset  
1Gb Hard disk drive  
16Mb RAM  
15" SVGA MPR II NI monitor  
Quad speed CD ROM drive  
TV card with Scalable Window  
28.8bps V.Fast Fax Modem

1 Mb PCI graphics accelerator card  
2 Serial ports, 1 Parallel port, 3.5" Floppy drive,  
102 key keyboard, Microsoft® compatible mouse,  
MS-DOS® 6.22, MS-Windows™ 3.11, 16 bit wavetable sound  
card, 20 Watt active speakers, FM Radio card, PC Answering  
machine with Voicemail,

Lotus Ami Pro, Lotus Organizer,  
Free connection to Compuserve®  
Free connection to The Internet

#### 7 ENTERTAINMENT CD TITLES

- SimCity 2000™ • Dragon Lore™ •
- The Privateer™ • Chessmaster Turbo™ •
- Mega Race™ • Hard Ball 4™ •
- World Cup Golf: Hyatt Dorado Beach™ •

#### 5 EDUCATION CD TITLES

- Grolier Multimedia Encyclopedia 95® •
- Student Writing Center™ • Mavis Beacon Teaches Typing™ •
- World Atlas™ • The Four Seasons Gourmet French Cuisine™ •

#### 10 CHILDREN'S CD TITLES

- Yearn to Learn™ - Peanuts Coloring Book • Dr. T's Sing-A-Long™ •
- Math Blaster™: The Search for Spot • Word Attack® • Milly Fitzwilly  
Mouse Catcher™ • The Friends of Emily Culpepper™ • The Little Engine™ •
- The Yukadoos™ • The Pirate that Wouldn't Wash™ •
- The Wrong Way Around the World™ •

#### 4 MUSICAL TITLES with FREE Midi Keyboard

- Jam Session™ • Recording Studio™ • Music School™ • Private Lessons™ •
- Plus FREE Midi Keyboard •

#### 10 AUDIO TITLES

- Audiostation™ • WinDAT™ • MIDI Orchestrator™ •
- Audio Calendar™ • Say It™ • Sound Script™ • Sound Events™ •
- Audio Screen Saver™ • MusiClips™ • WAV Sound Effects™ •

# £1995



## Selected Options & Upgrades

### FOR HOME OFFICE SYSTEM

	Add to system price
■ Pentium® 90 Mhz processor;	£79
■ Pentium® 100 Mhz processor;	£179
■ Pentium® 120 Mhz processor;	£299
■ Additional RAM; (Per Mb);	£30
■ 15" Monitor;	£79
■ 17" Monitor;	£299
■ 850Mb Hard disk drive;	£35
■ 1Gb Hard disk drive;	£85
■ Microsoft Windows 95;	£35

### FOR POWER PRO SYSTEM

	Add to system price
■ Pentium® 120 MHz Processor;	£120
■ Pentium® 133 MHz Processor;	£220
■ Pipeline burst mode cache	£65
■ For EDO RAM	£160
■ Additional EDO RAM (per Mb);	£40
■ Microsoft Windows™ 95	£35

☎ 0181 842 0071 SOUTHERN SALES ☎

CALL NOW

☎ 0113 234 3663 NORTHERN SALES ☎



## WESTERN SYSTEMS (EUROPE) LIMITED

#### OPENING HOURS

Mon - Fri: 9.00 - 6.30  
Sat: 10.00 - 2.00

Western House, Braintree Road, Ruislip, Middlesex, HA4 0EJ. Tel 0181 842 0071 Fax 0181 841 0700

All prices are exclusive of VAT. Inland delivery £15 per system and £8 on all other items. All sales are subject to Western Systems (Europe) limited Terms and Conditions. Available on application.  
E & OE. The Intel Inside Logo is a trademark of the Intel Corporation. All trademarks recognised. Western Systems reserve the right to substitute CD titles

# MULTIMEDIA WITH A BONUS

INTERNET • FAX MODEM • ANSWERPHONE • VOICE MAIL • RADIO • MUSICSTAR

WELL OVER £1000!! WORTH OF SOFTWARE

**51 SOFTWARE TITLES**

**PENTIUM 75MHz**  
**£1385**

**0% finance available**

**£1295**

## POWERFUL MULTIMEDIA PLATFORM

- ◆ Quad Speed CD ROM
- ◆ 540Mb Hard disk drive
- ◆ 8Mb RAM
- ◆ 16 bit Wavetable soundcard
- ◆ 80 watt powerful active speakers
- ◆ FM Radio card
- ◆ 14" Monitor SVGA .28 NI MPRII
- ◆ 1Mb PCI graphics accelerator
- ◆ Windows™ 95 ready

AVAILABLE WITH INTEREST FREE CREDIT  
**0% FINANCE**



## COMMUNICATION

- ◆ Answerphone / Voice mail and music on hold
- ◆ Fax modem 14.4 bps fax
- ◆ Internet free connection - 3 hours and up to 90 e-mail free per month
- ◆ 1 month free connection to CompuServe® Services include Hutchinson Encyclopedia, News, Stock Quotes, Airline Schedules, AA travel information, The UK's What's on guide, The new UK shopping Centre and more and more and more

## SOFTWARE

Comes complete with a staggering 51 software titles PLUS Microsoft DOS® 6.22 and Microsoft Windows™ 3.11 installed and Lotus Ami Pro™ & Lotus Organizer™.



## 11 ENTERTAINMENT CD TITLES

- ◆ Cyberia™ ◆ Sim City 2000™ ◆ Dragon Lore™ ◆ Privateer™ ◆ Chessmaster Turbo™ ◆ Mega Race™ ◆ Space Adventure ◆ Space Shuttle™ ◆ Speed™ ◆ SSN-21 Seawolf™ ◆ World Cup Golf: Hyatt Dorado Beach™ ◆

## 18 EDUCATIONAL CD TITLES

- ◆ Grolier™ Multimedia Encyclopedia ◆ Math Blaster™: The Search for Spot ◆ Word Attack 3◆ ◆ Kid Cad™ ◆ Student Writing Center™ ◆ Managing Your Money™ ◆ Capitol Hill™ ◆ Mavis Beacon Teaches Typing™ ◆ World Atlas® ◆ US Atlas® ◆ 20th Century Video Almanac™ ◆ The Four Seasons Gourmet French Cuisine™ ◆ Oceans Below™ ◆ Macromedia™ Action! ◆ Sports Illustrated™ 1995 Multimedia Sports Almanac ◆ Tax-Cut Headstart Edition™ ◆ Undersea Adventure ◆ Clipmedia@ 2SE ◆

## 8 CHILDREN'S CD TITLES

- ◆ Yearn to Learn™ - Peanuts Coloring Book ◆ Dr. T's Sing-A-Long Kids' Classics™ SE ◆ Milly Fitzwillly Mouse Catcher™ ◆ The Friends of Emily Culpepper™ ◆ The Little Engine™ ◆ The Yukadoos™ ◆ The Pirate That Wouldn't Wash™ ◆ The Wrong Way Around the World™ ◆

## 4 MUSICAL TITLES With FREE Midi Keyboard

- ◆ Jam Session ◆ Recording Studio ◆ Music School ◆ Private Lessons ◆ plus Free Midi Keyboard ◆

## 10 AUDIO TITLES

## CONFIGURATION OPTIONS

Ram Upgrades	Hard Disk Upgrades	Monitor Upgrades	Processor upgrades
From 8Mb to 16Mb +£240	From 540Mb to 850Mb +£35	From 14" to 15" monitor +£79	Pentium 75MHz to Pentium 90MHz +£79
From 8Mb to 32Mb +£720	From 540Mb to 1Gb +£85	From 14" to 17" monitor +£299	Pentium 75MHz to Pentium 100MHz +£179

**NEW**

## ANSWERPHONE FOR PC

Add an answerphone and phone book organiser to your computer system

### Features include:

- ◆ Answerphone with 9 voice mail boxes
- ◆ Music on hold from multiple sources
- ◆ Phonebook organiser with auto dialler
- ◆ Microphone for speakerphone use



BONUS 2 POINTS

**£49**

## FAX MODEMS

**FREE**  
**COMPUERVE & INTERNET CONNECTION**



## Join CompuServe and the Internet Free with this special offer

There's no easier way to get online. One month's free membership gives you unlimited access to Basic Services including "PA" News, The Hutchinson Encyclopedia, stock quotes, airline schedules, AA travel information, UK what's on guide, UK shopping centre, up to 3 hours free Internet access every month and up to 90 e-mail messages

### Every fax modem includes

- ▼ CompuServe start-up kit supplied with one month free membership
- ▼ BAPT approved modems
- ▼ Fax Works Easy to use full version modem and fax software not just any 'lite' version
- ▼ Four bonus points

14.4K INTERNAL FAX MODEM

14.4 bps V.42 bis MNPS  
Complete with CompuServe & FaxWorks

**£69**

28.8K INTERNAL FAX MODEM

28.8bps V.fast class  
Complete with CompuServe & FaxWorks

**£139**

14.4K EXTERNAL FAX MODEM

14.4 bps V.42 bis MNPS  
Complete with CompuServe & FaxWorks

**£89**

28.8K EXTERNAL FAX MODEM

28.8 bps V.fast class  
Complete with CompuServe & FaxWorks

**£159**

BONUS 4 POINTS

## MULTIMEDIA

## SPECIAL OFFER

**4X QUAD UPGRADE KIT**

Quad speed CD ROM drive,  
16 bit stereo soundcard  
& 8 watt speakers, headset  
with microphone

**£179**



15 software titles including CD's  
Return to Zork  
Wing Commander II,  
Grolier Encyclopedia,

## QUAD & DUAL SPEED CD ROMS

- Dual speed upgrade kit, inc, speakers, 16 bit FM soundcard, Grolier Encyclopedia & Mega Race **£89**
- Quad speed NEC/MITSUMI CD ROM drive **£99**
- High Speed IDE ATAPI adaptor **£10**

## MULTIMEDIA ACCESSORIES

BONUS 2 POINTS

Each Multimedia accessory comes with 2 bonus points

### SOUND CARDS

**SOUND FX PRO** 16 stereo soundcard IDE, Quad speed. Panasonic, Sony & Mitsumi interface. With 10 software titles including Audiostation **£45**

**16 BIT WAVETABLE** synthesis stereo soundcard IDE, Quad speed. Panasonic, Sony & Mitsumi interface. With 10 software titles including Audiostation **£75**

### SPEAKERS

**20 watt** active stereo speakers Fully shielded, volume, bass & treble controls **£25**

**80 watt** active stereo speakers Fully shielded, volume, bass & treble controls **£39**

# MULTIMEDIA WITH A BONUS

**SIMULTANEOUS TV & PC DISPLAY!**

## TV CARD

£139



- Watch your favourite TV programmes
- Capture and use images in documents
- Works with camcorders and VCR's too

• Teletext option add £49

## RADIO CARD

- Tune your PC to your favourite radio station
- All necessary cables & adaptor plugs
- User friendly software and manuals



£25

Soundcard not required

## TAPE DRIVES

### BETTER SAFE THAN SORRY

- 1.4 Gb Capacity
- High performance interface card
- Up to 10Mb per minute backup speed
- Includes software & mounting brackets
- Industry standard QIC-3020-MIC format
- Backward read compatibility with QIC-80 and Irwin 80



£149

## VIDEO ARTIST

Turn your PC into a digital video editing system, make your home videos into a Hollywood blockbuster or create professional business and training presentations



- Easy to install and use
- Capture raw video from almost any source (VCR, TV, Laser disc)
- Apply special effects, music, narration and titles to your productions.
- Complete hardware and software package.

£299

## BUILD YOUR OWN MULTIMEDIA SYSTEM!

£995

0% finance available



### STANDARD CONFIGURATION

- DX4-100MHz processor
- 540 Mb EIDE hard disk/1.44Mb floppy
- 8 Mb RAM 128k cache
- 14" SVGA .28 NI monitor
- 1 Mb PCI graphics accelerator card
- MS<sup>®</sup> DOS 6.22
- MS<sup>®</sup> Windows<sup>™</sup> 3.11
- Lotus Ami Pro & Organizer
- 12 months on site warranty

**PLUS**

Choose £250 worth of products from these pages FREE

OTHER PC CONFIGURATIONS AVAILABLE PLEASE CALL FOR DETAILS

## THE SOFTWARE BONUS

### BONUS POINTS create your own software bundle

Cash in your bonus points and create your own software bundle. It's dead simple. The Bonus points are shown next to each item you purchase. The value points of each software title is indicated below. Just add-up and convert Bonus Points to software titles

- 8 POINT TITLES** • Interplay 10 titles • 7th Guest • Undersea/Space/Speed • Iron Helix • Cyberia • Return to Zork • Microsoft Works • 3D Dinosaur/Kids Zoo • Guinness book of Records • Sim City 2000 • Theme Park • Grolier Multimedia Encyclopedia '95 •



- 4 POINT TITLES** • Wing Commander II • Dragon Lore • Strike Commander • The Horde • Kings Quest • Mega Race • Seawolf • World Cup Golf • Star Wars Chess • Macromedia Action/Clipmedia II • 20th Century Video Almanac • Oceans Below •



- 2 POINT TITLES** • Super VGA Harrier • It's a Bird's Life • Links Golf • USA Today • National Parks • The Family Doctor • T2 Screen Saver • Spectre VR • That's Geek to Me • National Parks • Strategy Football • Chessmaster • Tutor Value Collection •



## MusicSTAR 4 GREAT CD TITLES

### PRIVATE LESSONS



### JAM SESSION



### MUSIC SCHOOL



### RECORDING STUDIO



Buy the Musicstar software package comprising of these four highly recommended music software titles and get a Midi Keyboard free. The Musicstar software is also fully compatible with other Midi keyboards

**SPECIAL OFFER**

ONLY £59

**FREE!!**

Midi Keyboard



## RED HOT & GOLD MEDAL

The Perfect Presents 12 CD Titles in each pack

Red Hot Pak: Super VGA Harrier™, Links Golf™, National Parks™, It's a Bird's Life™, Terminator 2™, Spectre VR™, That's Geek to Me™, USA Today™, Strategy Football™, Tutor Collection™, Family Doctor™ and Chessmaster™

Gold Medal Pak: Blue Force™, Dune II™, Jetfighter™ II, Maelstrom™, Microcosm™, Shadow President™, Darklands™, Cyber Race™, Casino Master Gold Edition™ and The Complete House™

£25

PER PACK



### WESTERN FINANCE

Monthly payment scheme (subject to status) is available to private purchasers. Example payment calculation for system costing £995+VAT: £995+£15 (delivery charge)+VAT at 17.5%=£1186.75 total cash price. Based on a 20% deposit of £237.35 followed by 36 monthly payments of £23.49 (APR 19.9%). Western Systems (Europe) Limited is a licensed credit broker.

**FREE\***

GSM/DIGITAL MOBILE PHONE WORTH £200 AVAILABLE WITH EVERY ORDER

\* Subject to status

0181 842 0071 SOUTHERN SALES

CALL NOW

0113 234 3663 NORTHERN SALES



**WESTERN SYSTEMS (EUROPE) LIMITED**

Western House, Braintree Road, Ruislip, Middlesex, HA4 0EJ. Tel 0181 842 0071 Fax 0181 841 0700

All prices are exclusive of VAT. Inland delivery £15 per system and £8 on all other items. All sales are subject to Western Systems (Europe) Limited Terms and Conditions. Available on application. E & OE. The Intel Inside Logo is a trademark of the Intel Corporation. All trademarks recognised. Western Systems reserve the right to substitute CD titles

### OPENING HOURS

Mon - Fri: 9.00 - 6.30  
Sat: 10.00 - 2.00



**AUTHORISED  
DISTRIBUTOR**

**CHLORIDE**  
POWER ELECTRONICS

**MPC**  
ESTABLISHED 1989

**CHLORIDE UPS SYSTEMS**



**CHLORIDE ALADIN UPS  
OFFLINE SYSTEM**



**CHLORIDE EXPERT UPS  
INTERACTIVE SYSTEM**

MPC INTERNATIONAL INTRODUCE  
CHLORIDE POWER ELECTRONICS UPS  
SYSTEMS - FROM THE LEADERS IN  
BATTERY TECHNOLOGY. UPS SYSTEMS  
FROM 250VA RIGHT TO 550kVA

**ALADIN**

- Offline, microprocessor control technology
- Total automatic operation
- battery care - auto battery test - temperature compensation charging
- ideal for stand alone PC or small office equipment

**EXPERT**

- Free dialog software with comprehensive diagnostics static switch
- Microprocessor controlled
- Battery care - as with Aladin
- Ideal for powerful PCs and more powerful office equipment.

**LANPOWER PLUS**

- Free dialog software
- No break system, on-line double conversion
- Ideal for min/midi range systems

**Aladin Offline UPS**

- 250VA/10 **£81**
- 400VA/10 **£115**
- 600VA/10 **£155**

**Expert Line Interactive UPS  
Free dialog software**

- 400VA/15 **£230**
- 600VA/10 **£209**
- 900VA/15 **£365**
- 1200VA/10 **£509**
- 1500VA/15 **£707**

**LanPower Plus Digital OnLine  
Free dialog software**

Call for prices and specification for  
systems from 2kVA upto 550kVA  
CALL  
**FOR LATEST  
OFFERS**

**TEXAS INSTRUMENTS**

**MPC OFFER FULL SERVICE AND WARRANTY OPTIONS  
PLEASE CALL OUR STAFF FOR ASSISTANCE**

**MICROLASER 600 PRINTER**



Affordable 600dpi printing for Mac, Window and DOS. TI have used powerful RISC processors and Adobe memory boosters for more efficient printing

- 600dpi resolution
- 5ppm
- Mac, Window, DOS ready
- 250 paper sheet capacity
- Adobe Postscript level 2 and PCL 5 emulation
- 2MB RAM with Adobe Memory booster

From **£599** Only

**MICROLASER PRO600  
PS23/PS65 PRINTERS**



The ideal office Mac, DOS, Windows performance printer at a surprisingly affordable price with RISC processing Postscript, PCL5 emulation, 500 sheet paper capacity.

- 600 dpi resolution
- 8ppm
- Mac, Window, DOS ready
- 500 paper sheet capacity
- Adobe Postscript level 2 (23 or 65 fonts) and PCL 5 emulation
- 20mhz RISC processor with 3/6 MB RAM

From **£859** Only

**MICROLASER PRO E  
POWERPRO PRINTERS**



High end performance printing for Windows, Mac, DOS. Fast printing, with sharp professional results allows increased productivity. Upgrade options available.

- 600 dpi resolution
- 12ppm
- Mac, Window, DOS ready
- 500 paper sheet capacity
- Adobe Postscript level 2 (PowerPro 67 fonts ProE 23 fonts) and PCL 5 emulation
- 20/25mhz RISC processor with 3/6 MB RAM

From **£969** Only

CALL US TODAY FOR CURRENT PRICING  
AND SPECIAL OFFERS



Public Sector and PLC Purchase Orders Welcome.  
Credit Cards not debited until goods are despatched

**MPC**

CALL OUR SALES TEAM NOW ON  
**01923 24 98 98**  
FAX: 01923 24 97 77

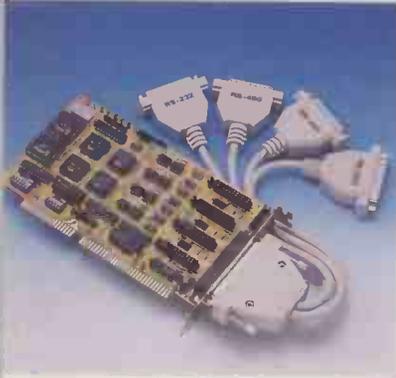
MPC International (UK) Ltd., 11 The Courtyards, Croxley Business Park, Hatters Lane Watford WD1 8GL Tel: 01923 24 98 98 Fax: 01923 24 97 77

Prices exclude VAT. Delivery from £10.00. Prices and specs subject to change without notice. Goods not sold on trial basis. MPC's terms & conditions apply. Call for details. E&OE

MPC MPC MPC 01923 24 98 98 MPC MPC MPC 01923 24 98 98

# Industrial Workstations, Industrial PCs, Embedded Board Computers, Data Acquisition and Control, Serial Communications.

## COMMUNICATIONS INTERFACES



### 4-Port Multi-User Serial Card

High Quality AT Bus 4-Port Serial Communications Card. Shown above. Supplied with 16550 UARTs for baud rates to 115kbps

- ▼ Port address 100H - 3F8H
- ▼ Interrupts IRQ2-7, 10-12, 15
- ▼ Transmit & Receive LEDs
- ▼ Compatible with Arnet 4-Port Card
- ▼ Can be used for adding 4 ports to Windows and SCO Unix
- ▼ Also supports RS422/RS485
- ▼ Supplied with 4-way cable set

£149

### 16550 Serial Card

Ideal for hardware requiring high speed communications. Highly recommended for Windows.

- ▼ Two 16550 serial ports COM1-COM4, IRQ2-5
- ▼ Bi-directional Parallel Port LPT1-LPT3, IRQ5,7
- ▼ Optional games port
- ▼ Enable/disable any port

£45

### AT bus Serial Card

The most flexible 2-Port Serial Card on the market. Supports any port address and high interrupts. Perfect for COM1-COM4 under windows.

- ▼ 2 RS232 serial ports
- ▼ Interrupts IRQ2-7, 10-12, 14-15
- ▼ Port address 100H-3F8H
- ▼ 16 bit AT bus

£75

Add £20 for 16550 option

### Dual RS422/RS485 Card

Offering 2 high speed serial ports for transmissions up to 4000 feet

- ▼ 2 RS422/RS485 serial ports
- ▼ Supplied with 16550 UARTs
- ▼ Up to 115K baud
- ▼ Port address 200H-3F8H
- ▼ IRQ2-7, 10-12, 15
- ▼ 16 bit AT bus

£89

Also Isolated RS422/RS485 Card £109

### DigiBoard Serial Cards

The Best Engineered Multi-Channel Boards on the market today. The DigiCHANNEL PC/X is ideal for use in multi-user environments, most operating systems are supported with drivers available for DOS, XENIX, UNIX, OS/2, and many more.

PC/4	4-Port RS232 Card	£295
PC/8	8-Port RS232 Card	£395
PC/16	16-port RS232 Card	£750
PC/4s	4-Port with 16550	£325
PC/8s	8-Port with 16550	£450
PC/16s	16-Port with 16550	£850

### DigiBoard PC/Xe Cards

The DigiCHANNEL PC/Xe range are intelligent multi-port RS232 high speed communication boards with on-board 80186 processor and 64K memory for increased throughput. Drivers available for DOS, Windows NT, Windows, OS/2, Xenix and UNIX.

PC/2e	2-Port Intelligent Card	£189
PC/4e	4-port Intelligent Card	£395
PC/8e	8-Port Intelligent Card	£495

### Digiboard PC/Xem System

An Intelligent Modular System offering 16 to 64 high speed serial channels. The system comprises one host adapter with on-board 20MHz RISC processor and 1 to 4 external concentrators each providing 16 serial ports. Data rates of 115kbps can be achieved on 32 ports. Drivers for DOS, SCO-UNIX, OS/2, Netware Connect and Windows NT.

PC/Xem Host Adapter	£395
Ports/16em Connector Box	£600

### Isolated RS232 and Current-Loop Card

Providing 2 Isolated RS-232 or current loop serial ports with baud rates up to 56Kbps.

- ▼ Supplied with 16550 UARTs
- ▼ Provides 500VDC isolation
- ▼ Port address 200H - 3F8H
- ▼ Interrupts IRQ2-7, 10-12, 15
- ▼ 16-Bit AT bus

£119

### Synchronous Serial Card

Single channel, multi-protocol communications adapter which uses an AMD 85C30-10 serial communications controller (SCC) as standard.

- ▼ RS232 interface
- ▼ Synchronous mode to 1.23M baud
- ▼ IRQ2-7, 10-12, 14-15
- ▼ DMA Channels 1 - 3

£220

Also Synchronous RS422/RS485 £220

### Remote Data Acquisition Modules for RS485 Network

ADAM Modules (shown below) are compact intelligent sensor-to-computer interface units designed specifically for reliable operation in harsh environments. Their built-in microprocessors, encased in rugged industrial grade plastic packages provide analog I/O, digital I/O, thermocouple measurement and data display. Each module has a built-in RS485 serial interface for data transfer with the host computer.



### Isolated RS232/RS485 Converter

ADAM modules need only 2 wires to communicate with their controlling host computer over a multidrop RS-485 network. ADAM modules also accept any power source between 10V and 30V and are protected against power reversal.

- ▼ Automatic control of data flow
- ▼ Input RS232 (4-wire)
- ▼ Output RS485 (2-wire)
- ▼ Baudrate 1.2K to 38.4K

£99

### Analog Input module

ADAM modules can accommodate multiple types and ranges of analog input. You select type and range remotely by issuing ASCII commands from your host computer.

- ▼ Input for thermocouple, mV, V, or mA
- ▼ Input range 15mV to 2.5V, 20mA
- ▼ 10 samples per second
- ▼ 1 digital input / event counter
- ▼ 2 digital outputs
- ▼ Baudrate 1.2K to 19.2K

£165

### ADAM Modules

ADAM 8ch Analog Input Module	£210
ADAM 8ch Thermocouple Module	£225
ADAM Analog Output Module	£165
ADAM Digital I/O Module	£119
ADAM Relay Output Module	£119
ADAM Counter/Frequency Module	£210
ADAM IP66 Industrial Enclosure	£85
ADAM Power Supply Unit 24V	£149

### IEEE-488 Interface Card

Provides complete IEEE-488 functionality on a half size card.

- ▼ Powerful, easy to use software command set
- ▼ DMA & Interrupt
- ▼ On-board firmware driver
- ▼ 16 digital outputs
- ▼ Basic, Pascal & C drivers
- ▼ IEEE-488 cable 2m

£199

### Digital I/O Card

The simple solution for providing digital I/O and timer functions.

- ▼ 32 digital inputs
- ▼ 32 digital outputs
- ▼ 3 channel programmable counter/timer
- ▼ Breadboard area

£89

### 144 bit Digital I/O Card

High Density mixed digital I/O Card for industrial monitoring & control.

- ▼ 144 Digital I/O lines
- ▼ Buffered circuits for higher driving capacity than the 8255
- ▼ Interrupt handling
- ▼ Output status readback

£155

### Wiring Kit & Relay Boards

Wiring Terminal Board	£35
Industrial Wiring Kit	£30
Isolated Digital input board 16ch	£99
Isolated Digital input board 24ch	£109
Relay Board 16ch, 120V 1A	£115
Relay Board 24ch, 120V 1A	£135
Relay Board 16ch, 250V 5A	£130
Relay Board 24ch, 250V 5A	£165
SSR Module Carrier Board 8ch	£70
SSR Module Carrier Board 16ch	£80
SSR Module 280V AC 3A	£9
SSR Module 60V DC 3A	£9

### PC-104 MODULES

PC-104 Modules (shown below) simply stack together to form a compact modular PC-based system which has very low power consumption.

PC-104 386SX/33 CPU Module 1Mb	£299
PC-104 SVGA Display Module	£169
PC-104 Ethernet Module	£109
PC-104 Super I/O Module	£99
PC-104 RAM/ROM Disk Module	£89
PC-104 PCMCIA Memory Module	£250
PC-104 RS422/RS485 Module	£199
PC-104 Digital I/O Module	£129
PC-104 Global Positioning (GPS)	£350



# LAB AND INDUSTRIAL PRODUCTS

**CONTACT US ON  
0171 625 7744**

## Analog & Digital I/O Card

Versatile fully integrated multifunction A/D, D/A and Digital I/O card.

- ▼ 12 bit 40KHz
- ▼ 16 single-ended or 8 differential A/D inputs
- ▼ 1 D/A output
- ▼ 16 digital inputs
- ▼ 16 digital outputs
- ▼ Pacer Clock
- ▼ Timer/Counter
- ▼ DMA and Interrupt
- ▼ Wiring Terminal Board

**£199**

## High Performance A/D Card

The complete and cost-effective solution for your PC based automation needs.

- ▼ 12 bit 100KHz
- ▼ 16 single-ended or 8 differential A/D inputs
- ▼ Built in 1K word FIFO
- ▼ Amplifier x0.5 to x1000
- ▼ 1 D/A Output
- ▼ 16 digital inputs
- ▼ 16 digital outputs
- ▼ Timer/counter
- ▼ Pacer Clock
- ▼ DMA and Interrupt
- ▼ Wiring Terminal Board

**£375**

## Relay Output and Isolated Digital Input Card

Offering 8 programmable electro-mechanical relays for ON/OFF control or small power switching, and 8 opto-isolated inputs which can be used as digital input under noisy environment or floating potential.

- ▼ 8 on-board SPDT relays
- ▼ LED indicators to show activated relays
- ▼ 8 opto-isolated digital input channels
- ▼ Easy to use and program

**£109**

## Industrial I/O Cards

D/A Output Card 2ch.	£155
D/A Output Card 6ch.	£285
D/A Output Card 12ch.	£399
24 bit Digital I/O Card	£60
48 bit Digital I/O Card	£80
32 ch Isolated Digital I/O Card	£105
4 1/2 Digit Voltmeter Card	£295
Stepping Motor Control Card	£255

Industrial Automation with PCs  
**ADVANTECH.**

We offer a full 12 months warranty and if you have any problems or questions you can call us for Technical Support.

## Industrial Workstation with 14" Colour CRT

Rugged heavy duty workstation for 19" rack or panel mounting.

- ▼ Highly integrated PC Workstation
- ▼ 1024 x 768 Colour CRT Monitor
- ▼ 27-key membrane keypad
- ▼ IP56/IP52 sealed hardened front panel
- ▼ Heavy duty aluminium and steel chassis
- ▼ 250-watt power supply
- ▼ 8 ISA slots

**£1600**

## Industrial Workstation with 9.4" LCD Display

Rugged heavy duty workstation with flat-panel LCD display and 80-key membrane keypad.

- ▼ Highly integrated PC Workstation
- ▼ 640 x 480 colour TFT display
- ▼ 19" rack/panel mount
- ▼ IP56/IP52 front panel
- ▼ 200-watt power supply
- ▼ 8 ISA slots

**£3200**

Also with B/W LCD display £1400  
Also with EL display £2550

## Industrial Chassis + Intel Pentium 90MHz Motherboard

Robust 19" Industrial Chassis fitted with Intel Pentium 90MHz Motherboard. Ideally suited for heavy duty use in television, multimedia and communications and other professions requiring Pentium power in a rugged industrial grade format.

- ▼ 19" Industrial Chassis 250W
- ▼ Pentium 90MHz processor
- ▼ 4 ISA slots, 3 PCI slots
- ▼ 2 serial ports, 1 parallel
- ▼ 8Mb RAM, 256K cache
- ▼ 540Mb IDE Drive
- ▼ 1.44Mb Floppy Drive
- ▼ PCI S3 Display Card

**£1500**

For other configurations, custom build, SCSI peripherals, please call.

## Disk Drives & Controllers

Only supplied as part of a system.

Adaptec ISA SCSI Master Kit	£220
Adaptec ISA SCSI Board only	£170
Adaptec PCI SCSI Master Kit	£240
IDE Hard Drive 420Mb	£140
IDE Hard Drive 540Mb	£155
IDE Hard Drive 1Gb	£280
SCSI Hard Drive 1Gb	£380
SCSI Hard Drive 2Gb	£770

## Industrial 19" Chassis

The rugged all steel chassis conforms to the 19" rack mounting standard. The unit includes a 14 slot passive backplane and a high efficiency switching power supply (250W) in a dual-fan cooled chassis.

- ▼ Supports 286/386/486 CPU Cards and Pentium CPU Card (ISA bus)
- ▼ Mounting for up to 4 drives
- ▼ Hold down clamp to protect plug in cards from vibration
- ▼ Positive air pressure inside generated by dual (push-pull) cooling fans
- ▼ Removable air filters

**£495**

## Flash/RAM/ROM Disk Card

Half-size disk card which can use up to 3Mb of SRAM, EPROM or Flash memory chips to replace a floppy disk drive. It offers faster access times and better protection from vibration, vapors and contaminants than physical drives.

- ▼ Emulates drive A,B,C or D
- ▼ Boots when emulating drive A
- ▼ Accepts 128Kx8 or 512Kx8 EPROMs, Flash Memory or SRAM.
- ▼ Simple installation
- ▼ No software required

**£110**



## Industrial CPU Cards

Industrial Grade CPU Cards designed to be highly reliable in harsh industrial environments. Built to ensure high end stability under extremes of temperature, shock and vibration. Special features include watchdog timers, RAM/ROM disk, PC-104 interface, floppy/IDE interface, parallel and RS232/RS485 serial ports.

Half-size Cards	
CPU Card 286SX/16	£190
CPU Card 386SX/25	£240
CPU Card 386SX/33	£290
CPU Card 486DX2/50	£370
CPU Card 486DX2/66	£420
Full-size Cards	
CPU Card 486DX2/50 256K cache	£400
CPU Card 486DX2/66 256K cache	£450
CPU Card 486DX4/100 256K cache	£550
CPU Card Pentium/66 256K cache	£800

## Passive Backplanes

Passive Backplane 3 slot	£40
Passive Backplane 6 slot	£45
Passive Backplane 8 slot	£50
Passive Backplane 12 slot	£60
Passive Backplane 14 slot	£70
Passive Backplane 20 slot	£130

## Display and Keyboards

14" SVGA Colour Monitor	£250
Rack Mount Kit for 14" Monitor	£250
ISA SVGA Display Card 1Mb	£80
PCI S3 Display Card 1Mb	£90
Rack Mounted Compact Keyboard	£199
Compact keyboard	£60
Standard Keyboard	£40

## Memory Components

Only supplied as part of a system	
SIMM 1Mb 72pin parity	£50
SIMM 4Mb 72pin parity	£140
SIMM 8Mb 72pin parity	£280
SIMM 16Mb 72pin parity	£420
EPROM Memory 512Kb	£20
FLASH Memory 512Kb	£50
SRAM Memory 128Kb	£20



**SEMAPHORE  
SYSTEMS LIMITED**

Unit 3, Hampstead West,  
Iverson Road,  
London NW6 2HX

Tel: 0171-625 7744

**CALL US FOR LAB SERIES CATALOGUE**

DELIVERY MAINLAND UK £10 (10Kg)

All prices exclude VAT. Access and Visa accepted.

# SEMAPHORE

# Hi-Grade puts the key to the future within reach of all.

With technology advancing at its current dizzy rate, it is easy to fear that the PC bought today may tomorrow be obsolete.

Fear no more. Hi-Grade Computers can supply any customer with the latest technology plus full upgradability to help you take advantage of innovations such as ever faster processors or Windows 95. Our Winputer P75, for example, with its new Intel Triton chipset and fast hard disk and graphics card, can run the most power-hungry software. It can be upgraded now to 133MHz, fast EDO RAM or pipeline synchronous burst cache. It will take a 200MHz processor when that arrives.

Hi-Grade is equally helpful financially. Personal customers can buy a P75 on interest-free credit, i.e. £172.14 deposit, then 12 monthly instalments of £129.10 (including VAT).

Firms can obtain the same PC on lease rental, with great tax advantages, at the very low APR of 14.9%. You pay £145.20, then £48.40 per month for 33 months (excluding VAT).

**HI-GRADE**  
COMPUTERS PLC

*Technology with a human face*

Unit 1, Cromwell Centre, 32 Thames Road  
Barking, Essex IG11 0HZ  
Fax: 0181 591 1586

**Tel: 0181 591 9040**

**Northern Sales Tel: 0131 557 5999**

**Southern Sales Tel: 01703 315151**



**Interest-free  
credit or lease  
at 14.9% APR**



## Hi-Grade Winputer P75

- Intel Pentium processor
- 75MHz clock speed (upgradable to 133MHz)
- Intel Triton PCI/ISA chipset
- 16Mb RAM, expandable to 128Mb
- 256K cache (upgradable to 512K synchronous pipeline burst mode)
- 3.5" 1.44Mb floppy disk drive
- 540Mb hard disk with PCI enhanced IDE interface mode 4
- Sony quad-speed IDE CD-ROM drive
- S3 868 PCI local bus graphics card (1Mb RAM upgradable to 2Mb)
- 14" colour SVGA monitor
- 4 PCI (3 free) and 4 ISA (4 free) expansion slots
- 2 serial ports, 1 parallel port
- MS-DOS 6.22 & Windows 3.11 for Wkgs or Windows 95
- Desktop or mini-tower case
- 102-key soft tactile keyboard
- Serial 2/3-button mouse

**£1,465 (plus VAT)**

Finance available subject to status. Written quotations on request. Hi-Grade is a licensed credit broker. A member of the Direct Marketing Association, it adheres to the DMA's strict Code of Practice on customer protection.

# Multimedia

## Omega Tailor-Made Multimedia Systems

Specify your own configuration by using this 5 stage process:

1. Select the Processor Base System.  
(Includes 1.44Mb floppy, 4Mb or 8Mb RAM, local bus graphics, IDE controller, standard ports, Mini-Tower 5 bay case and keyboard)

486DX2-66 4Mb MT . . . \$279  
486DX4-100 4Mb MT . . . \$299  
Pentium® 75 8Mb MT . . . \$529  
Pentium® 90 8Mb MT . . . \$609  
Pentium® 100 8Mb MT \$689

2. Select the IDE Hard Disk.  
540Mb . . . . . \$100  
350Mb . . . . . \$130  
1.08Gb . . . . . \$180  
1.6Gb . . . . . \$280

3. Select the Screen.  
14" SVGA colour . . . \$120  
14" SVGA NI . . . . \$160  
15" SVGA NI . . . . \$230  
17" SVGA NI . . . . \$440

4. Select the CD / Multimedia Options.  
Double speed CD-ROM drive alone . . . . \$40  
Double speed CD-ROM Plus 16-bit sound card & speakers . . . . \$80  
Quad speed CD-ROM drive alone . . . . \$100  
Quad speed CD-ROM drive plus 16-bit sound card & speakers . . \$140

5. Additional Options.  
DOS 7 & OS/2 Warp . . . \$Call  
DOS & Windows 3.11 . . . \$Call  
Windows '95 . . . . \$Call  
DOS & Windows 3.11 for Workgroups . . . . \$Call  
486 models with 256K Cache . . . . \$40  
RAM upgrade per 4Mb . \$100  
486 video RAM upgrade to 2Mb . . . . \$35  
Pentium® video RAM upgrade to 2Mb . . . \$40  
350Mb tape streamer . . \$90  
800Mb tape streamer . \$150  
3.2Gb Imago tape streamer . \$220  
Tape cartridge . . . . \$Call  
9624 data/fax modem . \$35  
14.4 data/fax modem . \$80  
28.8 data/fax modem . \$159  
Upgrade to 1Mb VIDEO from 16-bit . . . . \$30  
PC joystick . . . . \$10  
16-bit sound card . . \$30  
Twin stereo speakers . \$10  
Standard mouse . . . \$9  
Deluxe mouse . . . . \$19

Options 2-5 can only be purchased with a PC system

APPROVED connection to telecommunication services specified in the instructions for use subject to the conditions of the service



Mr PC is a division of Corporate Systems Ltd

"Take a look at our 'Best Buy' Omega 486DX2-66 Mini-tower multimedia system which comes with an incredible specification for just £599+VAT. With fast 540Mb hard disk, 66MHz 486DX2 processor, double speed CD-ROM drive, speakers, joystick and a superb SVGA colour screen, this is surely the best value in multimedia PC systems in the UK today!"

# Omega



Alternatively go for Omega ultimate DX4-100 and Pentium® mini-tower multimedia systems which feature quad speed drives, a minimum of 8Mb RAM and hard disks up to 1.6Gb."

### 486DX2-66MT

## Multimedia PC

- 486DX2-66 processor
- Mini-tower case
- 4Mb RAM expandable to 64Mb
- 540Mb hard disk
- Double speed CD-ROM drive
- 3.5" 1.44Mb floppy drive
- 16-bit sound card
- PC joystick
- Twin stereo speakers
- 16-bit SVGA card
- 14" SVGA colour screen
- Parallel, 2 serial and joystick ports
- 102 Keyboard
- 12 month warranty extendable to 3 years

# £579

+ VAT

With 8Mb RAM and quad speed CD . . . . . £739

### 486DX4-100MT

## Multimedia PC

- 486DX4-100 processor
- Mini-tower case
- 8Mb RAM expandable to 64Mb
- 540Mb hard disk
- Double speed CD-ROM drive
- 3.5" 1.44Mb floppy drive
- 16-bit sound card
- PC joystick
- Twin stereo speakers
- 16-bit SVGA card
- 14" SVGA colour screen
- Parallel, 2 serial and joystick ports
- 102 Keyboard
- 12 month warranty extendable to 3 years

# £699

+ VAT

With quad speed CD and 850Mb hard disk . . . . . £789

### 75MHz Pentium® MT

## Multimedia PC

- Intel® 75MHz Pentium® processor
- Mini-tower case
- Upgradeable to 90 or 100MHz Pentium® processor
- 8Mb RAM
- 540Mb enhanced IDE hard disk with 256K hard drive cache
- Double speed CD-ROM drive
- 3.5" 1.44Mb floppy drive
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA colour screen
- 16-bit stereo sound card
- PC joystick
- Twin stereo speakers
- Parallel, 2 fast serial and joystick ports
- 102 Keyboard
- 12 month warranty extendable to 3 years

# £829

+ VAT

850Mb model with quad speed CD . . . . . £919  
850Mb, P90 model with quad speed CD . . . . . £999

Sales lines are open  
Mon-Fri  
9:00 am  
until  
5:30 pm

Order  
Hotline

# 01282 777 888

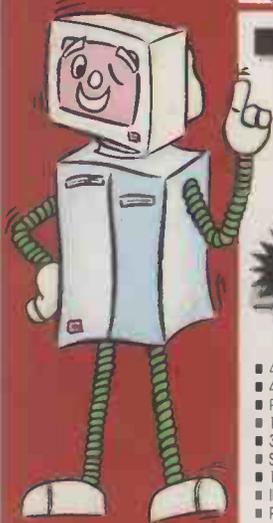
FAX  
01282  
777209

Terms & conditions: All prices are subject to VAT (17.5%) and delivery costs (£19 + VAT) and may change without notice. Goods are normally delivered within few days of cleared payment. All orders will be fulfilled within 28 days unless otherwise notified. No surcharges are made to Access, Visa, Amex or Switch. Goods are not supplied on a trial basis. Credit account orders are normally 3% extra. Errors and omissions exempted. Business user prices shown. End user enquiries welcome. The Intel Inside and Pentium Processor Logos are trademarks of Intel Corporation. E&OE

# MrPC

BLACKBURN ROAD, SIMONSTONE, BURNLEY BB12 7GT  
TELEPHONE 01282 777 888 FAX 01282 777 209

# MrPC SYSTEMS



## OMEGA SYSTEMS



**£459**

### Omega 486 Systems

- 486DX2-66 or 486DX4-100 processor
- 4Mb RAM expandable by SIMMS
- Pentium™ technology upgradeable
- 125Mb hard drive
- 3.5" 1.44Mb floppy drive
- SVGA graphics
- 14" SVGA colour screen
- IDE hard and floppy controller
- Parallel, 2 serial, joystick and keyboard ports
- Expandable desktop case
- 4 drive bays and 7 expansion slots (2 VESA)
- 102 Enhanced keyboard
- Microsoft compatible mouse

486DX2-66.....	£439
486DX4-100.....	£459



**Omega**

### Omega 586 Systems

- 75, 90, 100MHz Pentium™ processor
- 8Mb RAM expandable by SIMMS
- 850Mb Enhanced IDE hard disk
- 3.5" 1.44Mb floppy drive
- PCI bus with 4 PCI slots
- 1Mb PCI bus graphics with windows accelerator
- 14" SVGA colour screen
- PCI IDE hard and floppy controller
- Parallel, 2 serial and keyboard ports
- Expandable desktop case
- 4 drive bays and 7 expansion slots
- 102 Enhanced keyboard
- Microsoft compatible mouse

Pentium™ 75.....	£839
Pentium™ 90.....	£919
Pentium™ 100.....	£999

### Omega Best Buy

See the details of our best buy system for only **£749**

- 486 DX4-100 processor
- 8 Mb RAM
- Pentium™ technology
- 850Mb hard disk
- 3.5" 1.44Mb floppy drive
- 1Mb video card
- 14" SVGA colour screen
- IDE hard and floppy controller
- Parallel, 2 serial joystick and keyboard ports
- Expandable Mini-Tower case
- 5 drive bays and 7 expansion slots (2 VESA)
- 102 Enhanced keyboard
- Double speed CD-ROM drive
- 16-bit sound card
- Stereo speakers and joystick

700Mb Tape streamer.....	£150
9624 Data/fax modem.....	£35
14.4 Data/fax modem.....	£69
Double speed CD-ROM drive.....	£29
Quad speed CD-ROM drive.....	£99
PC Joystick.....	£10
16-bit Sound card.....	£30
Twin stereo speakers.....	£10
<b>Pre-loaded Software Options</b>	
DOS & Windows 3.11.....	£9Call
DOS & Windows 3.11 for workgroups.....	£9Call
PC DOS 7 & OS/2.....	£9Call
Windows 95.....	£9Call

**OPTIONS**  
These options are only available with Omega Systems

540Mb HD instead of 125Mb.....	£60
850Mb HD instead of 540Mb.....	£30
1.08Gb HD instead of 540Mb.....	£80
1.6Gb HD instead of 540Mb.....	£180
15" NI SVGA instead of 14".....	£110
17" NI SVGA instead of 14".....	£320
RAM upgrade per 4Mb.....	£100
486 Video RAM Upg to 2Mb.....	£35
Pentium™ video RAM upg to 2Mb.....	£40
350Mb Tape streamer.....	£90

## COMPAQ



**£799**

### New Compaq Presario

- 486SX2-66, 486DX2-66 or 486DX4-100 processor
- 4Mb or 8Mb RAM, Max 64Mb
- 420Mb hard disk
- 3.5" 1.44Mb floppy drive
- Local bus SVGA graphics
- Compact, standard desktop or mini-tower models
- Serial parallel, joystick and mouse
- 14" Low radiation NI SVGA colour screen
- 16-bit stereo sound card, microphone and speakers
- High speed multisession CD-ROM drive
- Integrated 9600/2400 fax/data modem with telephone answering
- MS DOS 6.2, Windows 3.1, Tabworks,

**Software**  
Microsoft Works v3, MS Money, MS Entertainment pack, Microsoft Encarta '95 CD, The Ultimate Human Body CD  
CDS 520 486SX2-66 compact.....£799

## NOTEBOOKS



**£799**

### Omega 486DX2-66

CDS Special 486DX4-100 8Mb.....£999

CDS 524 486DX2-66 compact.....£1039

### Omega Notebooks

- 486DX2-66 or 486DX4-100 processor
- 4Mb or 8Mb RAM, max 20Mb
- 340Mb, 540Mb or 810Mb hard disk
- High contrast 9.5" LCD VGA mono or colour screen
- 3.5" removable 1.44Mb floppy disk drive
- VESA local bus graphics
- PCMCIA Type II/III slot
- Built-in trackball
- Parallel, serial port, VGA and PS2/ports
- Up to 3 hours battery life
- Battery and AC Pack included
- 12 month warranty

486DX2-66, 340/4 mono.....	£799
486DX4-100, 340/4 mono.....	£839
486DX2-66, 340/4 colour.....	£1169
486DX4-100, 340/4 colour.....	£1209

### OPTIONS

540Mb HD instead of 340Mb.....	£90
810Mb HD instead of 340Mb.....	£260
4Mb RAM module.....	£150
8Mb RAM module.....	£300
16Mb RAM module.....	£600

### Toshiba T2100

- 486DX4-75 processor
- 4Mb or 8Mb RAM, max 28Mb
- 350Mb or 520Mb hard disk
- STN mono/colour or TFT colour display
- MS DOS 6, Win 3.1 and trackpoint mouse

T2110 350Mb, 4Mb.....	£845
-----------------------	------

"My Best Selling Printers"

1. HP DeskJet 850C.....£330
2. Canon BJ30.....£139
3. HP DeskJet 660C.....£273
4. HP LaserJet 5L.....£349
5. Epson Stylus 1000.....£319
6. HP LaserJet 4 Plus.....£369
7. HP DeskJet 320.....£169
8. Epson EPL 3000.....£359
9. Panasonic KXP 2124M.....£191
10. OKI 400EX.....£269
11. Canon BJ200EX.....£159
12. Star LC24-200C.....£198
13. NEC P2Q.....£97
14. Canon BJC600E.....£318

"you won't find lower prices"

# PRINTERS



**£574**

### HP LaserJet 5P

**HP LASERJET**

HP LaserJet 4 Plus.....	£969
HP LaserJet 4M Plus.....	£1294
HP LaserJet 4Si.....	£2053
HP LaserJet 4SiMX.....	£2923
HP LaserJet 4V.....	£1363
HP LaserJet 4MV.....	£1963
HP LaserJet 5L.....	£349
HP LaserJet 5P.....	£574
HP LaserJet SMP.....	£719
HP LaserJet Colour.....	£4179
HP OfficeJet XL.....	£459

**Printer options**  
Remember to order with your printer

- Extra toner
- Extra ink cartridges
- Extra ribbons
- Extra software fonts
- RAM upgrades etc



**£236**

### Canon BJ230

**CANON**

BJ30.....	£139
BJC70.....	£219
BJ200EX.....	£159
BJ230.....	£236
BJ300.....	£344
BJ330.....	£388
BJC4000.....	£218
BJC600E.....	£319
BJC800.....	£1064
BJC820.....	£1199
LBP4 U.....	£391
LBP430W.....	£359
LBP1260.....	£893



**£292**

### Epson Stylus Colour

**EPSON**

DLQ 3000.....	£671
DFX - 5000+.....	£1045
DFX - 8000.....	£1849
EPL 3000.....	£369
EPL 5200+.....	£485
FX870.....	£238
FX1170.....	£297
LX300.....	£92
LQ300.....	£141
LX1050+.....	£179
LQ570+.....	£209
LQ - 1070+.....	£291
LQ 870.....	£369
LQ1170.....	£429
Stylus 1000.....	£319
Stylus Colour.....	£292
Stylus Pro.....	£405
Stylus Pro 820.....	£545
Stylus Pro.....	£1389
Stylus Pro 820.....	£215
Stylus Colour 2S.....	£265
Stylus Colour 2.....	£309



**£479**

### Panasonic KXP4430 Laser

**PANASONIC**

KXP1150.....	£87
KXP2023.....	£107
KXP2124M.....	£191
KXP 2135.....	£123
KXP 3626.....	£252
KXP 3696.....	£259
KXP 4430.....	£479
KXP 4440.....	£679
KXP 5400 PS.....	£519
KXP 6100.....	£235
KXP 6150.....	£320
KXP-Colour Kit.....	£28



**£395**

### Kyocera FS-400

**KYOCERA**

FS400 300dpi 4ppm.....	£395
FS1550 300dpi 10ppm.....	£895
FS1600 600dpi 10ppm.....	£1099
FS3400 300dpi 18ppm.....	£1395
FS3500 300dpi 18ppm.....	£2159
FS3600 600dpi 18ppm.....	£1789
Duplex FS1550DX.....	£1489
Duplex FS1600DX.....	£1699
Duplex FS3400DX.....	£1999
Duplex FS3600DX.....	£2399
Duplex FS6500 A3, 300 dpi 7/13ppm.....	£1639



**£330**

### HP DeskJet 850C

HP DeskJet 340& CSF.....	£180
HP DeskJet 340.....	£169
HP DeskJet 600.....	£206
HP DeskJet 660C.....	£273
HP DeskJet 850C.....	£330
HP DeskJet 1200 colour.....	£625
HP DeskJet 1200 PS colour.....	£945
HP DeskJet 1600C.....	£822
HP DeskJet 1600CPS.....	£1219



**£99**

### Star LC 240C

LC-90.....	£78
LC-100 C.....	£89
LC-15.....	£176
LC24-20 VIK2.....	£112
LC24-200 C.....	£198
LC24-15 VIK2.....	£231
LC-240.....	£89
LC-240C.....	£99
XB24-200C.....	£309
XB24-250C.....	£379



**£257**

### NEC 610 Laser Plus

P2Q.....	£97
P3Q.....	£178
P72.....	£372
P90.....	£548
S610 Laser Plus.....	£257
S660 Laser.....	£388
S660i Laser.....	£509
S3000 Colour.....	£638



**£269**

### OKI 400EX

Okilaser 400EX.....	£269
Okilaser 410EX.....	£370
Okilaser 810EX.....	£625



**£239**

### Lexmark Winwriter 200

- 4ppm print speed
  - Laser quality 300 dpi resolution
  - 12 months on-site maintenance
  - GDI & PCL4 language compatible
  - 512Kb RAM standard, upgradeable to 4.5Mb
- |                     |       |
|---------------------|-------|
| Optra R.....        | £958  |
| Optra L.....        | £1367 |
| Optra RX.....       | £1467 |
| Optra LX.....       | £1898 |
| Optra LX1.....      | £2293 |
| Winwriter 150C..... | £269  |

# PERIPHERALS

## PLOTTERS



**£3711**

Designjet 650C

**HP DesignJet**

230 A1	£1385
230 A0	£1907
250C A1	£1736
250C A0	£2385
600 A1 600dpi	£2712
600 A0 600dpi	£3244
650C A1 Colour	£3711
650C A0 Colour	£4386
750C A1 Colour	£3205
750C A0 Colour	£4350

**HP PaintJet**

XL300 A4	£1594
XL300 A3 Value Pack	£1768
XL300 Postscript A4	£2568
XL300 Postscript A3 Value Pack	£2752

## SCANNERS

from **£472**



**Agfa scanners**

**Agfa Scanners**

StudioScan	£472
StudioScan Ili	£585
Arcus II	£2118

**HP Scanners**

HP ScanJet 4C PC	£5Call
HP ScanJet 4S PC	£5Call

**Epson Scanners**

GTX8500 Parallel	£499
GTC8500 SCSI	£565
GTX9000 Parallel	£595
GTX9000 SCSI	£665
GT3000 Lapcat	£309

**Logitech**

Scanman 256	£77
Scanman Colour	£165
Scanman Easytouch 256	£98

## MRPC PRODUCTS

**£69**



**14.4 Fax & Data Int**

**MRPC Modems**

14.4 Fax & data Int	£69
14.4 Fax, data & voice Int	£99

**MRPC Scanners**

256 Greyscale hand scanner	£38
■ 400dpi max resolution	
■ 256 greyscale levels with software enhancement	
■ 105mm scan width	
24-bit Colour hand scanner	£98
■ 400dpi max resolution	
■ 24-bit colour	
■ 256 greyscale levels	
800dpi Colour flat bed scanner	£395
■ 24-bit True colour reproduces 16.7 million colours in one pass	
■ interface card supplied	
1200dpi Colour flat bed scanner	£595
■ 1200dpi horizontal x 600dpi vertical	
■ 24-bit True colour reproduces 16.7 million colours in one pass	
■ Twin Compliant	

## MONITORS

**£278**



**NEC MultiSync XV 15" Monitor**

**Taxon Monitors**

400LR 14"	£177
410LR 14"	£184
580LR 15"	£262
880LR 17"	£499
885LR 17"	£565
895LR 17"	£795
1080LR 20"	£849
2100LR 21"	£1435

**Panasonic Monitors**

Panasonic TX-D12051 20"	£655
Panasonic TX-D2051 20"	£999
Panasonic TX-T1562	£1395
Panasonic TX-D1733	£219
Panasonic D1133FU	£489
Panasonic D1133FU	£549

**NEC Monitors**

NEC XV14 14"	£215
NEC XV15 15"	£274
NEC XV17 17"	£558
NEC XE15 15"	£388
NEC XE17 17"	£665
NEC XE21 21"	£1325
NEC XP17 17"	£895
NEC XP21 21"	£1745

## MODEMS

**£160**



**Pace 28.8 Int Modem**

Zoom 14.4 Int	£85
Zoom 28.8 Int	£139

**US Robotics**

Sportster 28.8 Ext	£157
Sportster 14.4 Int	£105
Worldport 28.8 PC/MCIA	£159
Courier Terbo v34	Ext £238
Courier Terbo v34	Int £238

**Pace**

Pace Microlin NB32+ PC/MCIA 14.4	£189
Pace Mobifax 144 14.4 Netlink	£110
Pace Message Desk Ext	£172
Pace Microlin V34 Int	£179
Pace Microlin NB34 PC/MCIA	£275
Pace Linnet 3 4 FX	£160
Pace Ultralink 32plus	£330

## TAPE DRIVES & MEMORY

**£79**



**Jumbo 350Mb**

**TAPE STREAMERS**

Jumbo 350Mb	£78
Jumbo 680Mb	£125
Jumbo 1.4Gb	£209
Trakker par. port 350Mb	£154
Trakker 680Mb	£208
omega Ditto 800Mb Int	£135
omega Ditto 3 2Gb Int	£220
omega Zip Drive Ext Par	£129
omega Zip Drive Ext SCSI	£129
Travan T100 800Mb	£119
Cartridges for above	Call

**RAM Memory**

1Mb Standard SIMM	£27
4Mb Standard SIMM	£94
4Mb 72 pin SIMM	£87
8Mb 72 pin SIMM	£179

## MICE

FROM **£17**



**MPC Mouse**

MPC Mouse	£17
-----------	-----

**Logitech**

Pilot II Serial	£17
Pilot II PS/2	£18
Mouseman RH Bus	£33
Mouseman Cordless RH	£33
Serial/PS2	£49
Trackman PC Serial/PS2	£43
Trackman Portable Serial/PS2	£31
Mouseman Senso	£38

**Microsoft**

Ballpoint PS/2	£48
Bus Mouse for Windows 95	£48
Home mouse	£21
Serial PS/2 Mouse	£35

## KEYBOARDS

**£49**



**Comfy Keyboard**

Comfy Keyboard	£49
The great concert in Comfyland	£25
Christmas in Comfyland	£19
Adventure of the missing bone	£25

**Microsoft Natural Keyboard** ..... £60

## CLEARANCE BARGAINS

Citizen Swift project tractor feed	£10
Epson Stylus 300	£99
Epson EPL4000	£349
Epson LQ200 printer	£90
Epson LQ400	£100
Epson EPL multimedia tray	£29
Epson pull tractor feeder FX1050	£19
Epson LQ550 LX850 s/feeder	£19
Epson LX850 LQ850 CSF	£299
Epson LQ1010 CSF	£39
Epson 2550 scanner	£29
HP VLZE SX33 210Mb (Base/Mon)	£399
HP LaserJet AA 250 sheet tray	£19
HP DeskJet 500C	£175
HP LaserJet 4P	£499
IBM low rad 14" monitor	£139
IBM Value Point K2C SX33 170Mb (Base/ Mon)	£499
IBM 540, 540Mb (Base/Mon)	£499
IBM 573, 540Mb (Tower base/ Mon)	£549
Mitac Supergreen, 540Mb, 14" mon	£479

NEC S601 paper face up tray	£29
NEC P20 SFF	£10
NEC P60 cut sheet feeder	£29
NEC P90 sheet feeder	£29
NEC P2200/P2+ sheet feeder	£9
NEC SE monitor	£549
NEC 610	£199
OKI sheet feeder for 320/390	£20
OKI OL800 printer	£399
OKI OL840 printer	£599
OKI LJ800 printer	£799
OKI 400	£229
OKI 182 parallel printer epe	£79
OKI 182/260 pull tractor feed	£79
Olivetti pull tractor for JP350	£9
Panasonic KXP4451	£599
Panasonic TX1713 17"	£449
Star LR4 PostScript laser	£499
Star LC24-200	£99
Star LC100 sheet feeder	£15
Star X824-10 sheet feeder	£9

- "Buy with confidence"
- 1 Lowest Prices with Full Service
  - 2 Part of Multi-Million Pound Computer Group
  - 3 Over 150,000 Satisfied Customers
  - 4 Quality Leading Brand Products Only
  - 5 Friendly Helpful Sales Staff
  - 6 Huge Stocks, Ready To Ship
  - 7 Minimum of 12 Months Guarantee
  - 8 Comprehensive After-Sales Service
  - 9 FREE Hardware Technical Support Line
  - 10 The Best Value In the UK

Sales lines are open Mon-Fri 9am until 5:30 pm

Order Hotline

01282 777 888

Ex 01282 777 209

# MULTIMEDIA

## CREATIVE LABS

**£61**



**Soundblaster 16 Value IDE**

**SoundBlaster Range**

Soundblaster 16 AWE-32	£159
Soundblaster 16 SCSI-2 AdSP	£124
Soundblaster 16 SCSI-2	£103
Soundblaster 16 MCD	£82
Soundblaster 16 Value IDE	£60
Waveblaster	£124
AdSP Upgrade	£38
Soundblaster Pro 16 IDE ADSP	£103
Soundblaster Pro IDE	£83
Soundblaster 16 AWE-32 Value	£120
Soundblaster V2	£24

**Multimedia Cards**

VideoBlaster R1300	£255
Video Spigot	£75
Creative MP400 (MPEG)	£174
TV Coder Ext	£119

**Multimedia Kits**

Multimedia Home CD	£279
Decover X4 kit	£265
GameBlaster Quad Int	£189

## SOUND CARDS

**£49**



**16-BIT SOUND CARDS**

High performance 16-bit stereo soundcard with standard interfaces ..... £49

**MRPC CD-ROM KITS**

**MRPC CD-ROM Double** ..... £49

Double speed IDE CD Kit

- Double speed Multi-session CD-ROM drive
- IDE ATAPI Interface
- Connects directly to your IDE hard disk cable

**MRPC CD-ROM Quad** ..... £99

Quad Speed IDE CD Kit

- Latest Quad Speed IDE CD-ROM drive
- IDE ATAPI Interface
- Connects directly to your IDE hard disk cable

## MRPC MULTIMEDIA KITS

**£109**



**Multimedia Kit 1** ..... £109

Double speed multimedia bundle

- Double speed IDE CD-ROM drive
- Connects directly to your IDE hard drive cable
- Audio cable included
- 16-bit high performance soundcard
- Multimedia software
- Dual stereo speakers
- PC joystick
- 3 CD titles

**Multimedia Kit 2** ..... £159

Quad speed multimedia bundle

- Quad speed IDE CD-ROM drive
- Connects directly to your IDE hard drive cable
- Audio cable included
- 16-bit high performance soundcard
- Multimedia software
- Dual stereo speakers
- PC joystick
- 3 CD titles

## MULTIMEDIA ADD-ONS

**£65**



**Virtual Pilot TV CARD**

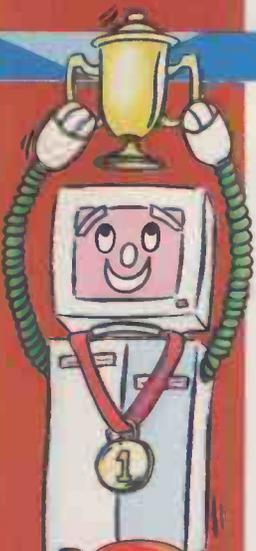
Hauppauge WIN TV Prism	£149
Hauppauge WIN TV Celebrity	£255
Hauppauge WIN TV Cinema	£189
Logitech Wingman Extreme	£29
PC Joystick	£19
Joystick Card	£9
CH Flightstick	£27
CH Flightstick Pro	£48
CH Virtual Pilot Pro	£65
Speakers	£17
15W Quickshot Speakers	£30
70W Screenbeat Speakers	£59
Microphone	£9
Midi Cables	£18

**CD Leisure Software**

Full Throttle	£28
Flight Unlimited	£28
Virtual Pool	£23
Dungeon Master 2	£23
Dark Forces	£28
Ai Unser Jr Racing	£15
Superkarts	£20



# Mr PC SOFTWARE



**"Lowest Prices in the UK"**  
See my price guarantee



**PageMaker Classic**  
3.5" disk media unless specified

**ADOBE**

Adobe Acrobat Pro	£299
Adobe Type Manager v2.5 Win	£64
Adobe Illustrator Win	£325
Adobe Photoshop Win	£382
PageMaker v5 Win	£385
PageMaker Classic Win	£62
Persuasion Win	£189
PC Collection Win	£829
Intellidraw Win	£84
PhotoStyler Win	£360

**ASYMETRIX**

Asymetrix MediaBlitz Win	£49
Multimedia Toolkit Win	£429
Toolbook	£195

**AUTODESK**

Autosketch for Windows	£139
Generic CAD v6.1 DOS	£345
Autodesk Animator Pro Win	£335
AutoCAD LT R2	£378

**BORLAND**

Reflex DOS v2	£172
Visual dBase Win 5.5	£209
Delphi CD	£219



**Asymedia MediaBlitz**

Paradox 5.0 Win	£219
Paradox 4.5 Dos	£275
dBASE 5.0 Win	£225
dBASE 5.0 Dos	£299
dBASE 5.5 Win	£218
C ++ 4.5 Dos & Win	£55
Turbo C ++ 3.0 Dos	£53
Turbo C ++ 4.5 Win CD	£335

**BRODERBUND**

Harry & The Hound House	£25
Maps & Facts	£25
Myst Windows	£25
Ruffsbone	£25
Arthur's Birthday	£25
Arthur's Teacher Trouble	£25
Carmen World Deluxe	£25
Just Grandma & Me	£23
Little Monster at School	£25
Tortoise & the Hare	£25

**CENTRAL POINT/SYMANTEC**

CP PC Tools Pro (v9) DOS	£74
CP PC Tools for Win v2	£49
GP Xtree Gold v3	£64
CP Xtree for Windows v2	£65
Norton Antivirus +Subs v3 Win	£102
Norton Desktop v3 for Win	£88



**Quattro Pro for Windows v5**

Norton PC Anywhere DOS	£95
Norton PC Anywhere DOS Host	£58
Norton PC Anywhere DOS Remote	£65
Norton PC Anywhere Win H&R	£98
Norton PC Anywhere Win Host	£50
Norton PC Anywhere Win Remote	£84
Norton Utilities v8 DOS	£60
ACT v2 for Windows	£125
Symantec Q&A v4 for Win	£118
TimeLine for Win	£319
On Target for Win	£79
Speed Drive	£46
Norton Anti-Virus 95	£54
Norton Anti-Virus 95 trade up	£26
Norton Navigator 95	£68
Norton Navigator 95 CD	£72
Norton Navigator 95 trade up	£34
Norton Utilities 95	£64
Norton Utilities 95 CD	£88
Norton Utilities 95 trade up	£50
Norton PC Anywhere '95	£89

**COREL**

CorelDraw 3	£62
CorelDraw 4	£105
CorelDraw 5	£278
CorelDraw 3 to 5 Upg	£254
CorelDraw 4 to 5	£145
Corel Ventura v5	£245



**Paradox v5**

Corel Ventura v5 UPG	£145
Corel SCSI v2	£66
Corel CD Power	£27
Corel Prof Photos CD's	£17
Corel Art Show 5 CD	£20
Corel Gallery	£25
Corel Gallery 2	£44
Corel Flow	£45
Corel CD Office Companion	£65
CorelDraw CD 6	£259
CorelDraw CD 3 or 4 to 6 Upg	£217
CD Office Comp 5 to 6 Upg	£137

**CRT**

Learn Windows 95	£25
------------------	-----

**DELFINA**

Delrina DOS/FAX	£32
WinFax Pro for Win	£54
WinFax Pro Upgrade from Lite	£32
Commsuite	£75
Opus 'n Bill Screen Saver	£29
Win Com Pro	£53

**DORLING KINDERSLEY**

Encyclopedia of Nature	£31
Encyclopedia of Science	£31
History of the World	£31
Stowaway	£21
PB Bears Birthday	£20



**IBM OS/2v3 + Lotus SmartSuite**

The Ultimate Human Body	£31
The Way Things Work	£31
World Reference Atlas	£37

**GSP**

Timeworks v2 DOS	£29
GSP Pressworks for Windows	£29
GSP Designworks v2 Windows	£64
GSP Designworks v2 Windows	£79

**IBM**

IBM PC DOS v7	£41
IBM PC DOS v7 Upg	£30
IBM OS/2 v2.0	£28
IBM OS/2 v2.1	£79
IBM OS/2 Warp	£50
IBM OS/2 v3 Warp CD	£44
IBM OS/2 Warp / SmartSuite	£206
IBM OS/2 Warp with Windows 3.5	£90
IBM OS/2 Warp with Windows CD	£79
IBM OS/2 Warp Connect Upg from OS/2	£66
IBM OS/2 Warp Connect Upg from Operating System	£66

**WINDOWS 95 SOFTWARE**

After dark Win 95 3.5" or CD	£19
Dash Board	£26
Sidekick 95	£26
Ashton How animals move	£21



**dBASE v5 for Windows** £219



**CA Simply Business** £39



**CD Office Companion** £65



**CorelDraw v4 CD** £84



**IBM OS/2 v3** £51

1. Windows 95 Upg.....£59
2. Lotus SmartSuite Upg £155
3. Quattro Pro for Win .....£29
4. MS DOS 6.2 .....£36
5. MS Office 4.2 Upg .....£149
6. CA Simply Business .....£39
7. CorelDraw 3 .....£42
8. Quicken v4 .....£28
9. MS Works v4 95 .....£53
10. dBase for v5 Win.....£228
11. MS Money v3 .....£24
12. MS Excel 95 Upg .....£82
13. MS Word 95 Upg .....£82
14. Paradox for Win .....£219
15. WinFax Pro Upg .....£32
16. MS Encarta '95 CD.....£55
17. Lotus SmartPics .....£84
18. MS Office Pro 95 Upg£245
19. Visio v3 .....£89

Terms & conditions.  
All prices are subject to VAT (17.5%) and Delivery and may change without notice.  
Delivery charges: PC systems £19, Lasers and large items £15, other items £10. Goods are normally delivered within a few days of clearance payment. All orders will be fulfilled within 28 days unless otherwise notified. No surcharges are made to Access, Visa, Amex or Switch. Business user prices shown. End user enquiries welcome. Goods are not supplied on a trail basis. Credit account orders are normally 3% extra. Errors and omissions excepted. Clearance Bargains may include shop soiled goods

**CRT Learn Windows 95**

IMSI TurboCAD v3.2 DOS	£54
TurboCAD for Windows	£53
Formtool Gold	£47
Windease	£15
CD Speedway	£27
Picture This	£47
Space Missions CD	£27
World War II CD	£27
Masterclips CD	£61
Masterclips	£63

**Norton Utilities v8**

SoftRAM	£55
Soft RAM Win 95	£45
Family Tree Maker Win	£35
Arts & Letters Apprentice Win	£48

**The Ultimate Human Body**

Wordstar v7 Upg	£58
PFS: WindowWorks	£39
PFS: Power Album	£33
PFS: Publisher for Win	£33
PFS: CV & Job Search Pro	£33
Calendar: Creator Plus	£33
PC Paintbrush	£42
PhotoFinish for Win	£85

**WinFax Pro**

UTILITIES/COMMS	
Carbon copy v3 Windows	£74
Carbon Copy Plus v6 DOS	£73
Cleanweep	£26
CrossTalk v4 v2.1 DOS	£127
CrossTalk for Windows	£26
Gibson Sprinter II	£39
Alpha 5, Home & Business	£39
Laplink v1 Win	£57
Laplink v1 Win	£75
Stacker 4 DOS/Win	£59
Stacker 4 Comp Upg	£36
Smartcom for Windows	£59
Smartcom 420 Win	£59
Procomm Plus for Win v2	£54
Procomm Plus v2 DOS	£54
QEMM v7.5	£45
Accent Exp v2	£35
Accent Professional v2	£189
Accent Exp Special Ed	£89
Eozzap 95 for Windows	£15

**Encyclopedia of Science**

Lotus Graphwriter II	£49
Lotus Symphony v3	£49
Lotus Freelance v1.0 WIN	£49
Lotus 1-2-3 v4 Upg	£19
Lotus SmartSuite v2.1 CU voucher	£79
Microsoft Application	£19
Microsoft Office Pro v4.2 Upg CCP	£49
Microsoft Foxpro v2.5 distribution kit	£49
Microsoft Entertainment pack	£5
Microsoft Office v4 Upg	£49
Microsoft Works for DOS v2	£5
Microsoft DOS v5 upgrade	£5
Microsoft Strous CD	£10
Microsoft Office Pro v4 Educat	£89
Microsoft Excel v4 Educat	£49
Word WP Office v2	£39
Borland Office v2 Cu Voucher	£49
Microsoft Works for Win v2 Educat	£59
Lotus 1-2-3 v3.1 1.25"	£19
Borland Paradox v4.5	£5
Ashton Dbase	£5
Ashton Dbase Compiler	£5



**IBM PC DOS 7 CD upgrade** £30



**QuickTax 95** £28



**Quicken v4 for Windows** £28



**Visio v3 for Windows** £89

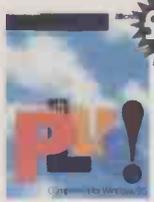


**Borland Delphi CD** £219



Mr PC is a division of Corporate Systems Ltd.

# MICROSOFT™



£26

Microsoft Plus



£59

Windows 95



£82

MS Excel v7 95 CCP



£19

MS Explorapedia



£53

MS Works v4 95

## Microsoft Windows 95

Windows 95 Upgrade	£59
Windows 95 Upgrade CD	£59
Windows 95 Upgrade MLP1	£58
Windows 95 (Upgrade from DOS)	£112
Office 95	£330
Office 95 CD	£330
Office 95 CU	£162
Office 95 CU CD	£162
Office 95 CCP	£139
Office 95 CCP CD	£139
Office Pro 95	£429
Office Pro 95 CD	£429
Office Pro 95 CU	£245
Office Pro 95 CU CD	£245
Office Pro 95 CCP	£204
Office Pro 95 CCP CD	£204
Plus	£26
Power point v7 95	£225
Power point v7 95 CU	£107
Power point v7 95 CCP	£82
Publisher 95	£61
Excel v7 95	£225
Excel v7 95 CU	£107
Excel v7 95 CCP	£82
Access v7 95	£225
Access v7 95 CU	£107
Access v7 95 CCP	£82
Word v7 95	£225
Word v7 95 CU	£107
Word v7 95 CCP	£82
Works v4	£53
Project 4.1 95	£289
Schedule + 95	£68

## MICROSOFT OFFICE

MS Office v4.2 Win	£326
MS Office v4.2 Win CD	£326
MS Office v4.2 Win Upg	£149
MS Office v4.2 Win C.U.	£221
MS Office v4.3 Win PRO	£415
MS Office v4.3 Win Pro CD	£419
MS Office v4.3 Win Pro Upg	£240
MS Office v4.3 Win Pro C.U.	£258

## MICROSOFT POWERPOINT

MS PowerPoint v4 Win	£227
MS PowerPoint v4 Win Upg	£82
MS PowerPoint v4 Win C.U.	£110

## MICROSOFT PROJECT

MS Project v4 Win	£282
MS Project v4 Win Upg	£82

## MICROSOFT PUBLISHER

MS Publisher v2 Win	£61
MS Test V3 Win	£399

## MICROSOFT FOXPRO

MS FoxPro v2.6 DOS STD	£69
MS FoxPro v2.6 DOS PRO	£282
MS FoxPro v2.6 Win STD	£69
MS FoxPro v2.6 Win PRO	£282

## MICROSOFT EXCEL

MS Excel v5 Win	£227
MS Excel v5 Win Upg	£82
MS Excel v5 Win CU	£110

## MICROSOFT ACCESS

MS Access v2 Win	£224
MS Access v2 Win Upg	£82
MS Access v2 Win CU	£110
MS Access v2 Win Dev Kit	£225

## MICROSOFT WORD

MS Word v6 Win	£228
MS Word v6 Win Upg	£86
MS Word v6 Win CU	£110
MS Word v6 DOS	£164

## MICROSOFT WORKS

MS Works v3 DOS	£80
MS Works v3 Win	£82
MS Works v3 Win Upg	£36

## OPERATING SYSTEMS

### MICROSOFT DOS

MS DOS v6.22	£36
MS DOS v6.22 MLP1	£32

### MICROSOFT WINDOWS

MS Windows v3.1	£60
MS Windows v3.1 MLP1	£52
MS Windows v3.1 Upg	£36
MS Windows printing system	£72

### MICROSOFT WINDOW NT

MS NT Workstation v3.5	£212
MS NT Workstation v3.5 MLP1	£175
MS NT Server v3.5	£460
MS NT Server v3.5 MLP1	£392

### MICROSOFT WINDOWS FOR WORKGROUPS

MS WFWG v3.11	£82
MS WFWG v3.11 MLP1	£80
MS WFWG ADD-ON v3.11	£36
MS WFWG ADD-ON v3.11 MLP1	£35

## MS WFWG ADD-ON v3.11 MLP20

MS WFWG ADD-ON v3.11 MLP20	£671
----------------------------	------

## LANGUAGES

MS Delta v1 Win	£185
MS Delta v1 Win MLP5	£772

## MICROSOFT VISUAL BASIC & C++

MS Visual Basic v3 Win	£75
MS Visual Basic v3 Win PRO	£192
MS Visual Basic v1.0 DOS	£77
MS Visual Basic v1.0 DOS PRO	£192
MS Visual C++ v1.5 Win	£55
MS Visual C++ v1.0 Win PRO	£185
MS Visual C++ v2 Win Pro CD	£232
MS Visual CONTROL V1.0 Win	£69
MS Visual TOOLS v1.5	£185

## MULTIMEDIA/LEISURE

MS 500 Nations CD	£19
MS Ancient Lands CD	£19
MS Arcade Win v1	£10
MS Autoroute Express CD	£38
MS Autoroute Express UK & Ireland v4 CD	£41
MS Autoroute Express UK & Ireland 3.5"	£31
MS Autoroute Express Europe CD	£45
MS Autoroute Express Europe 3.5"	£35
MS MS Bookshelf Win '95	£39
MS Beethoven Win CD	£19
MS Best of Entertainment Windows	£10
MS Cinemania '95 Win CD	£27
MS Creative Writer Win	£19
MS Dangerous Creatures CD	£19
MS Dinosaurs Win CD	£19

## MS Dogs CD

MS Dogs CD	£19
MS Encarta '95 Win CD	£55
MS Explorapedia	£19
MS Fine Artist v1 Win CD	£19
MS Fine Artist v1 Win	£24
MS Flight Sim v5.1	£25
MS G Wilson Haunted House Win	£19
MS Golf v2 Win	£19
MS Golf v2 Win CD	£19
MS Golf ADD-ON Mauna Kea	£10
MS Golf ADD-ON Pinehurst	£10
MS Golf ADD-ON Banff	£10
MS Magic BUS - Human Body	£27
MS Magic BUS - Solar System	£27
MS Mozart Win CD	£19
MS Musical Instruments	£19
MS Multimedia Viewer v2 CD	£185
MS National Art Gallery Win CD	£28
MS Scenes Sierra Club	£14
MS Scenes Outer Space	£14
MS Scenes Impressionist	£14
MS Schubert	£19
MS Sound Bits MGM Win	£14
MS Sound Bits World Win	£14
MS Sound Bits Hanna Barbara Win	£14
MS Space Simulator DOS	£24
MS Strauss CD	£19
MS Stravinski CD	£19
MS Wine Guide	£29
MS Oceans	£19
How the Leopard got its spots	£25

"This is what I have to offer"

- 1 Lowest Prices with Full Service
- 2 Part of Multimillion Pound Computer Group
- 3 Over 150,000 Satisfied Customers
- 4 Quality Leading Brand Products Only
- 5 Friendly Helpful Sales Staff
- 6 Huge Stocks, Ready To Ship
- 7 Minimum of 12 Months Guarantee
- 8 Comprehensive After-Sales Service
- 9 FREE Hardware Technical Support Line
- 10 The Best Value in the UK

Sales lines are open Mon-Fri 9am until 5:30 pm

Order Hotline

01282

777

888

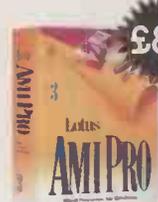
FAX 01282 777 209

# LOTUS



£219

Lotus 123 v5



£81

Lotus Ami Pro v3.1



£79

Lotus Organizer v2



£258

Lotus Freelance v2.1



£155

Lotus SmartSuite 3.1 special price for users of any Lotus product

## Lotus 1-2-3 Upg & Approach

Lotus 1-2-3 v2.4 DOS	£234
Lotus 1-2-3 v4 DOS	£267
Lotus 1-2-3 Rel 5	£219
Ami Pro v2 for Windows	£29
Ami Pro v3.1	£81
Approach v3 for Windows	£81
Freelance v4 DOS	£219
Freelance v2.1	£258
Improv for Windows	£86
Organizer v2	£79

## Lotus Write v2

Lotus Write v2	£41
SmartPics clipart	£84
SmartSuite 3.1 Upgrade	£155
SmartSuite 3.1	£275
SmartSuite bundles	£90A
Notes Starter Pack	£599
ScreenCam v1.1	£49
NoteSuite v3.2	£665
NoteSuite Starter Pack	£585
NoteSuite v3.2 Express	£133
SmartSuite	£96
Word Pro	£96

### \*MPC PRICE GUARANTEE

Due to our huge buying power, our advertised prices are normally the lowest in the UK. If you find a lower advertised price on any current ex. stock product which is confirmed to be genuine, we will beat that price. This guarantee applies to our advertised prices and excludes clearance products sold below cost.

# NOVELL



£115

PerfectOffice PerfectOffice Upgrade



£163

WordPerfect WordPerfect



£145

Quattro Pro Quattro Pro v6

## Netware

Novell Personal Netware	£43
Netware 3.12 5usr	£385
Netware 3.12 10usr	£905
Netware 4.1 5usr CD	£415
Netware 4.1 10user CD	£946

## Office products

Perfect Office Professional CD or 3.5"	£349
Perfect Office Std	£155
Perfect Office Upg	£115
Perfect Office CU	£155
Perfect Office Prof upgrade CD	£179
Perfect Office Prof upgrade 3.5	£189

## Presentations DOS 3.5

Presentations DOS 3.5	£214
Presentations comp Upgrade DOS	£99
Presentations Win v2	£165
Presentations comp Upgrade Win	£99
WordPerfect 6 for DOS	£210
WordPerfect 6 DOS Upg	£73
WordPerfect 6 DOS Como Upg	£105
WordPerfect 6.1 for Win	£159
WordPerfect 6.1 Win Upg	£62
WordPerfect 6.1 Win Com Upg	£85
Quattro Pro for Win v5	£29
Quattro Pro for Win v6	£145

## Presentations Presentation

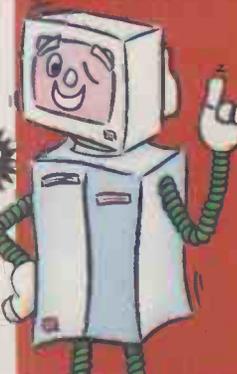
Presentations Presentation	£165
----------------------------	------

## Presentations Presentation

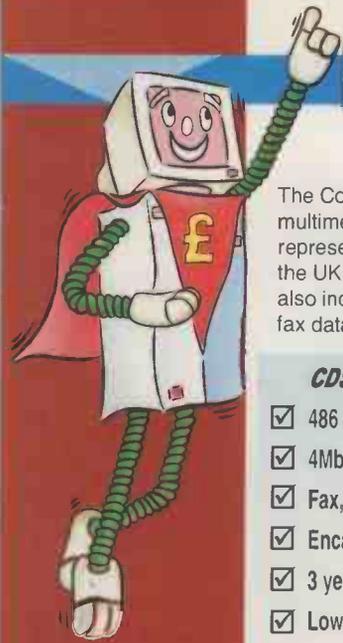
Presentations Presentation	£57
----------------------------	-----

## InfoCentral

InfoCentral	£145
-------------	------



# Mr PC



# COMPAQ PRESARIO

## Multimedia Systems

The Compaq Presario multimedia systems represent the best value in the UK. All these systems also include a full feature fax data and voice modem.

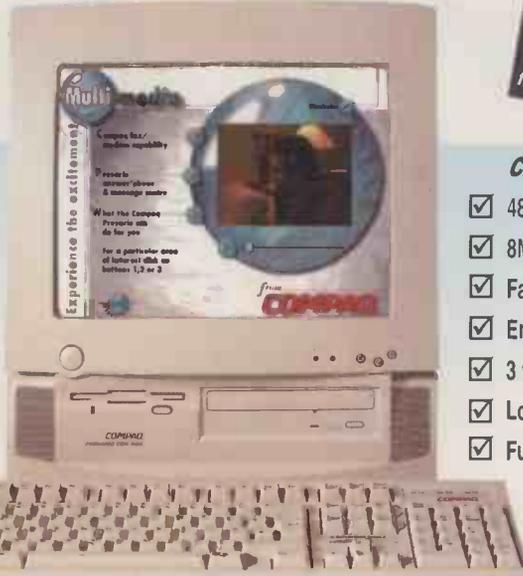
Windows 95 upgrade  
**FREE**  
from Compaq

### CDS 520

- 486 SX2-66 processor
- 4Mb RAM
- Fax, data & voice modem
- Encarta S/W Bundle
- 3 year warranty
- Lowest price in UK
- Full feature multimedia

### CDS Special

- 486 DX4-100 processor
- 8Mb RAM
- Fax, data & voice modem
- Encarta S/W Bundle
- 3 year warranty
- Lowest price in UK
- Full feature multimedia



**"Lowest Prices in the UK"**  
\*see my price guarantee

### The Benefits of Buying Compaq CDS Models from Mr PC

- World's No. 1 PC manufacturer
- Exceptional quality
- 3 Year Compaq warranty
- Fast 486 processors
- Large 420 hard disk
- Built-in multimedia
- High quality 16-bit sound
- Double speed CD-ROM
- Full-Feature fax machine
- Automatic answering machine
- Powerful data modem
- Links to CompuServe
- Excellent Microsoft software
- Wide range to choose from
- Best prices in UK

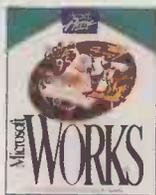
Terms & conditions  
All prices are subject to VAT (17.5%) and Delivery and may change without notice. Goods are normally delivered within a few days of cleared payment. All orders will be fulfilled within 28 days unless otherwise notified. No surcharges are made to Access, Visa, Amex or Switch. Goods are not supplied on a trial basis. Credit account orders are normally 3% extra. Errors and omissions exempted. Business user prices shown. End user enquiries welcome.

### PRESARIO MODEL CDS 520

- 486SX2-66 processor
- 4Mb or 8Mb RAM expandable to 64Mb
- 420Mb hard disk
- 3.5" 1.44Mb floppy drive
- Local bus SVGA graphics
- Compact 3 bay case with 2 expansion slots serial parallel, joystick, MIDI and mouse ports
- 14" Integral low radiation NI SVGA colour screen
- 16-bit stereo sound card, microphone and speakers
- Integrated 9600/2400 fax/data modem with telephone answering and CompuServe
- Double speed multisession CD-ROM drive
- MS DOS 6.2, Windows 3.1 (Free Windows 95 upgrade), TabWorks, Welcome Centre, Control Centre and Learning Centre
- Microsoft Works v3, MS Money and MS Entertainment pack
- Microsoft Encarta® '95 CD and The Ultimate Human Body
- 3 year Compaq warranty

### PRESARIO MODEL CDS SPECIAL

- 486DX4-100 processor
- 8Mb RAM expandable to 64Mb
- 420Mb hard disk
- 3.5" 1.44Mb floppy drive
- Local bus SVGA graphics
- Compact 3 bay case with 2 expansion slots serial parallel, joystick, MIDI and mouse ports
- 14" Integral low radiation NI SVGA colour screen
- 16-bit stereo sound card, microphone and speakers
- Double speed multisession CD-ROM drive
- Integrated 9600/2400 fax/data modem with telephone answering and CompuServe
- MSDOS 6.2, Windows 3.1 (Free Windows 95 upgrade), Tabworks, Welcome Centre, Control Centre and Learning Centre
- Microsoft Works v3, MS Money and MS Entertainment Pack
- Microsoft Encarta '95 CD & The Ultimate Human Body CD
- 3 year Compaq warranty



Microsoft Works



Microsoft Money



Entertainment Pack



Encarta '95 CD



Ultimate Human Body

### CDS 520

486SX2-66, 420 / 4Mb multimedia and modem

# £699

Plus VAT

8Mb model.....£799

### CDS 524

486DX4-100, 420 / 8Mb multimedia and modem

# £899

Plus VAT

#### \*MR PC PRICE GUARANTEE

Due to our huge buying power, our advertised prices are normally the lowest in the UK. If you find a lower advertised price on any current ex-stock product which is confirmed to be genuine, we will beat that price. This guarantee applies to our advertised prices and excludes clearance products sold below cost.

"Buy with confidence"

- 1 Lowest Prices with Full Service
- 2 Part of Multi-Million Computer Group Over 100,000 Satisfied Customers
- 3 Quality Leading Brand Products Only
- 4 Friendly Helpful Sales Staff
- 5 Huge Stocks, Ready To Ship
- 6 Minimum of 12 Months Guarantee
- 7 Comprehensive After-Sales Service
- 8 FREE Hardware Technical Support Line
- 10 The Best Value in the UK

Sales lines are open  
Mon- Fri  
9am until  
5:30 pm

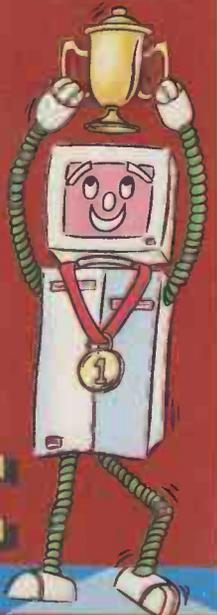
Order  
Hotline

# 01282

# 777

# 888

FAX  
01282  
777209



# MrPC

BLACKBURN ROAD, SIMONSTONE, BURNLEY BB12 7GT

MrPCDD1D

Mr PC is a division of Corporate Systems Ltd



# Omega



## CD Business Systems

**Omega  
Tailor-Made  
CD Business  
Systems**

Specify your own configuration by using this 5 stage process:

1. Select the Processor Base System.  
(Includes 1.44Mb floppy, 4Mb or 8Mb RAM, local bus graphics, IDE controller, standard ports, Desktop 4 bay case and keyboard)

486DX2-66 4Mb .....£299  
486DX4-100 4Mb .....£319  
Pentium® 75 8Mb .....£519  
Pentium® 90 8Mb .....£599  
Pentium® 100 8Mb .....£679

2. Select the IDE Hard Disk.

540Mb .....£100  
850Mb .....£130  
1.08Gb .....£180  
1.6Gb .....£280

3. Select the Screen.

14" SVGA colour .....£120  
14" SVGA NI .....£160  
15" SVGA NI .....£230  
17" SVGA NI .....£440

4. Select the CD / Multimedia Options.

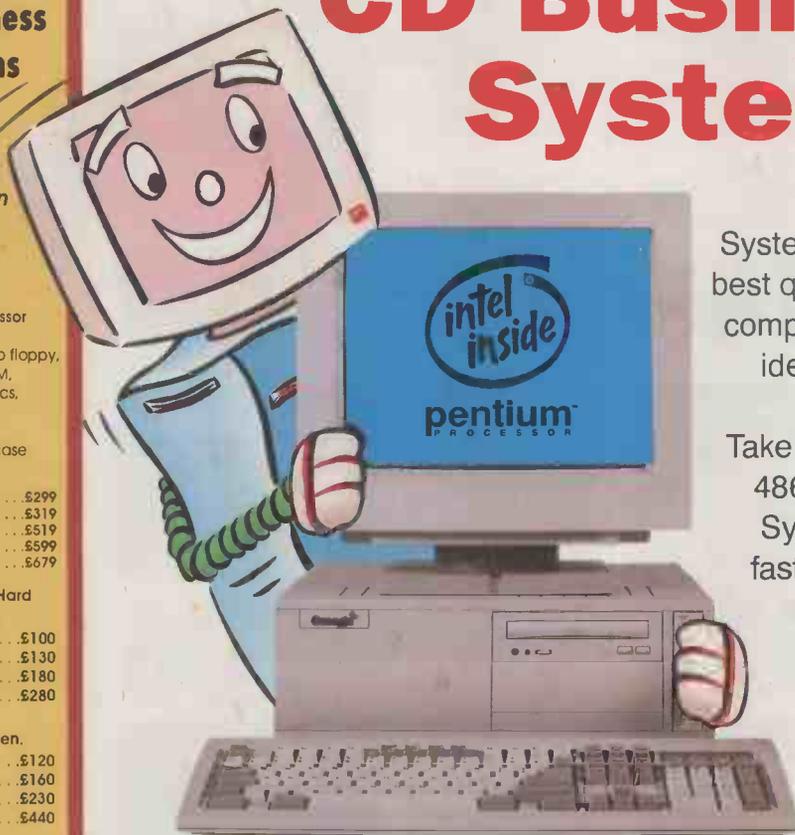
Double speed CD-ROM drive alone .....£40  
Double speed CD-ROM Plus 16-bit sound card & speakers .....£80  
Quad speed CD-ROM drive alone .....£100  
Quad speed CD-ROM drive plus 16-bit sound card & speakers .....£140

5. Additional Options.

DOS 7 & OS/2 Warp .....£Call  
Windows '95 .....£Call  
DOS & Windows 3.11 for Workgroups .....£Call  
486 models with 256K cache .....£40  
RAM upgrade per 4Mb .....£100  
486 video RAM upgrade to 2Mb .....£35  
Pentium® video RAM upgrade to 2Mb .....£40  
350Mb tape streamer .....£90  
800Mb tape streamer .....£150  
3.2Gb Iomega tape streamer .....£220  
Tape cartridge .....£Call  
9624 data/fax modem .....£35  
14.4 data/fax modem .....£80  
28.8 data/fax modem .....£159  
PC joystick .....£10  
16-bit sound card .....£30  
Twin stereo speakers .....£10  
Standard mouse .....£9  
Deluxe Mouse .....£19

Options 2-5 can only be purchased with a PC system.

APPROVED connection to telecommunication services specified in the instructions for use, subject to the conditions set out in them.



"Omega CD Business Systems come fitted with the best quality high specification components and provide the ideal hardware for all your business needs.

Take a look at the 'Best Buy' 486DX4-100 CD Business System which comes with fast 850Mb hard disk, 8Mb RAM, 100MHz 486DX4 processor, quad speed CD-ROM drive and a superb SVGA colour screen for just £769 +VAT!"

Sales lines are open  
Mon-Fri  
9:00 am  
until  
5:30 pm

**Order  
Hotline**

**01282  
777  
888**

**FAX  
01282  
777209**

### 486DX2-66 CD Business System

- 486DX2-66 processor
- 4Mb RAM expandable to 64Mb
- 540Mb hard disk
- Double speed CD-ROM drive
- 3.5" 1.44Mb floppy drive
- 32-bit VESA graphics
- 14" SVGA colour screen
- Parallel and 2 serial ports
- 102 keyboard
- 12 month warranty extendable to 3 years

**£569**

+ VAT

With 8Mb RAM and 540Mb disk .....£669

### 486DX4-100 CD Business System

- 486DX4-100 processor
- 8Mb RAM expandable to 64Mb
- 540Mb hard disk
- Double speed CD-ROM drive
- 3.5" 1.44Mb floppy drive
- 32-bit VESA graphics
- 14" SVGA colour screen
- Parallel and 2 serial ports
- 102 keyboard
- 12 month warranty extendable to 3 years

**£689**

+ VAT

With quad speed CD and 850Mb disk .....£769

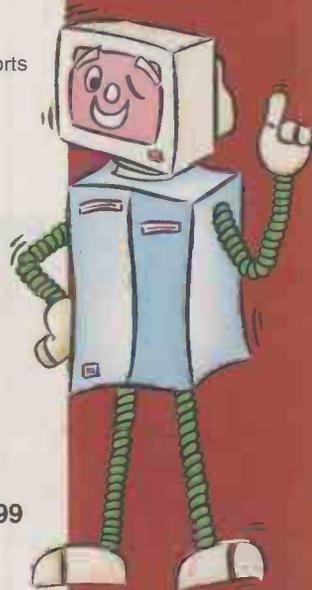
### 75MHz Pentium® CD Business System

- Intel® 75MHz Pentium® processor
- 8Mb RAM
- 540Mb enhanced IDE hard disk with 256K hard drive cache
- Double speed CD-ROM drive
- PCI 64-bit graphics with 1Mb video RAM
- 14" SVGA colour screen
- 3.5" 1.44Mb floppy drive
- Parallel and 2 fast serial ports
- 102 keyboard
- 12 month warranty extendable to 3 years

**£789**

+ VAT

P90 model with 850Mb hard disk .....£899



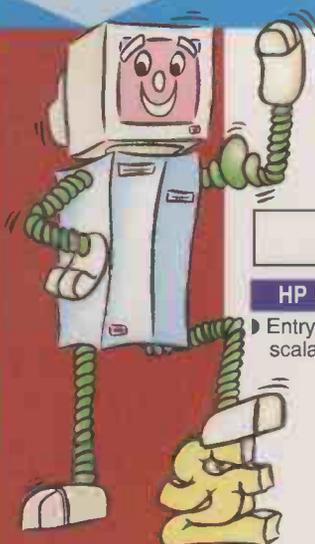
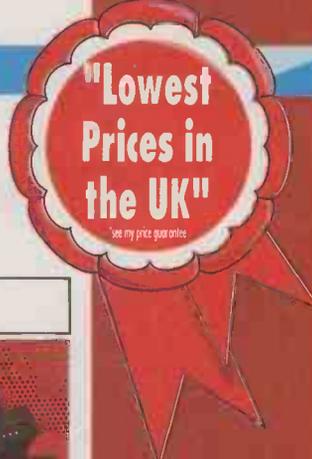
Terms & conditions: All prices are subject to VAT (17.5%) and delivery costs (£19 + VAT) and may change without notice. Goods are normally delivered within few days of cleared payment. All orders will be fulfilled within 28 days unless otherwise notified. No surcharges are made to Access, Visa, Amex or Switch. Goods are not supplied on a trial basis. Credit account orders are normally 3% extra. Errors and omissions exempted. Business user prices shown. End user enquiries welcome. The Intel Inside and Pentium Processor Logos are trademarks of Intel Corporation. E&OE

**MrPC**

BLACKBURN ROAD, SIMONSTONE, BURNLEY BB12 7GT  
TELEPHONE 01282 777 888 FAX 01282 777 209

Mr PC is a division of Corporate Systems Ltd.

# HEWLETT-PACKARD



**"Our HP prices are the best in the UK"**

\*see my price guarantee

## HEWLETT-PACKARD BEST SELLERS

- 1 HP DeskJet 850C.....£330
- 2 HP DeskJet 660C.....£273
- 3 HP DeskJet 340.....£169
- 4 HP DeskJet 1200C.....£625
- 5 HP LaserJet 4+.....£977
- 6 HP LaserJet 5MP.....£719
- 7 HP LaserJet 4M+.....£1294
- 8 HP LaserJet 4Si.....£2054

**Terms & conditions**  
All prices are subject to VAT (17.5%) and delivery and may change without notice. Goods are normally delivered within a few days of cleared payment. All orders will be fulfilled within 28 days unless otherwise notified. No surcharges are made to Access, Visa, Amex or Switch. Goods are not supplied on a trial basis. Credit account orders are normally 3% extra. Errors and omissions exempted. Business user prices shown. End user enquiries welcome.



MrPC is a division of Corporate Systems Ltd

## HP LASERJET

### HP LASERJET 5L

- ▶ Entry level with 26 scalable fonts
- ▶ Prints upto 4PPM
- ▶ 300 DPI
- ▶ 1Mb RAM
- ▶ Max 8000 page per month



**£349**

### HP LASERJET 5P

- ▶ Entry level with 45 scalable fonts
- ▶ Prints upto 4 PPM
- ▶ 600 DPI
- ▶ 2Mb RAM



**£574**

### HP LASERJET 5MP

- ▶ As above with Postscript & 6Mb RAM ..... £719

### HP LASERJET 4 +

- ▶ Ideal for business with 35 scalable fonts
- ▶ Prints upto 12 PPM
- ▶ 600 DPI
- ▶ 2Mb RAM



**£977**

### HP LASERJET 4M PLUS

- ▶ As above with Postscript & 6Mb RAM .....£1294

### HP LASERJET 4V

- ▶ The new network printer that offers A4/A3 paper size printing
- ▶ Prints upto 16 PPM
- ▶ 600 DPI
- ▶ 4Mb RAM



**£1364**

### HP LASERJET 4M V

- ▶ As above with built-in network interface...£1967

### HP LASERJET 4Si

- ▶ High speed with 45 scalable fonts
- ▶ Prints up to 16 PPM
- ▶ 600 DPI
- ▶ 2Mb RAM
- ▶ Network printer



**£2054**

### HP LASERJET 4Si MX

- ▶ As above with PostScript & 10Mb RAM ...£2925

### \*MrPC PRICE GUARANTEE

Due to our huge buying power, our advertised prices are normally the lowest in the UK. If you find a lower advertised price on any current ex. stock product which is confirmed to be genuine, we will beat that price. This guarantee applies to our advertised prices and excludes clearance products sold below cost.

## HP DESKJET

### HP DESKJET 340

- ▶ Superb portable with optional auto sheet feed & colour kit
- ▶ Prints up to 3 PPM
- ▶ 600 x 600 DPI
- ▶ 6 built-in fonts



**£169**

### Options

- ▶ Sheet feeder.....£49
- ▶ Colour kit .....£38
- HP 340 + Sheetfeeder...£180

### HP DESKJET 600

- ▶ Standard DeskJet for affordable, high quality business printing
- ▶ 14 scalable fonts
- ▶ 16Kb buffer
- ▶ Prints up to 3PPM
- ▶ 600 x 600 DPI
- ▶ Built-in sheet feeder
- ▶ 3 year warranty



**£206**

### HP DESKJET 660C

- ▶ Colour DeskJet with simple operation and exceptional quality output
- ▶ 80Kb buffer
- ▶ Prints up to 4 PPM
- ▶ 600 x 300 DPI
- ▶ 6 built-in typefaces
- ▶ Built-in sheet feeder
- ▶ 3 year warranty



**£273**

HP DeskJet 850C.....£330

### OFFICEJET LX

The OfficeJet combines printer, fax, PC fax, copier and scanner in one neat stylish package which is absolutely ideal for the small business or home office.



**£459**

HP DeskJet 1600C.....£822

HP DeskJet 1600CPS.....£1225

### HP SUPPORT PACK

- ▶ 3 year on-site maintenance
- ▶ Removes the trouble of arranging repairs
- ▶ Makes service support a fixed, known cost
- ▶ Prompt service when you need help
- ▶ Excellent value for money, no hidden costs
- ▶ Direct phone number for service



Prices vary with printer **CALL** for details

# MrPC

MrPC/PSA

BLACKBURN ROAD, SIMONSTONE, BURNLEY BB12 7GT  
TELEPHONE 01282 777 888 FAX 01282 777 209

Sales lines are open Mon-Fri 9am until 5:30 pm

**Order Hotline**

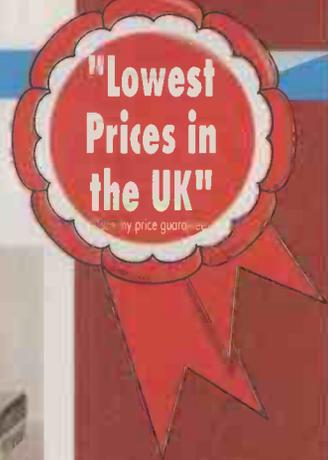
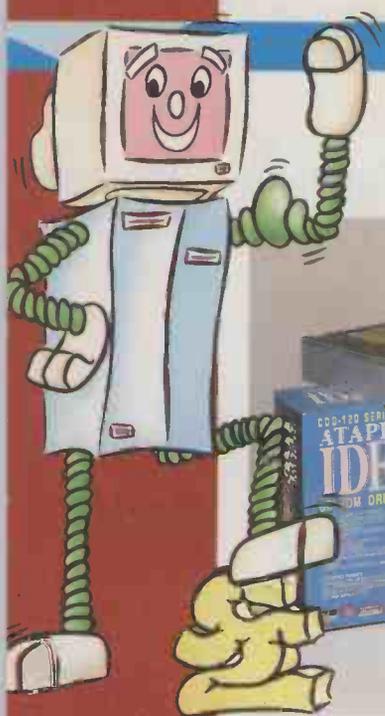
**01282  
777  
888**

**FAX  
01282  
777209**

*"Please call me for the latest prices"*



# Multimedia



Sales lines are open  
Mon-Fri  
9am  
until  
5:30 pm



"I will beat any price"

See my price guarantee

- Multimedia Options**
- Joystick.....£19
  - win Stereo Speakers.....£17
  - Microphone.....£9
  - Midi Cables.....£18
  - Room 2 CD.....£32
  - Under a Killing Moon CD...£34
  - Myst CD.....£31
  - Theme Park CD.....£24
  - Little Big Adventure CD.....£28
  - Viking Commander III CD...£34
  - Magic Carpet CD.....£28
  - EZ Language CD.....£19
  - World Atlas CD.....£19
  - Shareware CD.....£19

Terms & conditions  
prices are subject to  
VAT (17.5%) and delivery  
and may change without  
notice. Goods are  
normally delivered within  
a few days of cleared  
payment. All orders will  
be fulfilled within 28 days  
unless otherwise notified.  
No surcharges are  
made to Access, Visa,  
Amex or Switch. Goods  
are not supplied on a trial  
basis. Credit account  
orders are normally 3%  
extra. Errors and omissions  
excepted. Business user  
prices shown. End user  
inquiries welcome.

## CD-ROM DRIVES

The very latest high performance CD-ROM drive with IDE interface enabling you to connect directly to your hard drive cable

### DOUBLE SPEED

- Double speed with 250ms access time
- Compatible with all sound cards
- MPC 2 standard, multi-session Photo CD compatible
- Video CD, CD-i, CD-XA compatible with MPEG full motion Video Playback
- Easy to use with motorised tray loading No caddy needed
- IDE Atapi interface allows connection straight to your hard drive cable. No controller card needed and no expansion slot wasted!
- Easy to use front panel for CD-audio control
- Play music CD's instantly with random play and audio scan facility
- Includes audio cable to connect to sound card

**CD-ROM  
DOUBLE SPEED**  
**£49**

### QUAD SPEED

- Similar specification as IDE drive but with quad speed

**CD-ROM  
QUAD SPEED**  
**£99**

## 16-BIT SOUND CARD

An excellent high specification 16-bit sound card with all the features you need. At just £49 this is truly the UK's best buy in sound cards!

- True 16-bit technology with high fidelity stereo sound
- Compatible with SoundBlaster, Roland, General Midi, Windows Sound System, Ad-lib and other sound standards
- Wavetable hardware upgrade option-module simply attaches on
- Stereo sampling 4 to 44.1KHz, Yamaha OPL3 20 voice synthesizer, 8 Watt power amplifier, 4-operator FM synthesis with 16-bit FM DAC
- Easy installation with auto configuration and software selectable DMA & IRQ settings
- Built-in CD-ROM interfaces for Panasonic, Mitsumi, Sony and IDE (usually not required with IDE drives as drive connects directly to hard drive cable)
- Connectors for line-in, line-out, stereo speakers, microphone, CD-audio and Wavetable daughter board
- Built-in Midi/ PC joystick interface

**16-BIT  
SOUND CARD**  
**£49**

Order  
Hotline

01282  
777  
888

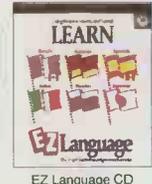
FAX  
01282  
777209

## MULTIMEDIA KITS

- Double speed or Quad speed CD-ROM Drive
- CD Audio cables
- 16-bit high performance sound card
- Twin stereo speaker system
- PC joystick
- Shareware CD
- EZ Language CD
- World Atlas CD

**MM KIT 1  
DOUBLE SPEED**  
**£109**

**MM KIT 2  
QUAD SPEED**  
**£159**



EZ Language CD

Shareware CD

World Atlas CD

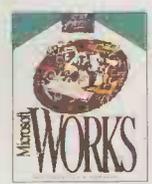
## MULTIMEDIA KITS WITH Microsoft

- Double speed or Quad speed CD-ROM drive
- CD Audio cables
- 16-bit high performance sound card
- Twin stereo speaker system
- PC joystick

- Microsoft Encarta '95 CD
- Microsoft Works CD
- Microsoft Golf CD
- Microsoft Dangerous Creatures CD
- Microsoft Beethoven CD

**MM KIT 3  
DOUBLE SPEED**  
**£149**

**MM KIT 4  
QUAD SPEED**  
**£199**



Encarta '95 CD

Works CD

Golf CD

Beethoven CD

Dangerous Creatures



**\*MPC PRICE GUARANTEE**  
Due to our huge buying power, our advertised prices are normally the lowest in the UK. If you find a lower advertised price on any current ex-stock product which is confirmed to be genuine, we will beat that price. This guarantee applies to our advertised prices and excludes clearance products sold below cost.

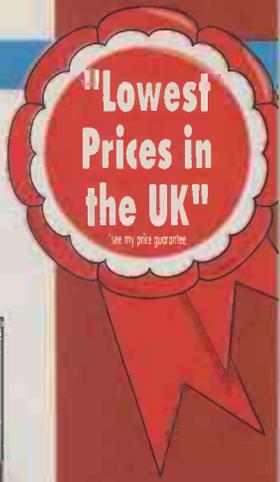
MPCMM1D

# Mr PC

BLACKBURN ROAD, SIMONSTONE, BURNLEY BB12 7GT  
TELEPHONE 01282 777 888 FAX 01282 777 209



# Microsoft®



## Upgrade to Microsoft®

### Windows® 95

# £49

Buy any CD-ROM or multimedia kit from MrPC and pay only £49. If purchased separately £59

Microsoft Windows makes everything you do with your computer faster and easier.

- Save time with an easier-to-use interface; long filenames; and one-click access to all of your programmes and documents with the Start button.
- 32-bit, multitasking lets you run multiple programmes or perform multiple tasks simultaneously.
- See our main advertisement for details of Microsoft Windows 95 keyboard and mouse

Sales lines are open  
Mon-Fri  
9:00 am  
until  
5:30 pm

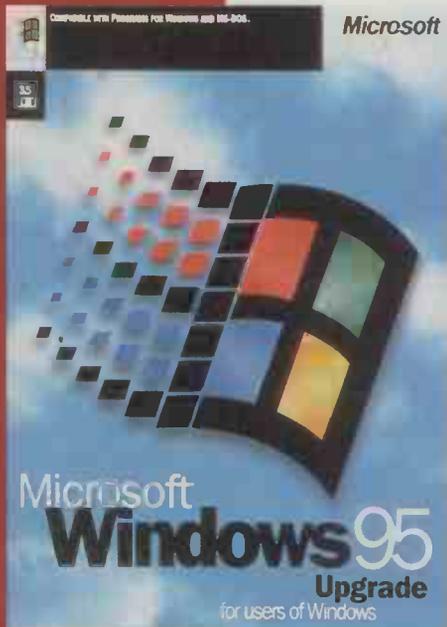
Order  
Hotline

01282

777

888

FAX  
01282  
777209



"My  
Windows®  
95 prices  
are the  
lowest in  
the UK"

\*see my price guarantee

#### Introducing Microsoft Plus!

A companion for the Windows 95 operating system, Microsoft Plus! adds space and style to your PC.



£26

#### Microsoft Access for Windows 95

Provides all levels of users the flexibility to manage, locate, and share information easily.



CCP £82

Trade Up . . . £107

#### Microsoft Schedule+ for Windows 95

With Microsoft Schedule+ for Windows 95, manage calendars, tasks, and contacts for yourself or share them within workgroups.



£66

#### Microsoft PowerPoint for Windows 95

Powerpoint presentation graphics programme for Windows 95 adapt to your needs, so you can create a professional-looking presentations



CCP £82

Trade Up . . . £107

#### Microsoft Word for Windows 95

Microsoft Word for Windows 95 helps make everyday writing tasks more automatic and complex tasks simple.

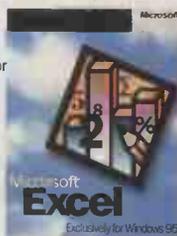


CCP £82

Trade Up . . . £107

#### Microsoft Excel for Windows 95

Microsoft Excel for the Windows 95 operating system was designed based on your needs. Whether you're working on a simple summary, charting sales trends, or performing advanced analysis.



CCP £82

Trade Up . . . £107

#### Microsoft Works for Windows 95

Provides the all of the tools you need, a word processor, spreadsheet, database, drawing and communication tools, to make everyday computing tasks easier.



£55

#### Microsoft Office

Microsoft Office Standard for Windows 95, you get these full-featured programmes; Microsoft Excel, Word, the Powerpoint® presentation graphics programme, and a new addition - Microsoft Schedule+. In Microsoft Office Professional, you get all these plus Microsoft Access. All available on CD or 3.5" floppy.



CCP £139

Trade Up . . . £162



CCP £204

Trade Up . . . £245



Terms & conditions: All prices are subject to VAT (17.5%) and delivery costs (£19 + VAT) and may change without notice. Goods are normally delivered within few days of cleared payment. All orders will be fulfilled within 28 days unless otherwise notified. No surcharges are made to Access, Visa, Amex or Switch. Goods are not supplied on a trial basis. Credit account orders are normally 3% extra. Errors and omissions exempted. Business user prices shown. End user enquiries welcome. The Intel Inside and Pentium Processor Logos are trademarks of Intel Corporation

#### \*MR PC PRICE GUARANTEE

Due to our huge buying power, our advertised prices are normally the lowest in the UK. If you find a lower advertised price on any current ex. stock product which is confirmed to be genuine, we will beat that price. This guarantee applies to our advertised prices and excludes clearance products sold below cost.

All prices quoted are for CCP upgrade. A CCP is a Compliance checking program that can be used to upgrade from Microsoft Works, Word, Access & Excel

# MrPC

MRPCMW1B

MrPC is a division of Corporate Systems Ltd.

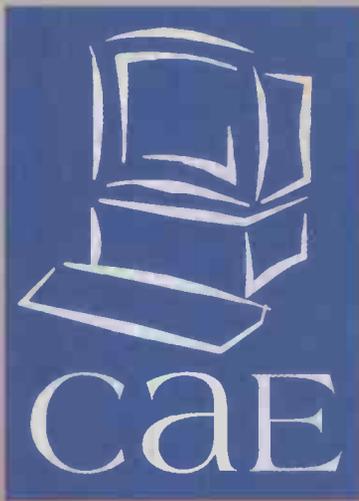
BLACKBURN ROAD, SIMONSTONE, BURNLEY BB12 7GT  
TELEPHONE 01282 777 888 FAX 01282 777 209



## HP VECTRA V-LINE PC's

HP Vectra VE 4/50	4Mb	M270	£722
HP Vectra VE 4/50	8Mb	M420	£905
HP Vectra VE 4/66	8Mb	M420	£934
HP Vectra VE 4/66	8Mb	M840	£1017
HP Vectra VE 4/100	8Mb	M420	£1099
HP Vectra VE 4/100	8Mb	M840	£1184
HP Vectra VE 5/75	8Mb	M270	£1048
HP Vectra VE 5/75	8Mb	M540	£1108
HP Vectra VE 5/90	8Mb	M270	£1237
HP Vectra VE 5/90	8Mb	M540	£1297
HP Vectra VL 5/75	8Mb	M420	£1187
HP Vectra VL 5/75	8Mb	M840	£1270
HP Vectra VL 5/90	8Mb	M420	£1376
HP Vectra VL 5/90	8Mb	M840	£1459
HP Vectra VL 5/100	8Mb	M420	£1489
HP Vectra VL 5/120	8Mb	M840	£1840

All HP Vectras come as standard with a 3 Year warranty (1st year on site)  
Upgradeable to 3 years on site using HP Support Pack (£115)



## HP OMNIBOOKS

600C 4/50	4Mb	M170	£1323
600C 4/50	4Mb	M260	£1429
600C 4/75	8Mb	M170	£1626
600C 4/75	8Mb	M260	£1728
4000C 4/50	4Mb	M260	£1500
4000C 4/50	8Mb	M340	£1576
4000C 4/50	8Mb	M520	£1788
4000CT 4/75	8Mb	M340	£2090
4000CT 4/75	8Mb	M520	£2242
4000C 4/100	8Mb	M340	£1980
4000C 4/100	8Mb	M520	£2132
4000CT 4/100	8Mb	M810	£2646

## HP MONITORS



HP 14" SVGA 1024i	£195
HP 14" SVGA 1024i	£209
HP 15"	£383
HP 17"	£604
HP 21"	£1470



## HP DESKJET PRINTERS



HP DeskJet 850C	£408
HP DeskJet 660C	£306
HP DeskJet 540	£220
HP DeskJet 320	£175

## HP LASERJET PRINTERS

HP LaserJet Printer 4L	£370
HP LaserJet Printer 5P	£605
HP LaserJet Printer 5MP	£755
HP LaserJet Printer 4 PLUS	£1025
HP LaserJet Printer 4M PLUS	£1360
HP LaserJet Printer 4V	£1435
HP LaserJet Printer 4MV	£2079
HP LaserJet Printer 4Si	£2192
HP LaserJet Printer 4Si MX	£3099



## HP MULTIMEDIA PC's

HP Vectra L2 4/100	8Mb	M540	£1392
HP Vectra M2 4/66i	8Mb	M540	£1339

## HP CD-ROM DRIVES

HP Multimedia Kit	£317
HP CD ROM Double Speed IDE	£137
HP CD ROM Double Speed SCSI-2	£183

## HP MEMORY

### HP VECTRA VL2, VE & VL SERIES 3

D2690A	4Mb	Memory	£119
D2691A	8Mb	Memory	£245
D2974A	4Mb	Memory	£125
D2975A	8Mb	Memory	£255
D2297A	16Mb	Memory	£495
D2298A	32Mb	Memory	£975

### HP NETSERVER LC, LF & LM SERIES

D2974A	4Mb	Memory	£119
D2975A	8Mb	Memory	£245



01923 210923



01923 210305

D2297A	16Mb	Memory	£495
D2298A	32Mb	Memory	£975

### HP NETSERVER LH SERIES

D3597A	4Mb	Memory	£295
D3592A	8Mb	Memory	£565
D3593A	16Mb	Memory	£1095

Memory also available for  
HP OMNIBOOK, DESKJET & LASERJET  
ranges

CAE OFFICE SYSTEMS  
VICTORIA HOUSE  
49 CLARENDON ROAD  
WATFORD, HERTS, WD1 1HP

PLEASE CALL FOR OTHER  
MANUFACTURERS PRICES  
AND FULL RANGE OF  
CONSUMABLES

Access



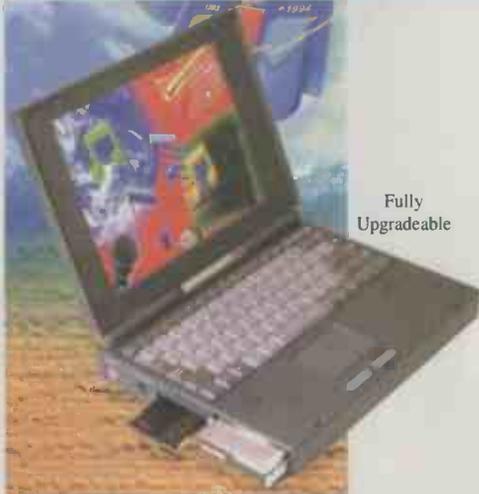
ALL PRICES EXCLUDE  
VAT & DELIVERY.  
PRICES AND  
SPECIFICATIONS SUBJECT TO  
CHANGE WITHOUT NOTICE. E&OE





# and we'd spoil you!

## OPTI PENTIUM 753 CD



Fully Upgradeable

- 75MHz Pentium® processor (Upgradeable)
- Built in CD ROM Drive
- Touch pad or Trackball
- Opti Viper Chipset
- Hard disk - 520Mb fast HDD
- 8Mb RAM (upgradeable 40Mb)
- 1Mb SVGA fast graphics
- Large Dual scan 11.3 screen (optional TFT)
- 16 bit soundcard on-board
- PCMCIA slots 11/111
- TV/Video output (composite)
- MPEG 1 decoder
- Nimh or Lithium Ion battery



**CHOICE PRICE**  
**£2149**  
*Excludes V.A.T & Delivery.*



Lease from as little as  
**£13**  
per week

	11.3 Quad scan	11.4 TFT colour
Intel P75	£2149	£2799
Intel P90	£2249	£2899
Intel P100	£2375	£3015

## OPTI 741 PLATINUM

- i 486DX2/66.
- Touch pad or Trackball
- 340Mb HDD.
- 4Mb RAM, 3.5 FDD.
- 1Mb VESA 32 BIT graphics.
- Dual scan system.
- Built in 16 bit Soundcard.
- 2 type 2 PCMCIA slots or 1 type 3.
- Trackball. • Carry bag.
- 2 year Opti warranty.

Lease from as little as  
**£6**  
per week



Windows 95 ready. License required.

**CHOICE PRICE**  
**£999**  
*Excludes V.A.T & Delivery.*

	Mono	DL STN	TFT
486DX2/66	£999	£1350	£1875
486DX4/75	£1049	£1399	£1925
486DX4/100	£1100	£1450	£1975

## OPTI 1000™ ML

- New Cyrix 486 DX2/66 processor.
- 4Mb RAM.
- 340Mb HDD.
- Two PCMCIA type 2 or type one type 3.
- Dual scan mono screen.
- Trackball.

Lease from as little as  
**£5**  
per week



Windows 95 ready. License required.



**CHOICE PRICE**  
**£799**  
*Excludes V.A.T & Delivery.*

Enhanced power management Low power consumption

### SOFTWARE

- OS/Warp
- 32 Bit Lotus SmartSuite

**CHOICE PRICE**  
**£49**  
*Excludes V.A.T & Delivery.*

Min requirement 8Mb RAM. Pre-loaded software.

### NOTEBOOK OPTIONS



Multi-Media Option



14" Monitor Option

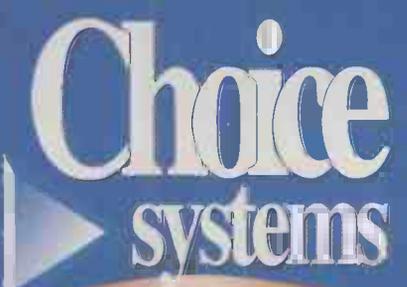


Docking Station

### PCMCIA & OTHER OPTIONS

- PCMCIA Quad speed CD-ROM (add) .....CALL
- PCMCIA Dual speed CD-ROM (add) .....£225
- Upgrade 8Mb (add) Platinum.....£155
- RAM upgrade 12Mb (add) Platinum.....£299
- RAM upgrade 20Mb (add) Platinum.....£650
- RAM upgrade Pantera.....CALL
- HDD upgrade to 1 Gb (add) Platinum/PanteraCALL
- New PCMCIA joystick card.....£49

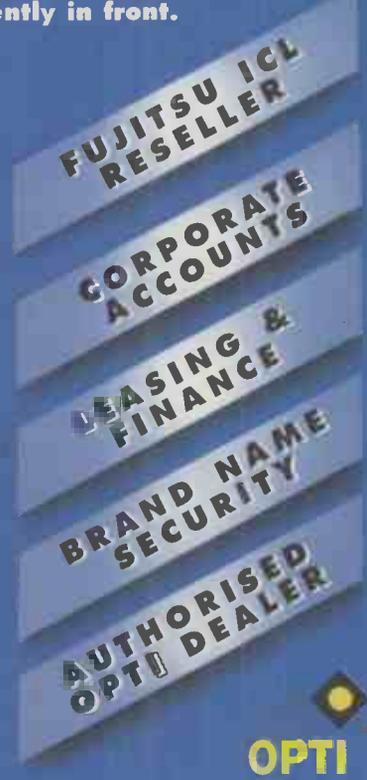
- Novell approved Docking station Platinum .....£349
- AC/DC adaptor (add).....£95
- Battery charger (add).....£79
- PCMCIA fax modem 14.4 (add).....£155
- PCMCIA Rapido 28.8 (add).....£225
- PCMCIA Ethernet adaptor (add).....£125
- PCMCIA SCSI 2 card (add).....£175
- 14"/15"/17" External monitors.....CALL



Established since 1986

The Choice customer charter is designed to guarantee that you have made an Ironclad quality purchase.

At Choice Systems we only sell "brand-name" systems & components with a proven track record for reliability & quality. It is this policy that has kept both us & our customers consistently in front.



Corporate, Government & Local Authorities orders welcome with purchase orders.

Opening times:  
Mon-Fri 9.30 - 6.00  
Sat: 10.00 - 4.00

Tel: 0181-993 9003

Facsimile: 0181-993 9936



Choice Systems Limited. Unit 1, Concord Business Centre Concord Road, Acton, London W3 0TJ

All prices exclude V.A.T. All prices are subject to change without prior notice. E&OE. All trademarks & registered Trade Marks are acknowledged. Choice Systems terms & conditions apply. Leasing & finance subject to status.

# STORAGE Solutions! SCSI Experts!

HEWLETT  
PACKARD

HEWLETT  
PACKARD

hp

HEWLETT  
PACKARD

hp

HEWLETT  
PACKARD

hp

## MONITORS

<b>SAMSUNG</b>	
14" COLOUR	£149
<b>SAMTRON</b>	
15" COLOR MONITOR	£215
<b>DEK</b>	
MF-8115 15"	EPOA
MF-8617A 17" Vision Master	
MF-8617B 17" Vision Master	
MF-9017E 17" Diamondtron	
MF-8221A 21" 1280x1280 FST	£1199
MF-9121 21" 1600x1280	£1285
<b>NOKIA</b>	
47M092 17" Trinitron 1280x1024 60Hz	£695
445M092 21" TCO 1600x1200 60Hz	£1345
445X092 21" TCO 1600x1200 80Hz	£1575
<b>SONY</b>	
15SF1 15" 0.25mm dp 1280x1024	
17-SF1 17" 0.25mm dp 1024x768	£595
17-SE1 17" 1600x1200 77Hz	£808
20SE1VT 20" 1280x1024	£1295
20SE1 20" 1600x1200	£1394
<b>PHILIPS</b>	
15C	
15A	£258
17A	£687
20T	£1238
21A	£179
<b>NEC</b>	
XV15" 0.28mm 1024x768	£274
XV17" 0.28mm 1024x768	£568
XP17" 0.28mm 1360X1024	£934
XE21" 0.28mm 1280x1024	£1334
XP21" 0.28mm 1280x1024	£1758

## IYAMA

## IDEK 17" Monitor



21"1600 X 1280 £1195

## £BEST

0.26 dot pitch 15.5"  
1280x1024 at 80 Hz  
135 MHz band width  
MPR II, TuV and  
ISO 9241/3

3 years warranty

## GRAPHICS CARDS

ARTIST HURCULES  
ORCHID DIAMOND  
TAXAN MATROX

## VIDEO CARDS

VIDEOLÓGIC CARDINAL

## NOKIA

447L090  
17" TRINITRON

£469

445X 21" £1420

## SONY

15" Trinitron  
15SF

£305

CDP 1730 £599

## MITSUBISHI

33" PRESENTATION  
DISPLAY

£2995

SHARP, 3 COM, SONY, PROXIMA  
PROFESSIONAL DISPLAY SYSTEMS

## LASER PRINTERS

UPTO  
**1200dpi**

<b>QMS</b>	
PS1060 A4 600X600 12MB	£1575
PS1660 A3 1200X600 12MB	£2890
<b>TEKTRONIX</b>	
PHASER 140	EPOA
PHASER 220c	EPOA
PHASER 220i	EPOA
PHASER 340 plus	EPOA
PHASER 440 dye sublimation	EPOA



<b>KYOCERA</b>	
FS-400	£395
FS-1550	£871
FS-1600	£1066
FS-3400	£1388
FS-3500	£2325
FS-3600	£1747
FS-5500	£3820
FS-6500	£1615

<b>TEXAS INSTRUMENTS</b>	
MicroWrite PS	£525
MicroLaserPro 600 (23 fonts)	£799

<b>LEXMARK</b>	
OPTRA R	£965
OPTRA L	£1379
OPTRA LX	£1894
OPTRA LXI	£2294

<b>EPSON</b>	
EPL5200	£461
EPL9000 12ppm A3	£1179

## SCANNERS

<b>EPSON</b>	
GT 6500+PicPub LE SCSI	£464
GT 8500+PicPub LE /Omni OCR	£497
GT 9000+PhotoShop LE	£678
GT 8500+PicPub 3.1 full version	£757
GT 9000+PhotoShop full version	£860
<b>LOGITECH</b>	
SCANMAN 32+Catchword win	£56
SCANMAN 256 PC	£78
SCANMAN COLOUR	£169
EASYSOFT SCANNER	£106
POWERPAGE	£299
<b>AGFA</b>	
STUDIO SCAN II si	£599
ARCUS II	£2225
<b>MICROTEK</b>	
ScanMaker II	£499
ScanMaker IIxe	£755
ScanMaker SMIIG	£325
ScanMaker SMIISP	£595
ScanMaker SMIISPxe	£775
ScanMaker 35T	£869
ScanMaker 45T	£3879
ScanMaker 2HR 1200x1200dpi	£925
ScanMaker 3 2400x2400dpi	£1945
<b>HEWLETT PACKARD</b>	
HP IICX 24bit A4 Flatbed	£673
HP IIP A4 Flatbed Scanner	£313



## ARCHIVE AND DISTRIBUTE

650MB ON CD FOR £4.50

KODAK X2 SPEED EXT & SOFT	£1595
PINNACLE X2 SPEED EXT & SOFT	£1160
DYNATEK JVC EXT + SOFT +3 DISKS	£949



YAMAHA X4 SPEED EXT +SOFT+3 DISKS £1599

## CD-R MEDIA 74 MIN (4X)

10+ : £ 4.50  
50+ : £ 4.00

## \*\*\* NEW \*\*\*

## HP-OFFICEJET

£485

The new Office-jet from HP is a complete solution for every office need:-

FAX MACHINE - LASER PRINTER  
PHOTO COPIER - SCANNER

## AGFA

ARCUS +  
WITH FULL PHOTOSHOP & PHOTOTUNE

# £2225

STUSCAN £599

## CD-ROM DRIVES

<b>TOSHIBA</b>	
XM 5201 SCSI 2 Triple speed bare drive	£149
XM 3601B SCSI Quad speed internal 4.4x	£225
XM 3601B SCSI Quad speed external 4.4x	£325
<b>NEC</b>	
3XI Internal triple speed SCSI Drive	£215
3XP+ Triple speed portable	£245
4XI Internal quad speed Drive	£249
4X External quad speed Drive	£365
<b>MITSUMI</b>	
FX400D Quad speed ide	£109
Mitsumi interface card	£13

# STORAGE Solutions! SCSI Experts!

## HARD DISKS

IDE		
CONNER	420 MB	£ 89
MAXTOR	545 MB	£105
QUANTUM	540MB	£109
SAMSUNG	1.0GB	£149
SCSI Seagate		
HAWK	1.05GB	£ 399
BARRACUDA	2.1GB	£ 565
HAWK 4	4.3GB	£ 875

SCSI		
QUANTUM	730MB	£149
CONNER	1.0GB	£215
MICROPOLIS	1.75GB	£425
QUANTUM	1GB/AV	£455
MICROPOLIS	2.1GB	£545
MICROPOLIS	4.3GB	£750
MICROPOLIS	9.1GB	£1385
MICROPOLIS	AV DRIVES	£BEST

## SYQUEST

200MB  
**£225**  
200MB REMOVABLE DISKS  
FROM £42

## BACK-UP

DAT DRIVES		
WANGDAT 3100 2.0GB	£579	£635
WANGDAT 3200 2-8GB	£649	£705
SONY SDT5200 4GB	£600	£650
SONY SDT5000 4-16GB	£549	£669
EXABYTE 4402 8GB	£CALL	£CALL

\* KIT INCLUDES - EXT.DRIVE, SCSI CABLE, 1 PC OF MEDIA & HEAD CLEANING TAPE.

BACK-UP SOFTWARE		
ARKSolo DOS		£85
ARKSolo Windows		£105
ASD-5 5 User DOS		£180
ASW-5 5 User Win		£189
ASW-10 10 User Win		£389



## SCSI CONTROLLERS

Adaptec 1522	£125
Adaptec 1542 Full kit	£165
Adaptec 358 MINI SCSI (Enh parallel port)	£135
Adaptec 460 PCMCIA Full kit	£165
DPT Cashing Controller ISA OK	£155
DPT Cashing Controller PCI OK	£255

## Tektronix Printers



Phaser 140	A4 (360 X 360 dpi)	£825
Phaser 220e	A4 (300 X 600 dpi)	£2475
Phaser 220i	A4 (300 X 600 dpi)	£2720
Phaser 240	A4 (300 X 300 dpi)	£2885
Phaser 300i	A4 (300 X 300 dpi)	£7420
Phaser 3PXI	A4 (300 X 300 dpi)	£4995
Phaser 340	A4 (300 X 300 dpi)	£3295
Phaser 340+	A4 (600 X 300 dpi)	£4535
Phaser 440	A4 (300 X 300 dpi)	£5195
Phaser 480	A3 (300 X 300 dpi)	£10,725
Phaser 540	A4 (600 X 600 dpi)	£4125

## SONY DAT SDT 5000

4-16 GB DAT SOLUTION  
**£549**  
1.3 Gb OPTICAL £1095

## FUJITSU 230 MB OPTICAL DRIVE

**£365**  
WITH 5 CART £449

## OPTICAL STORAGE

	INT	EXT
FUJITSU M2512A 230MB	£365	£415
FUJITSU M2512A 230MB KIT *	£449	£499
FUJITSU 230MB MEDIA	£14	
SONY S531 1.3GB ***NEW***	£1245	£1245

\* KIT INCLUDES - DRIVE, SCSI CABLE & 5 PCS OF MEDIA



## CD RECORDERS

JVC DOUBLE SPEED EXT	£ 949
PHILIPS DOUBLE SPEED EXT	£1485
KODAK DOUBLE SPEED EXT	£1475
YAMAHA QUAD SPEED INT	£1545
YAMAHA QUAD SPEED EXT	£1599
CD ROM MEDIA FROM	£4.50

## HEWLETT PACKARD

Deskjet 320	£163	Laserjet 5L	£345
Deskjet 540	£203	Laserjet 5P	£583
Deskjet 600	£206	Laserjet 5MP	£702
Deskjet 660c	£293	Laserjet 4+	£933
Deskjet 850c	£385	Laserjet 4M+	£1259
Deskjet 1200c	£595	Laserjet 4Si	£2052
Deskjet 1200c ps	£984	Laserjet 4SiMX	£2925
Deskjet 1600c	£823		
Deskjet 1600c ps	£1226		
		STORAGE	
Designjet 220	£1460	35470 2GB DAT	£559
Designjet 600	£2760	35480 2-8GB	£659
Designjet 650c	£3775	C1533A 4-16GB	£725
		C1300T Optical	£1850
		C1716T Optical	£1750

## CD RECORDER YAMAHA

**£1599**  
Quad Speed Multi-Session Records CD-ROM, CD-I and CD AUDIO. Including software and 3blank CD ROM.

## PRINTERS

EPSON	
STYLUS 800+	£ 175
STYLUS 1000	£ 326
STYLUS COLOUR II 720 dpi	£ 299
STYLUS COLOUR PRO XL	£1389
CANNON	
BJ30	£ 147
BJ70 COLOUR	£ 220
BJ200ex	£ 170
BJ230	£ 236
Epson Stylus Colour	
BJC 600c	£ 332
BJ 300	£ 358
BJ 330	£ 393
BJC 800	£1077
BJC 820	£1225

## HEWLETT PACKARD

### DAT STORAGE

	Internal	External
HP 35470 2.0GB	£599	£559
HP 35470 2.0GB EXT. KIT*	-	£679
HP 35480 2-8GB	£619	£659
HP 35480 2-8GB EXT. KIT*	-	£789
HP C1533A 4-16GB	£669	£725
HP C1533A 4-16GB EXT. KIT*	-	£849

\* DAT KITS INCLUDE - DRIVE, EXTERNAL CASE, ALL CABLES, SCSI TERMINATOR, 5 X 90M 2-4GB TAPES & ARKSOLO



40 GB HP 40T OPTICAL LIBRARY  
**£8350**

## OPTICAL!

## STORAGE!

### OPTICAL STORAGE

HP C171C 650MB	£1820	£1979
HP C1716T 1.3GB	£1345	£1495



20 Gb JUKEBOX 20XT  
**£3750**

## HEWLETT PACKARD

## MEDIA

100 3.5" Disks	£25
88 Mb SyQuest	£39
90 Meter DAT	£7.50
128 MB OPTICAL	£14
230 MB OPTICAL	£19
1.3 GB OPTICAL	£51

CALL FOR QUANTITY PRICING!

## MOTHERBOARDS

VESA/PCI		PENTIUM	
486DX2/66 256k	£135	Pentium-75	£245
486DX4/100 a 256k	£140	Pentium-90	£315
486DX4/100 i 256k	£175	Pentium-100	£389
486DX4/100 PCI I/O +35		Pentium-120	£525

## SIMM

72 Pin 2 X 32	8 MB	£175
72 Pin 4 X 32	16 MB	£305
72 Pin 1 X 36	4 MB	£100
72 Pin 2 X 36	8 MB	£195
72 Pin 4 X 36	16 MB	£325

4MB **£89**

AUTHORISED APPLE RESELLER



## B.D.C.S.

PRODUCTS ARE NOT SOLD ON A TRIAL BASIS. PLEASE CHECK SPECIFICATIONS & COMPATIBILITY BEFORE PURCHASING. PRICES AND SPECIFICATIONS MAY CHANGE WITHOUT NOTICE. E. & O. E.

Business Data & Communication Systems Ltd  
Trinity House, Heather Park Drive, Wembley, HA0 1SU.  
Prices & Specifications May Change Without Notice E.&O.E.  
All Prices Exclude VAT & Delivery Charges. Products Are Not Sold On Trial Basis

SCSI DAT! SCSI Drives! SCSI Raid! SCSI Optical! SCSI Experts!



# PC Systems 5Yrs Limited Warranty

## FOX Ascendant PCI

Mini Tower Case 230Watt Approved PSU  
Intel CPU, Triton ChipSet, 256Kb Cache,  
Synchronous Pipeline Burst Cache Option,  
8Mb EDO 70ns Memory  
PCI E-IDE 32bit Controller  
850Mb WesternDigital E-IDE 12Ms Hard Drive  
3.5" Panasonic Floppy Drive  
2 x Serial 16550 UART, 1x Parallel Port  
Diamond Stealth 2Mb 64DRam Video PCI  
15" Samsung/GoldStar FST Monitor 1024 x  
768@72Hz Non Interlaced MPRII.  
Microsoft Series II Mouse  
Cherry or Fujitsu Keyboard  
6 X Speed CD ROM Drive  
Windows 95 option  
Life Time Support  
5 Years Limited Warranty, (1stYear onsite)

P75MHz	£1124
P90MHz	£1199
P100MHz	£1289
P120MHz	£1399
P133MHz	£1499

## FOX Premier PCI

Mini Tower Case 200 Watt PSU  
256Kb Secondary Cache  
4Mb 70ns Memory  
E-IDE 32bit PCI IDE Controller  
630Mb 12Ms Western Digital Hard Drive  
3.5" Panasonic Floppy Drive  
2 x Serial 16550 UART, 1x Parallel Port  
1Mb PCI 32 bit Video Adaptor  
14" Trust/Samsung Monitor 1024x768  
Microsoft Series II Mouse  
UK 102 Quality Keyboard  
Windows 95 option  
Life Time Support  
5 Years RTB Limited Warranty

486DX2/66MHz	£599
486DX4/75MHz	£619
486DX4/100MHz	£649
Pentium 75MHz	£749
Pentium 90MHz	£829
Pentium 100MHz	£909
Pentium 120MHz	£1049
Pentium 133MHz	£1149

## Popular Options:-

Quad Speed CD-ROM, Creative Lab Sound  
Blaster 16, Speakers. £169  
MS Works, Money, Musical Instruments,  
Dangerous Creatures, MS Entertainment Pack,  
Encarter 95. £99  
Microsoft office Professional Ver 4.3 (Word,  
EXCEL, Power Point, Access) £169  
700Mb Internal Tape Backup unit £119

## FOX Award PCI

Mini Tower Case 230Watt Approved PSU  
Intel CPU, 256Kb Secondary Cache  
8Mb 70ns Memory  
E-IDE 32bit PCI IDE Controller  
850Mb WesternDigital E-IDE 12Ms Hard Drive  
3.5" Panasonic Floppy Drive  
2 x Serial 16550 UART, 1x Parallel Port  
Diamond Stealth 1Mb 64DRam Video PCI  
15" Samsung/GoldStar FST Monitor 1024 x  
768@72Hz Non Interlaced MPRII.  
Microsoft Series II Mouse  
Cherry or Fujitsu Keyboard  
Windows 95 option  
Life Time Support  
5 Years Limited Warranty, (1stYear onSite)

486DX2/66MHz	£899
486DX4/75MHz	£919
486DX4/100MHz	£939
Pentium 75MHz	£1024
Pentium 90MHz	£1099
Pentium 100MHz	£1189
Pentium 120MHz	£1299
Pentium 133MHz	£1399

## FOX Acclaim PCI

Mini Tower Case 230Watt Approved PSU  
Intel CPU, 256Kb Secondary Cache  
4Mb 70ns Memory  
E-IDE 32bit PCI IDE Controller  
630Mb WesternDigital E-IDE 12Ms Hard Drive  
3.5" Panasonic Floppy Drive  
2 x Serial 16550 UART, 1x Parallel Port  
Diamond Stealth 1Mb 64 DRam PCI  
14" Colour Monitor 1024 x 768@72Hz Non  
Interlaced MPRII.  
Microsoft Series II Mouse  
Cherry or Fujitsu Keyboard  
Windows 95 option  
Life Time Support  
5 Years Limited Warranty, (1stYear onSite)

486DX2/66MHz	£719
486DX4/75MHz	£739
486DX4/100MHz	£759
Pentium 75MHz	£859
Pentium 90MHz	£939
Pentium 100MHz	£1029
Pentium 120MHz	£1139
Pentium 133MHz	£1239

## Fox Note Books:-

Upgradeable screen, Intel Inside, 1Mb Video  
Accelerator, 32 bit bus, 9.5" TFT Screen, Sound  
Blaster compatible Speakers Built in, CPU, HDD,  
2xPCMCIA slots, Built in trackball, docking sta-  
tion option, supplied with leather case.  
Screen Type DualScan TFT

486DX4/100 4/340Mb	£1379	£1839
Pentium 75MHz 8/540Mb	£1379	£1839
Pentium 90MHz 8/540Mb	£1379	£1839

**★ INTEREST FREE CREDIT AVAILABLE ★**

## FOX Computer Systems

Opening Times:  
Mon - Fri 9am - 6pm  
Sat 10am - 5pm  
BBS 24 Hours

## Upgrade Service !

If your unsure about upgrading your PC, let  
our qualified engineering team do it for you.

Save pounds by getting it right first time

## HP NET Servers

### Hewlett-Packard NET SERVERS

HP NET SERVER 4166LC-540Gb, 8Mb	£1599
HP NET SERVER 41000C-1Gb, 8Mb	£1799
HP NET SERVER 4100LF 1Gb, 8Mb, CD	£2499
HP NET SERVER 5166LF-1Gb, 16Mb, CD	£2999
HP NET SERVER 5166LM 1Gb, 16Mb, CD	£3899
HP NET SERVER 5100LM 16Mb	£2799
HP NET SERVER 4100LF-1 ARRAY 8CHASSIS/CD	£3199
HP NET SERVER 4166LM-200 162X1G/CD	£5999
HP NET SERVER 5166LM-1 ARRAY 16CHASSIS/CD	£4699
HP NET SERVER 5166M-1 16NONJE	£5599

Prices exclude VAT @17.5% and delivery. All trade-  
marks acknowledged. Fox Computer Systems terms and  
conditions available on request. E&OE. Prices and spec-  
ification subject to change without prior notice.

**Tel: 01621 744500**

## Floppy Disk Drives

1.44Mb 3.5" Auto Detect	£18
1.22Mb 5.25" Auto Detect	£32
10 Pack 1.44Mb PreFormatted FDD	£4

## Backup Devices

### TAPE Drives

Colorado	
DJ-35 350Mb Internal IDE	£79
DJ-25 680Mb Internal IDE	£135
T1000 800Mb Internal IDE	£138
DJ-50 1.4Gb Internal IDE	£235
JT-xx Traker 250Mb External	£185
JT-35 Traker 350Mb External	£159
JT-25 Traker 700Mb External	£215
Traker carrying case	£35

## SPECIAL OFFER

**IOmega ZIP 100Mb  
DRIVE & Inc Media  
£139**

Connor	Int	Ext
420Mb IDE	£98	£239
850Mb IDE	£209	£285
4000Mb E-IDE	£429	£589

IOmega	
100Mb ZIP Drive Internal (Media £10ea)	£129
420Mb 3.5" Internal	£75
700Mb 3.5" Internal	£119
700Mb 3.5" External	£199

Syquest IDE	SCSI	Media
105Mb 3.5"	N/A	£185
270Mb 3.5"	£255	£259
88Mb 5.25"	N/A	£175
200Mb 5.25"	N/A	£259

## DAT Drives

Hewlett Packard Superstore	
HP35470A 2Gb 3.5" Internal	£549
HP35380A 2.8Gb 3.5" Internal	£649
HP3533AA 4-16Gb 3.5" Internal	£699
Internal Fixing Kit	£19
Superstore 2000e 2Gb External	£619
Superstore 5000e 4Gb External	£689
Superstore 6000e 8-16Gb External	£789
Superstore 12000e 4-8Gb AutoLoader	£1979
HP DAT Drive Support Pack (3 Years OSM)	£199

WangDat	
3100 2Gb 4mm 5.25" Internal	£519
3200 2-4Gb 4mm Internal	£589
3400 4-8Gb 4mm Internal	£699

Connor	
4320 2Gb 4mm 5.25" Internal	£539
4324 Python Turbo 4mm 5.25" Internal	£625

## OPTICAL Drives

Fujitsu	
M2512A 230Mb Magneto Optical Internal	£329
Panasonic	
LF7304 1.5Gb Phase Change Internal	£1489
Hewlett-Packard	
C1716 1.3Gb Internal 3Yr Warranty	£1749
Note external case available for optical Drives.	

## Tape & DAT Cartridges

Type	IOF	5Pk
DC2120 120Mb	£8	£169
DC6150 150Mb	£12	£55
DC6250 250Mb	£15	£69
DC6525 525Mb	£17	£79
DAT	IOF	5Pk
4mm 2Gb 90 meters	£10	£48
4mm 4Gb 120 meters	£15	£69
Optical		
PTT25 1.2Gb	£28	
PT50 2.0Gb	£38	
LMR1500A 1.5Gb	£109	
OM230 230Mb	£25	

## Printers

Hewlett Packard	3 Yr Support Pack	Printer
Deskjet 320	£35	£169
Deskjet 600	£35	£209
Deskjet 660C	£59	£289
Deskjet 850C	£59	£349
Laserjet 5L	£89	£369
Laserjet 5P	£119	£389
Laserjet 4 Plus	£149	£279
Laserjet SMP	£119	£279
Laserjet 4M Plus	£149	£299
Laserjet 4Si	£219	£399
Laserjet 4V/A3	£219	£389
Laserjet 4M/A3	£219	£2279
Laserjet 4Si MX	£219	£2899
Laserjet Colour	£219	£4179
Epson		
Epson LC300	£149	
Epson LQ570+	£215	
Epson LQ1070	£299	
Epson Stylus 800+	£179	
Epson Stylus Colour	£349	

Call for a free Windows based brochure

## FOX Servers



When so much  
depends on one unit  
choose the best inte-  
grated system from  
the system specialist.  
Best for price, best  
for reliability, best for  
maintainability.

### PCI Pentium 75/90/100Mhz

Full Tower Case 250Watt Approved PSU  
Pentium Motherboard with 256Kb Cache  
512Kb Graphics Adaptor  
14" SVGA Mono Monitor  
Adaptor 2940 SCSI-2 Hdd Controller  
102 Keyboard  
16Mb 70ns Memory  
2.1Gb Fast SCSI 9ms 2700rpm Hard Drive  
Dlink PCI BNC/RJ45 Ethernet Adaptor  
1 Parallel, 2 serial  
5 Years Limited Warranty

P75	P90	P100	P120
£1899	£1999	£2099	£2199

### RAID P75/90/100 Servers

Tower Case Triple HOT Swappable 250Watt  
Pentium Motherboard with Triton Chipset  
SVGA Graphics Adaptor, 14" VGA Mono Monitor  
Mylex DC-960 PCI Wide Raid + 4Mb Cache  
UK 102 Keyboard, 1 Parallel, 2 serial  
16Mb 70ns Memory  
HOT Swappable Fast SCSI 9ms Hard Drive (Raid  
level 3-5 configuration)  
Dlink PCI BNC/RJ45 Ethernet Adaptor  
5 Years Limited Warranty

P75	P90	P100	P120
From £2699	£2789	£2879	£2999

## Network Accessories

### Ethernet Adaptors (Novell approved)

SMC Elite	ISA	PCI	PCM-
CIA			
BNC/RJ45 Combo	£59	£109	£129

Trust  
NE2000 16bit SW Prog ..... £19

3 Com Etherlink III	
3C509 BNC/RJ45 Combo ISA	£65
3C579 BNC/RJ45 Combo EISA	£129
3C590 BNC/RJ45 Combo PCI	£129
PCMCIA Combo	£129

### Ethernet Hubs & Repeaters

8 port Smart Hub BNC	£99
16 port Smart Hub BNC	£189
2 port Repeater BNC/AUI	£149
6 port Repeater BNC/AUI	£299
3 port Ethernet print server	£219

Network users	5	10	25	50
312	£389	£889	£1319	£POA
4.0	£545	£1245	£1825	£POA

## UPS

American Power 400VA		BK	£109
American Power 600VA	SU £205	BK	£145
American Power 900VA	SU £359	BK	£269
American Power 1250VA	SU £499	BK	£339
American Power 2000VA	SU £899		

## Scanners

Trust	
Mono Hand Scanner 400dpi	£39
Colour Hand Scanner 400dpi	£79
A4 Flat Bed 24bit Colour 1200dpi	£289
A4 Flat Bed 24bit Colour 2400dpi	£379
Transparency Kit	£175

Hewlett Packard	
HP Scanjet 3P photo/256 256 Grey Scales, 300-1200dpi	£239
HP Scanjet IICX PCAT/PIAC/PS2 400-1600dpi	£609

Nikon	
Nikon CoolScan LS-10E 35mm External	£1045
Nikon CoolScan LS-10i 35mm Internal	£1205

Epson	
GTX Series Inc Adobe Photoshop LE, Omnipage OCR	
GTX 85000 Parallel	£495
GTX 8500 SCSi	£495
GTX 9000 Parallel	£602
GTX 9000 SCSi	£672
GTI Series Inc Adobe Photoshop Full Ver, Omnipage OCR	
GTI 8500 Parallel	£745
GTI 9000 SCSi	£855

### Digitising Tablets

12"x12" DIGITISING TABLET	£109
12"x18" DIGITISING TABLET	£179

## Modems BABT Approved

Trust	Int	Ext
14,400 Fax/Modem	£69	£79
28.8 Internal or External	£159	£169

## US Robotics

Sportster 14,400 Fax/Modem	£109	£105
Sportster 28.8 Fax/Modem	£159	£155
Courier V34 Fax/Modem	£239	£239
World Port DS CELL PICT	£169	n/a

## Heyes

Accura 14,400 Fax/Modem	£149
Accura 28.8 Fax/Modem	£189
Optima 14,400 Fax/Modem	£259
Optima 28.8 Fax/Modem	£349
Optima PCMCIA 14,400	£199



# Talk to the specialists in and ensure the right

## Why HandHeld?

Have it with you at all times for extended use.

- 30-40 hrs. battery use
- Pocket sized
- Easy link to PC
- Built-in software
- PCMCIA Compatible
- Use straight out of box
- Fully expandable



### Psion Series 3a

- 80 Characters x 17 Lines
- Zoom into built-in applications
- Voice recording

- 256KB **£199**
- 512KB **£209**
- 1MB **£249**
- 2MB **£299**

- Graphic User Interface
- Link to your PC
- Built-in Time Management, Calendar, Database, Word Processor, Calculator, World Data, Programming Language, Spreadsheet
- Fax Modem **£154.95**

**Bundle Package**  
• Psion Series 3a  
• 512KB  
• PC Serial Link  
• Leather Case  
**£269**  
1MB Bundle: £313  
2MB Bundle: £363

AC Adaptor.....£11.95	Paint and Compose.....£54.95
PC Comms Link.....£54.95	Agenda 3 Link.....£42.95
Leather Wallet.....£18.95	Aluminium Desk Stand.....£14.95
Spreadsheet.....£24.95	1MB RAM SSD.....£188.95
Spellcheck Thesaurus.....£34.95	128KB Flash.....£26.95
Personal Accounts.....£34.95	512KB Flash.....£64.95
Games Pack 3.....£24.95	1MB Flash.....£99.95
Mac Comms Link.....£59.95	2MB Flash.....£138.95
Parallel Cable.....£24.95	4MB Flash.....£255.95
Fax Modem.....£154.95	Timebase Solo.....£94.95
Chess.....£24.95	VT100 Emulator.....£49.95
Prof Finance.....£33.95	Data View.....£48.95
Beritz Interpreter.....£28.95	Wine Guide.....£32.95
Finance Pack 3.....£34.95	PalWin.....£54.95
Series 3 Tools.....£41.95	



- 1MB **£389.95**
- 2MB **£429.95**

**Bundle Deal**  
200LX + 1MB Memory Card  
**£499**

### HP200LX Palmtop PC

- 1MB & 2MB versions available
- 11oz of PC Power in Your Pocket
- 80 columns by 25 lines
- MS DOS 5.0
- Complete suite of built in applications- CC Mail, Database, Lotus 1-2-3 & Pocket Quicken
- PCMCIA Version 2 Type II
- HP Financial Calculator
- 40 hours on 2 x AA alkaline batteries

PC Cable.....£18.95	Leather Case.....£24.95
Mac Cable.....£18.95	PC Adaptor.....£28.95
Connectivity Pack.....£89.95	ALSO SEE PCMCIA MEMORY CARDS



Apple Newton 120  
**£399**  
INC. Windows Connection Kit

Nokia Cellular Data Card  
**£399**

### Apple Newton MessagePad 120

The Newton MessagePad 120 puts easy-to-use communications, productivity, and desktop connectivity solutions in the palm of your hand so you can work away from your office.

- Can turn printed or cursive handwriting into typed text.
- Can use a wired or wireless modem to send faxes or use built-in NewtonMail™ software to tap into electronic mail and on-line services.
- Offers a large selection of productivity, finance, time, billing, management, reference and entertainment software.

Connection Kit.....£54.95	Print Pack.....£39.95
Recharge Cradle.....£49.95	TapWorks.....£54.95

## Why Sub Notebooks?

When you want portability but don't want to compromise on power.

- Windows loaded
- A5 size with full PC power
- Up to 9 hours working power
- Immediate use
- Mainstream performance
- Data security



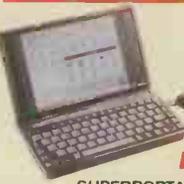
### HP Omnibook 4000/5000

- 486, up to 100MHz DX4
- 4 or 8MB RAM. Up to 32MB
- Up to 520MB HDD
- Built-in stereo sound
- 10.3" DSTN or 10.4" TFT
- Centered Trackball
- Infra-red port, serial, parallel, audio
- PCMCIA Type II Slot
- Enhanced Port Replicator
- 3 year warranty
- Full PC functionalities

- Modularity & flexibility
- Connectivity convenience
- Up to 3.5 hours battery life
- Sleep & hibernation mode
- MS-DOS 6.2, Windows 3.11
- 3.1kg (6.9lb) weight

Omnibook 4000  
From **£1399** **NEW LOWER PRICE**

MODEL	PROCESSOR	HARD DISK	RAM	SCREEN	PRICE
5000	590	1GB	8MB	10.4TFT	£3749
5000	590	1GB	16MB	10.4TFT	£4199
260	1486 DX2/50	260MB	4MB	10.3 DSTN	£1399
340	1486 DX2/50	340MB	8MB	10.3 DSTN	£1499
320	1486 DX2/50	520MB	8MB	10.3 DSTN	£1679
420	1486 DX2/50	340MB	8MB	10.4 TFT	£1599
520	1486 DX2/50	520MB	8MB	10.4 TFT	£1729
340	1486 DX4/100	340MB	8MB	10.3 DSTN	£1799
520	1486 DX4/100	520MB	8MB	10.3 DSTN	£1899
320	1486 DX4/100	340MB	8MB	10.4 TFT	£1999
420	1486 DX4/100	520MB	8MB	10.4 TFT	£2149
520	1486 DX4/100	810MB	8MB	10.4 TFT	£2269



- 600C 4/50 260MB **£1359**
- 600C 4/75 170MB HD 8MB RAM **£1799**

### HP Omnibook 600

- SUPERPORTABLE PC**  
Technology for freedom. No other PCs are as ready to go or as easy to use right out of the box.
- Desktop capability in your hand
  - Intel DX2 50/DX4 75
  - MS DOS 6.2, Windows 3.11
  - 170MB PCMCIA Type III Hard disk
  - Smallest notebook PC available (11.1x7.28x1.57")
  - 4MB and 8MB RAM, Upgradeable
  - VGA-Out Port
  - Comes with external 3.5" Floppy disk drive
  - Infra red data transfer
  - 3 year warranty
  - Up to 4 hours battery life
  - 1.72kg (3.8lb) weight

MODEL	PROCESSOR	HARD DISK	RAM	SCREEN	PRICE
260	1486 DX2/50	260MB	4MB	8.5 DSTN	£1359
260	1486 DX4/75	260MB	8MB	8.5 DSTN	£1799
260	1486 DX4/75	260MB	8MB	8.5 TFT	£2049



Nokia 2110 Phone  
**£199**  
INC. CONNECTION

### Nokia Cellular Data Card

- Link your notebook to your Nokia digital handportable phone, enabling you to send and receive faxes and to check your e-mail as easily from across the continent as from across the street
- PC Fax to 9600bps
  - Short message service
  - Built-in error correction

**FREE Tel-Me Software Included**

Nokia Cellular Data Card with FREE SMS software **£399**

**NOW AVAILABLE**  
Cellular Data Card for Ericsson, Siemens, Sony, Motorola Handsets  
**£429**

## Why do PICO guarantee the compatibility of all its PCMCIA products?

Pico has been involved in PCMCIA technology for over 5 years, sitting on the technical committee of the standards association. This has given us a unique insight into the companies and products involved in this technology. The result is that we have selected the best products in the marketplace offering you the user quality and performance at the most competitive prices. And we guarantee it!



• Internet Ready •  
**FREE** Introductory Subscription Included

IBM V32bis **£149**  
V34 Data/Fax **£189**

**Bundle Deal**  
Use your PCMCIA IBM Modem on your notebook AND desktop.  
PC Card Drive + IBM V32bis Data/Fax Modem **£249**

### IBM 14.4/14.4 Fax/Data Modem

- Data Rate of 57.6kpbs with v.42bis data compression
- Fax rates of 14.4kpbs
- Software support for multiple PCMCIA modems and any coms port
- Cellular ready capability - MNP10. External DAA for world-wide support capability
- Diagnostics software
- Operates with or without Card and Socket Services
- Feature upgrade flexibility
- 2,4/9,6 Data/Fax modem also available
- Durable stainless steel packaging

**SPECIAL OFFER**  
**SCM V34. 28.8 Fax/Data Modem**  
Full Windows software inc. **Only £159**  
**SPECIAL OFFER**

### USR V.34 28.8 Fax/Data Modem

- Cellular ready
- Internet ready
- Full Windows software Included

**Only £160**

### Psion V.34 Data/Fax

**Only £219**

### Greycell Gold 3 Modem + Ethernet

- V.32bis or V.34
- 10base T/2 NE2000 Compatible
- Simultaneous network & fax/modem operation

**Only £325**

### Xircom Combo - Fax/Data/Ethernet

- Simultaneous Ethernet/803.2 LAN plus 19,200bps data and 14,400bps send/receive fax modem operation in one slot
- Includes terminal & fax software for Windows
- Supports advanced PCMCIA features including HotSwap, Suspend/Resume and Integrated Power Management

**Only £314**

### Calluna/Centennial Hard Drives 130, 170 & 260MB

- Extra storage capacity
- High speed backup
- Data transportability
- Data security
- File Organisation
- System fault tolerance
- Idle and standby mode

130MB **£199**  
170MB **£279**  
260MB **£379**

### Accurite Floppy Sub-system

- Move data to and from disk through the PCMCIA slot.
- 3.5" 1.44MB floppy disk drive
- For palmtops and notebooks

**Only £299**



# PCMCIA & Mobile Computers... solution for you.

## IBM Voice Type Dictation

- Talk to a computer instead of typing
  - Transforms spoken words into accurate text
  - 22,000 word general vocabulary
  - 70 to 100 words per minute
  - Talk into microphone - displayed onscreen
- Only £829**

## GameCard II PCMCIA Dual Joystick Interface

- Allows you to plug one or two joysticks
  - Works with all games software. No modifications required
  - Works with all existing GamePads and Joysticks, including multifunction, analogue and digital
- Only £49.95**



## SecureData

- Incorporates CARES cryptographic data protection system
  - Offers complete protection against non-approved access
  - More effective than passwords
- Only £199**



## Multimedia Presentation Unit

- CD-ROM, 16-bit sound, speakers & Microphone
  - Dual Speed CD-ROM
  - Works on batteries or AC Adaptor
  - Use as stand-alone CD-ROM player
  - LCD Status and Power LED
- Only £369**



## IBM/PICO Ethernet Adaptor Cards

- 10Base-T and 10Base2 Ethernet LAN cards for portable computing applications.
- PCMCIA Version 2.
  - MS Windows compatible.
  - Novell certified.
  - MS Windows for Work Group certified
- Only £119**



## PreMax Combo Card

- The PE-200C from Premax, a Netware compatible 10BASE-T Ethernet Local Area Network (LAN) adaptor card, provides PC Card network connectivity with Novell's Netware, IBM's LAN Server, Banyan's VINES, and Microsoft's Windows for Workgroups.
- Easy Installation
  - 10BASE-T, Model PE-200T
  - 10BASE-T, 10BASE-2 connectors, PE-200C
  - 16 bit bus
  - 16KB data buffer
  - No external power required for operation
  - Card and socket services support
  - Hot swap card Insertion and removal
  - Software configurable
  - LED diagnostics and monitoring indicators
  - Automatic polarity detection and correction for UTP cable
  - 1 Year warranty
- Only £149**

## IBM/PICO Token-Ring I/O Card

- Provides attachment to Token-Ring LANs operating at either 16Mbps or 4Mbps.
- PCMCIA Version 2.
  - Operates with DOS 5.0, PC LAN Program (PCLP) v.1.34 and Novell Netware v.3.11.
  - Driver support includes NDIS and ODI.
  - Complies with IEEE 802.5 and 802.2.
- Only £249**



## IBM/PICO RS-232 Serial Card

- Complete RS-232 connectivity in the hands of mobile business professionals. The card allows quick and easy expansion to add peripherals like modems, serial printers, scanners and mouse devices at rates of up to 115.2Kbaud.
- Operation with or without Card and Socket services.
  - Support for multiple PCMCIA RS-232 cards.
  - Query facility for card status.
  - Complete with installation and diagnostic utilities.
  - Compatible with virtually all of today's operating systems.
- Only £149**



## PCMCIA CD-ROM DRIVE

This PCMCIA unit requires NO EXTERNAL POWER, making it the ideal choice for taking multimedia on the road.

- Single 5V operation, Low power consumption; 120mA (sleep), 250mA (standby), 800mA (peak)
  - Double speed data transfer rate; 307.2 Kbytes/sec
  - Data capacity; 635MB
  - Average access time; 350ms (1/3 stroke)
  - 64KB memory buffer
  - Motorized tray loading, no caddy required
  - MSCDEX compatible
  - Supports CD-DA, CD-ROM mode 1 and 2, CD-XA, Multi-session Photo CD and CD-I
  - 16bit, 44.1kHz sampling Audio output with front volume control
  - Data integrity 1 error in 10<sup>18</sup> bits
- Only £229**



## IBM/Pico 16-bit Audio Adaptor

- For high definition, 16-bit stereo sound for presentations, text to speech, Voice Command Navigation, Videogames and MIDI applications.
- PCM recording and playback either standalone or through multi-media functions in Windows or OS/2.
  - Basic Voice Command Navigation allowing the user to give verbal commands to Operating Systems or applications (Extended Audio Interface Module only).
  - Text-to-speech translation.
  - Sound Blaster emulation.
- Only £229**



## IBM/PICO SCSI Adaptor Card

- For medium speed, low power SCSI bus peripherals such as optical and tape drives.
- PCMCIA Version 2.
  - Hot insertion and removal.
  - MS Windows compatible.
  - Multimedia PC (MPC) compatible.
  - DMA emulation for high performance.
  - >500KB/s average sustained transfer rate.
  - Low power - 180mA active & 40mA standby
- Only £169**

## Card Readers

- Allows you to operate all of your PC cards - LANs, Fax/Modems, type III ATA hard drives and memory cards on your desktop. Internal and external as well as one, two or four slots available.
- Package includes: driver software and CardTalk control panel GUI.
  - No modifications needed to systems or application software.
  - Card activity detection lights on front panel.
  - Self-installing software.
- Only £169**



## PCMCIA MEMORY

128KB SRAM	£39.95
256KB SRAM	£54.95
512KB SRAM	£84.95
1MB SRAM	£95.95
2MB SRAM	£129.95
512KB PLUS (1MB Data Storage)	£110.95
1MB PLUS (2MB Data Storage)	£195.95
2MB PLUS (4MB Data Storage)	£295.95
5MB ATA Flash Card	£229.95
10MB ATA Flash Card	£279.95
20MB ATA Flash Card	£499.95
30MB ATA Flash Card	£699.95
40MB ATA Flash Card	£899.95

## DRAM Memory

DRAM expansion cards allow you to increase the resident RAM storage in your mobile computer without physically modifying the computer. Increasing RAM greatly improves program operation and efficiency.

PRODUCT/MODEL	PRICE
<b>IBM</b>	
700/720/750/760/PS/755/760/340/360/Butterfly	
4MB	£169
8MB	£329
16MB	£589
32MB	£1090
<b>TOSHIBA</b>	
1900/1910/4500/4600/4700/4800/1950	
8MB	£279
16MB	£499
32MB	£1049
<b>Toshiba 3400</b>	
4MB	£139
<b>COMPAQ</b>	
<b>LTE LITE</b>	
4MB	£139
8MB	£239

## CALL FOR HP OMNIBOOK MEMORY PRICING

Pico Direct is part of the DIP Group of companies. The DIP Group designs, develops and markets pocket computers for the mobile business professional. DIP Research began the design and development of pocket computer technology in 1986 and has since licensed its technology to major manufacturers such as Atari, Infos and Sharp Electronics.

- Established 8 years. Multi million pound company.
  - Designers & developers of hand held computers.
  - Unequaled technical support.
  - Free expert advice.
  - Free PCMCIA and product catalogue.
  - Major suppliers to the corporate and public sectors.
  - Educational discount.
  - Full manufacturer's warranty.
  - Credit cards not debited until despatch.
  - Low prices.
- WE WILL NOT BE BEATEN ON PRICE.**

## How to Order 3 easy ways

- 1 Call us now on 01483 202022
- 2 Fax us your order on 01483 202023
- 3 Send cheque/postal order or Access/Visa/Switch/Amex card details to:-  
**PICO DIRECT**  
The Technology Centre  
Weston Farm, The Street  
Albury, Surrey, GU5 9BZ

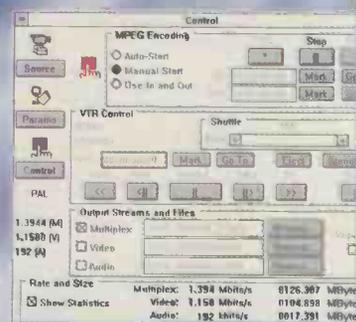
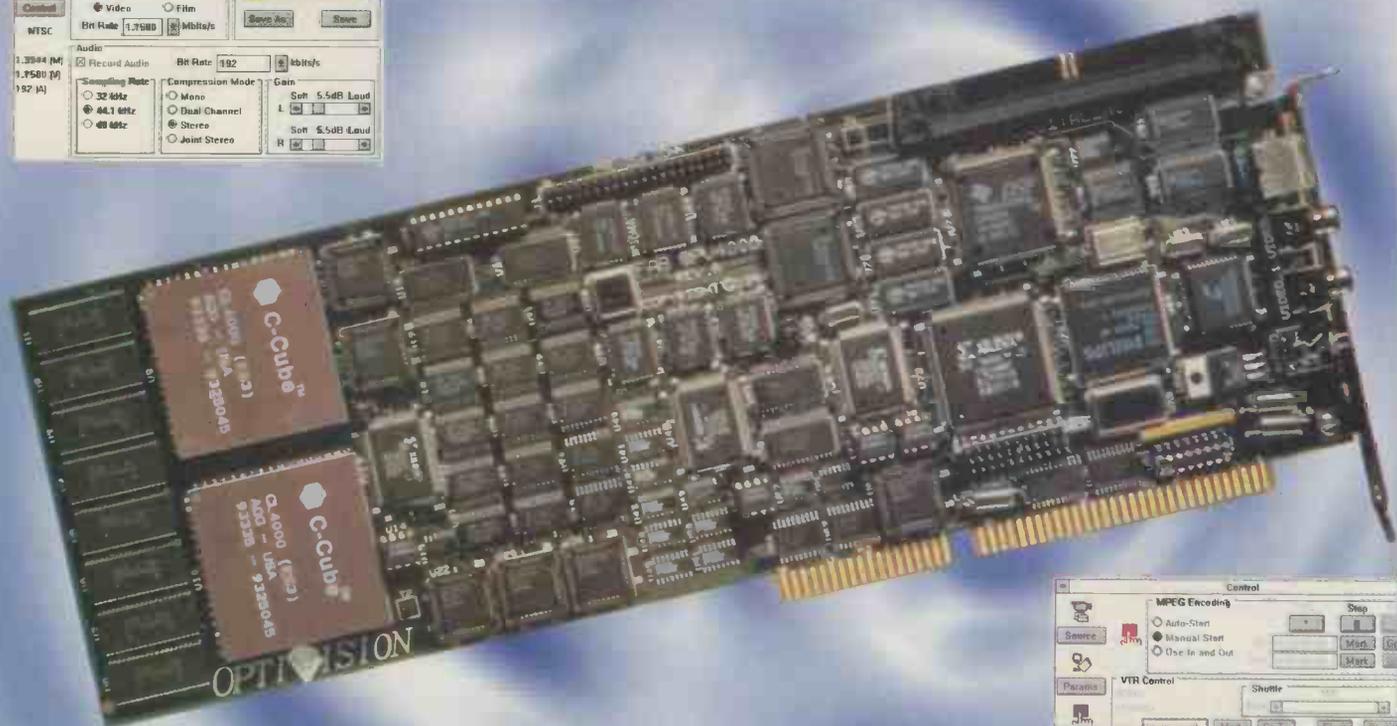
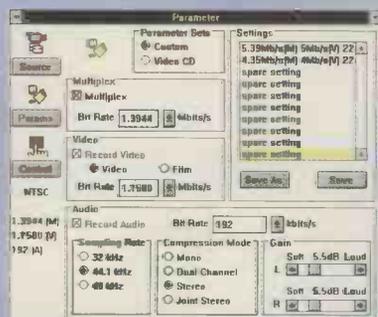
Send or call for free Product and PCMCIA Directory for further listings. Prices exclude VAT. Delivery £8 next day, £6 2-3 day. Ask about extended warranty.

**VISA ACCESS SWITCH AMEX**

**pico**  
DIRECT



**To Order, Call  
01483 202022**



## At £7,499\* it's probably one of the world's most **expensive** cards for the PC

It's not everyday you come across a PC card like the OPTIVision MPEG-1 Encoder card that costs five times the price of a well spec'd PC. Equally the OPTIVision MPEG-1 Encoder is one of the very few cards in the world that can take PAL/ NTSC television video and in **real-time** digitise/ compress sound & vision into an MPEG-1 data-stream.

On playback from hard disk, CD-ROM or VideoCD an OPTIVision produced MPEG-1 data-stream provides full-screen (or scaleable) full-motion video with S-VHS quality\*\* complemented with crisp CD quality stereo audio.

Part of the new MPC-3 multimedia standard, MPEG-1 is set to be the de facto standard for digital television. With MPEG authoring packages (as below) you can use MPEG

data streams to produce stunning customised interactive business, education & entertainment videos.

We are specialists in MPEG (and CD recording) and can supply a wide range of products including MPEG-1 & 2 Encoders & Decoders, MPEG authoring software & MPEG network servers for live real-time MPEG distribution on Ethernet LANs & WANs. *Now that's what we call vision!*

### **CD Revolution Ltd**

CDR House, Gogmore Lane, Chertsey, Surrey KT16 9AP

Tel: 01932 562000 Fax: 01932 571999 E-mail: cdrevolution@dial.pipex.com

London Showroom - 29 Villiers Street, London, WC2N 6ND Tel: 0171 930 00

also available from CD Revolution in Frankfurt, Germany - Tel: 06196 5605 0

Cape Town, South Africa - Tel: 021 880 1497/ 1710 & Sydney, Australia - Tel: 02 9968 3953



**Jakarta** - Integral 24-bit/ 16.7m colour Video Accelerator (with 2M RAM) & MPEG-1 Decoder (available in PCI or VL Bus versions + only uses a single IRQ)

**Jakarta** - £299 +VAT

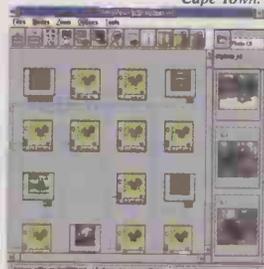
**Jakarta+Authoring Kit** - £379 +VAT (complete with Media Styler Special Edition on CD-ROM, VideoCLIP Sampler & 30 min. of MPEG Encoding from your VHS/Betacam tape)



**Media Styler (Special Edition)** Easy-to-use Windows Multimedia authoring software. You can easily manipulate & connect, video (.MPG, .AVI, .MOV), animation (.FLI, .FLC), sound (.WAV, .MID); photos, text & graphics & combine them into powerful presentations. **Media Styler (Special Edition)** - £49 +VAT

**Media Styler** - £399 +VAT

**Run Time Module** - £1,099 +VAT



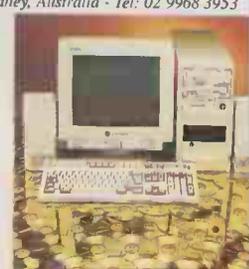
**CeQuadrat VideoPack** - Windows software, takes MPEG video/stereo audio bitstreams & in real-time multiplexes them into a VideoCD (White Book) format ready for CD recording. **VideoPack** - £699 +VAT

**CeQuadrat WinOnCD** - Windows recording software records VideoCD, CD-ROM, CD-ROM XA, CD-Audio, CD-I. **WinOnCD** - £399 +VAT



**VideoCLIP** - Windows Non Linear Video MPEG Editor. Arrange & edit several MPEG-1 audio, video or multiplexed sequences in compatible formats with multi-track editing table (video, audio, special effects, time line) supplied with an ensemble of special effects (negative, title etc.) **VideoCLIP Sampler** - FREE

**VideoCLIP** - £499 +VAT



**CD Revolution CDR P-75 MPEG-1 Encoder PC** - Ready-to-go fully featured Intel 75M Pentium® processor based P Optimision MPEG Encoder, Jakarta MPEG Decoder, Dual Speed CD Recorder, 8MB RA 2GB SCSI Hard Drive, Yamaha YSTM10 speakers, Windows CDR P-75 MPEG-1 Encoder PC - £9,999 +VAT

Pentium is a trademark of Intel Corporation

All trade marks recognised. Specifications and prices subject to change without prior notice. \*Prices are business to business and exclude VAT & delivery. \*\*Subject to quality of recorded material. E&E

# With such an extensive range of multimedia on offer you won't have enough hands to carry everything home.

From Midi keyboards to sound and PCTV video cards. From speakers, headsets and microphones to Home Cinema and Home Teletext modules. From CD-ROM players to joysticks and portable game pads... With the complete range of multimedia Trust has to offer, you won't have enough hands to carry everything home. Like the rest of the Trust product range you are guaranteed unparalleled home entertainment and maximum performance. All are immediately available from stock at a very keen price. The multimedia range includes, informative packaging, user friendly manuals, 24-hour BBS help line and a minimum 12-month guarantee. Want to know more? Drop in on one of the Trust dealers listed below, or fill in the coupon right away and become a member of the Trust Family. The latest Trust information package will then be sent to your home free of charge.



You can purchase Trust products in the following shops

**Computer Superstores:**  
PC Works — Byre Computer Stores  
Tempo Stores — Office 1 Superstores  
Nationwide Dealers:  
**Besties Stores Nationwide**  
Essex 01206 47242 — Chelmsford 01245 266073 — London 0171 636 2647 — Nottingham 01909 530242 — Scotland 01224 461000 — Surrey 0181 6931126 North Yorks 01423 522225 — Leicester 01533 516789 — Guernsey — 01481 720155 — Manchester 0161 442 4444  
**Mall Order:**  
Nottingham -01909 530242 — London 0181 523 4020 — Essex 01621 829500



Fill in the coupon to receive the latest Trust information pack together with a comprehensive dealer list.

**Trust family coupon**

Name \_\_\_\_\_

Company name: \_\_\_\_\_ M/F

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_ PCW 11/95

Send the coupon to Aashima Distribution (UK) Ltd, Freeport CL3829, Witham, Essex, CM8 3XY.

# Trust. Designed to please you.



# CD Recording Kits now only £749\* so you can now **back-up for £4.95\***

If you value the contents of your PC or Mac hard disk drive then you should make permanent backups and/or archives on recordable CD-ROMs costing only £4.95\* each. Alternatively you may want to use CD-ROMs to distribute large amounts of data throughout your organisation or even to clients.

Recordable CDs are the most cost effective, durable, permanent storage medium and can provide decades of safe storage. Any file can be quickly accessed and read directly using any multisession CD-ROM drive.

Of course, you'll need to invest in a CD Recorder with

software to record up to 650MB on a single recordable CD-ROM. Our range of CD Recorder Kits come complete (as pictured above) with Windows based CD recording software, Adaptec SCSI card, terminator, cables, blank CDs, etc. - *dealer enquiries welcome.*

**CD Revolution Ltd**

CDR House, Gogmore Lane, Chertsey, Surrey KT16 9AP  
 Tel: 01932 562000 Fax: 01932 571999 E-mail: cdrevolution@dial.pipex.com  
 London Showroom - 29 Villiers Street, London, WC2N 6ND Tel: 0171 930 0010  
 also available from CD Revolution in Frankfurt, Germany - Tel: 06196 5605 0  
 Cape Town, South Africa - Tel: 021 880 1497/ 1710 & Sydney, Australia - Tel: 02 9968 3953



CD Revolution CDR24 High-Specification Internal Dual Speed SCSI CD Recorder which can record a wide range of formats (subject to software used) CD-ROM, CD-ROM XA, CD-I, CD-DA and VideoCD. CD Revolution CDR24 - £749 +VAT (as pictured above at top of page complete with WinOnCD ToGo or Corel CD Creator software, Adaptec SCSI card, cables, CDs etc)



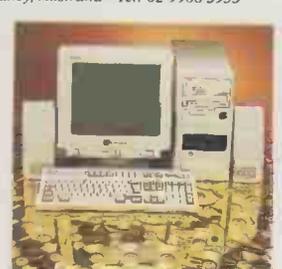
Philips CDD522 Dual Speed External SCSI CD Recorder which can record the full range of formats (subject to software used) CD-ROM, CD-ROM XA, CD-I, CD-DA, Photo CD (restricted image sizes) and VideoCD. CDD522 - £1,349 +VAT (complete with WinOnCD ToGo or Corel CD Creator software, Adaptec SCSI card, cables, CDs etc)



Yamaha - Quad Speed SCSI CD Recorder - The world's first (x4, x2, x1) speed record/play CD Recorder. Records (subject to software used) CD-ROM (including MPEG), CD-ROM XA, CD-I, CD-DA & VideoCD. CDR100 (internal) - £1,599 +VAT CDE100 II (external) - £1,749 +VAT (complete with WinOnCD ToGo or Corel CD Creator software, Adaptec SCSI card, cables, CDs etc)



Rimage CD Printer - Prints customised silk screen quality printing on gold recordable CD-ROMs. Crisp sharp text, graphics, barcodes & radius type are produced using the powerful Windows based label editing software. Printing takes 15 sec. with a professional print quality that does not smudge, fade or wash off. CD-Printer £3,499 +VAT



CD Revolution CDR P-75 CD Record 2 PC - Ready-to-CD-Record Intel 75Mhz Pentium® processor-based PC complete with internal SCSI Dual Speed CD Recorder, 8MB RAM, 1.2GB IDE Hard Drive, Windows & WinOnCD ToGo CD recording software. CDR P-75 CD Record 2 - £1,999 +VAT

# With our scanners the world of graphics applications is at your fingertips.

It goes without saying that we supply the perfect mouse and the best digitizers. But just to put you straight, we also provide flexible hand scanners and flatbed scanners. They are ideal for producing a thesis or a newsletter, since they read texts, transparencies and logos effortlessly. With a Trust scanner at home the world of graphics applications is at your fingertips. Like the other products in our range Trust scanners give maximum performance and unparalleled home entertainment. All are immediately available from stock at a very keen price. The scanners include, informative packaging, user friendly manuals, 24-hour BBS help line and a minimum 12-month guarantee. Want to know more? Drop in on one of the Trust dealers listed below, or fill in the coupon right away and become a member of the Trust Family. The latest Trust information package will then be sent to your home free of charge.



Trust flatbed scanner. Single pass with a choice of 2400 and 9600 dpi. Includes ImagePals Go 2.0, Wordlinx OCR and 16-bit SCSI interface.

## HOME ENTERTAINMENT

You can purchase Trust products in the following shops

**Computer Superstores:**  
PC Works — Byte Computer Stores  
Tempo Stores — Office 1 Superstores  
**Nationwide Dealers:**  
**Beatties Stores Nationwide**  
Essex 01206 47242 — Chelmsford 01245 266073 — London 0171 636 2547 — Nottingham 01909 530242 — Scotland 01224 481000 — Surrey 0181 6931126 North Yorks 01423 522225 — Leicester 01533 518789 — Guernsey — 01481 720155 — Manchester 0161 442 4444  
**Mail Order:**  
Nottingham — 01909 530242 — London 0181 523 4020 — Essex 01621 829500



Fill in the coupon to receive the latest Trust information pack together with a comprehensive dealer list.

### Trust family coupon

Name \_\_\_\_\_

Company name: \_\_\_\_\_ M/F

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_ PCW 11/95

Send the coupon to Aashima Distribution (UK) Ltd, Free post CL3829, Witham, Essex, CM8 3XY.

# Trust. Designed to please you.



# At £1,999\* it's the new affordable CD Recordable PC

If you're looking to purchase a new Intel Pentium® processor-based PC which is going to be used to store valuable data, then you should purchase a system which can back-up and archive the hard disk onto recordable CD-ROMs costing only £4.95 each. Alternatively you may want to use CD-ROMs to distribute large amounts of data throughout your organisation or even to clients.

Recordable CD-ROMs are the most effective, durable, permanent means of storing up to 650MB onto a single CD and can provide decades of safe storage. Any file can be quickly accessed and read directly using any multisession CD-ROM drive on any PC.

Our CDR P-75 CD Record-2 Pentium® processor-based PC comes complete ready-to-CD-record at dual speed.

\*(Pictured above priced at £1,999 +VAT with optional extras of speakers, CD-ROM drive and 16-bit sound card). With recordable CD storage costing less than 1p/MB, can you afford not to back-up with the new CD revolution?

**CD Revolution Ltd**

CDR House, Gogmore Lane, Chertsey, Surrey KT16 9AP

Tel: 01932 562000 Fax: 01932 571999 E-mail: cdrevolution@dial.pipex.com

London Showroom - 29 Villiers Street, London, WC2N 6ND Tel: 0171 930 0010

also available from CD Revolution in Frankfurt, Germany - Tel: 06196 5605 0

Cape Town, South Africa - Tel: 021 880 1497/ 1710 & Sydney, Australia - Tel: 02 9968 3953

Feature	CDR P CD Record-2	CDR P CD Record-2+	CDR P CD Record-4	CDR P MPEG-1 Encode
Choice of Intel Pentium® Processor 75/90/100MHz (+SIS chip-set) 100/133MHz(+Triton chip-set)	yes	yes	yes	yes
8MB RAM expandable to 128MB (72-pin) 256K cache 64-bit memory	yes	yes	yes	yes
1.2GB fast (10ms) IDE Hard Drive	yes	yes	yes	yes
Audio/Visual 2GB SCSI Hard Drive + Adaptec 2940 PCI SCSI Card			yes	yes
3.5" 1.44MB Floppy Drive	yes	yes	yes	yes
Quad Speed CD ROM Drive - VideoCD compatible		yes	yes	yes
16-bit Sound Blaster Sound Card		yes	yes	
Yamaha YSTM10 Speakers		yes	yes	
Cirius Logic Video card 1MB RAM	yes		yes	yes
Jakarta 2MB RAM 24-bit PCI SVGA Graphics Accelerator+MPEG Decoder		yes	yes	yes
Media Styler (Special Edition) multimedia authoring + VideoCLIP (Sampler) MPEG Editing		yes	yes	yes
15" High Resolution FST SVGA Colour Monitor	yes	yes	yes	yes
Professional Keyboard & MS Ergonomic Mouse + MS DOS 6.2/ Windows 3.11	yes	yes	yes	yes
Internal Yamaha - Quad Speed SCSI CD Recorder + Adaptec 1505 SCSI card		yes	yes	yes
Internal Philips or Pinnacle - Dual Speed SCSI CD Recorder + Adaptec 1505 SCSI card		yes		yes
Internal CD Revolution - Dual Speed SCSI CD Recorder + Adaptec 1505 SCSI card	yes			
WinOnCD ToGo - CD recording software (loaded)	yes	yes	yes	yes
OPTIVision real-time MPEG Encoder				yes
Affordable ready-to-go prices for CDR P-75 PCs	£1,999	£2,699	£3,499	£9,999
Affordable ready-to-go prices for CDR P-90 PCs	£2,099	£2,799	£3,599	£10,099
Affordable ready-to-go prices for CDR P-100 PCs	£2,199	£2,899	£3,699	£10,199
Affordable ready-to-go prices for CDR P-120 PCs	£2,399	£2,999	£3,799	£10,299
Affordable ready-to-go prices for CDR P-133 PCs	£2,549	£3,199	£3,999	£10,499

# PC-based industrial automation & lab control solutions from Roldec



## BEST-SELLING CARDS



**FPC-010 12-BIT AD/DA CARD**  
Our best-selling AD/DA card, simple BASIC operation, ideal for home or hobby applications.  
FPC-010 12-Bit AD/DA.....**£45**



**FPC-024 48 LINE DIGITAL I/O**  
The easiest way of providing digital control. Uses Intel's 8255 and 8235 ICs. Ideal for low cost PC control Systems.  
FPC-024 48 Line Digital I/O.....**£23**

**DCI-148 4-PORT RS232 ISA FIFO**  
Add four high-speed ports for Modem communications. Complete with Windows Drivers.  
DCI-148 4-Port RS232 ISA FIFO.....**£137**

## AD/DA CARDS



**DCI-072 14-BIT AD/DA 2D/A**  
Simple operation with data capture software.  
DCI-072 14-Bit AD/DA 2D/A.....**£108**

**DCI-525 ADVANCE 12-BIT AD/DA**  
High performance AD/DA combined with 16 digital I/O lines.  
DCR-525 Advance 12-Bit AD/DA.....**£204**

**DCI-508 8-BIT D/A**  
8 channels for industrial control.  
DCR-508 8-Bit D/A.....**£215**

**DCI-512 8-BIT D/A**  
Greater resolution, for better industrial control.  
DCR-512 12-Bit D/A.....**£267**

DCI-060 12-bit AD/DA.....**£81**  
DCI-062 12-bit AD/DA 2D/A.....**£92**  
DCI-070 14-bit AD/DA.....**£92**

### ROLDEC PRODUCT FOCUS:

#### DCI-100 2-PORT RS232 WITH 16650

**DCI-100 2 PORT RS232 WITH 16650**  
This card with the new 16650 UART incorporating 32-byte Read/Write buffers, for use with high-speed modems providing safer data transfer.  
DCI-100 2 Port RS232 with 16650.....**£55**



## DIGITAL I/O CARDS

**DCI-020 MULTI 8255 CARD 192 LINE**  
Features the most digital lines on one card.  
DCI-020 Multi 8255 Card 192 Line.....**£59**

**DCI-030 TTL I/O**  
64 TTL Level I/O lines, ideal for PC integration with electronic systems.  
DCI-030 TTL I/O.....**£37**

**DCI-025 64 CHANNEL I/O**  
TTL Level outputs. A wide range of daughterboards are available for interfacing. Call for details.  
DCI-030 TTL I/O.....**£267**

**DCI-028 16 CHANNEL RELAY BOARD**  
For isolated control of equipment.  
DCI-028 16-Channel Relay Board.....**£78**

**DCI-029 16 CHANNEL OPTO ISO BOARD**  
For isolating digital inputs.  
DCI-029 16-Ch. OPTO ISO Board.....**£68**

## RAM/ROM DISK CARDS

**DCR-288 ROM/RAM/FLASH**  
High-performance Autoboot card with FLASH and SRAM capacity.  
ALL07 Universal Programmer.....**£131**

**SEP81AE EPROM PROGRAMMER**  
For EPROM programming up to 8MBit.  
SEP81AE EPROM Programmer.....**£169**

DCR-512 512K ROM Card.....**£78**

## DEVICE PROGRAMMERS

**ALL03A UNIVERSAL PROGRAMMER**  
PC-based programmer. Devices covered include EEprom, MPU, PLD, GAL.  
ALL03A Universal Prog.....**£395**

**ALL07 UNIVERSAL PROGRAMMER**  
Interlaced via parallel port for programming ability for laptops or on-site applications.  
ALL07 Universal Programmer.....**£550**

**SEP81AE EPROM PROGRAMMER**  
For EPROM programming up to 8MBit.  
SEP81AE EPROM Programmer.....**£169**

**EPPO1AE EPROM PROGRAMMER**  
For EPROM programming up to 1MBit.  
EPP01AE EPROM Programmer.....**£155**



**CALL FOR OUR FULL PRICE LIST**  
**01902 45 64 64**

## SERIAL CARDS

**DCI-140 4-PORT RS232**  
The simplest way of providing 4 serial ports on existing systems.  
DCI-140 4-Port RS232.....**£40**

**DCI-150 8-PORT RS232 CARD**  
Multi-serial card for multi-user systems.  
DCI-150 8-Port RS232 Card.....**£110**

**DCI-153 8-PORT RS232 ISA FIFO**  
8 high-speed ports, with buffering, complete with Windows Driver.  
DCI-153 8-Port RS232 ISA FIFO.....**£257**

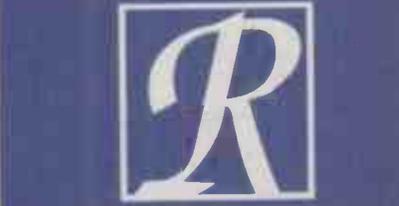
**DCI-128 2-PORT RS422/485 CARD**  
Faster and more reliable for comms at distances of up to 4000ft.  
DCI-128 2-Port RS422/485 Card.....**£73**



# ROLDEC SYSTEMS

- **Specialist skills and product knowledge**  
We have a fully-trained team with in-depth knowledge, specialist skills and expertise for a full range of scientific and industrial PC applications.
- **Established since 1990**  
We have been trading profitably since 1990, basing the strength of our business around repeat orders with satisfied customers. Our current client list includes every single University, British Aerospace, British Telecom, Rolls Royce, GEC Marconi, Motorola, CompuServe Europe, various Local and Health Authorities.
- **Distribution tie-up with Decision Computing International of Taiwan.**  
We can bring you high quality of technical products and components at truly competitive prices.
- **Genuine customer care policy**  
All our staff are trained to give you polite, knowledgeable and helpful service.
- **Credit facilities: 30 days account available (subject to status).**
- **All products carry a minimum 12 months' guarantee.**

**Call us now on**  
**01902 45 64 64**



Roldec Systems Ltd., Roldec House,  
504 Dudley Road, Wolverhampton, WV2 3AA.  
Tel: 01902 45 64 64. Fax: 01902 45 25 92

Specialix COMPUTER **DECISION** INTERFACE ADVANTECH  
Industrial & Lab Automation with PCs

All prices are exclusive of VAT and delivery. All prices are correct at time of going to press, and are subject to change without prior notice. All trademarks are acknowledged. E&OE.

# THE BEST PLACE FOR BEST PRICES

## GET WINDOWS '95 FOR ONLY £49.50!

To qualify, simply buy...

- ANY 4Mb, 8Mb, 16Mb or 32Mb memory upgrade
- ANY 1Gb or 2Gb IDE or SCSI HD



## IDE HARD DRIVES

<b>CONNER</b>	
635Mb CFS635A 12ms E-IDE	£117
850Mb CFS850A 12ms E-IDE	£135
1.3Gb CFS1275A 11ms E-IDE	£169
<b>FUJITSU</b>	
528Mb M2684T 12ms E-IDE	£115
1Gb M1606T 12ms E-IDE	£165
<b>IBM</b>	
1Gb Pegasus 10ms E-IDE	£215
<b>MAXTOR</b>	
850Mb 7850AV 12ms E-IDE	£138
1Gb 71260AT 12ms E-IDE	£175
<b>QUANTUM</b>	
540Mb Fireball 12ms IDE	£122
850Mb Trailblazer 12ms E-IDE	£143
1Gb Fireball 12ms E-IDE	£162
<b>SEAGATE</b>	
545Mb ST3660A 14ms E-IDE	£114
850Mb ST580A 11ms E-IDE	£140
1.2Gb ST31720A 12ms E-IDE	£176
<b>WESTERN DIGITAL</b>	
635Mb AC2635 12ms E-IDE	£123
850Mb AC2850 12ms E-IDE	£139
1.28Gb AC31200 10ms E-IDE	£195
1.6Gb AC31600 12ms E-IDE	£275
<b>PARALLEL IDE DRIVES</b>	
Backpack 5400 420Mb 12/14ms	£255
Backpack 5800 850Mb 12/14ms	£296
Backpack 51000 1.2Gb 12/14ms	£355

## SCSI HARD DRIVES

<b>CONNER</b>	
1Gb CFP10605 9ms	£257
1Gb CFP10805 9ms	£257
2Gb CFP21055 9ms	£495
4Gb CFP42075 9ms	£755
<b>FUJITSU</b>	
532Mb M2684S 12ms	£120
1Gb M1606S 9ms	£249
2Gb M2932S 10ms SCSI-2	£325
4Gb M4934S 10ms SCSI-2	£725
<b>IBM</b>	
1Gb Pegasus 11ms	£215
2Gb 86T0102 9ms	£655
4Gb 74C7045 9ms	£1,035
<b>HEWLETT PACKARD</b>	
2Gb C37258 9ms	£465
<b>MICROPLIS</b>	
2.1Gb Taurus 8.5ms SCSI-2	£568
4.3Gb Capricorn 8.5ms SCSI-2	£765
9.1Gb Scorpio 12ms SCSI-2	£1,499
<b>QUANTUM</b>	
850Mb Trailblazer 12ms SCSI	£172
1Gb Fireball 12ms SCSI	£224
2.1Gb Atlas 9ms SCSI	£575
4.3Gb Atlas 8ms SCSI	£795
<b>SEAGATE</b>	
1Gb ST31230N Hawk 9ms SCSI-2	£289
2.1Gb ST32430N Hawk 9ms SCSI-2	£588
2.1Gb ST32550N Barracuda 8ms SCSI-2	£635
4Gb ST15150N 10ms SCSI-2	£755
4Gb ST15150N Barracuda 8ms SCSI-2	£1,045
9Gb ST410800N Barra. 10ms SCSI-2	£1,575

## FLOPPY DRIVES

3.5" 1.44MB Sony	£18
5.25" 1.2MB Panasonic	£33

## TAPE BACKUP / STORAGE

<b>HP COLORADO</b>	
Jumbo 350Mb DJ35 Internal	£75
Jumbo 680Mb DJ25 Internal	£124
Jumbo 1.4Gb DJ50 Internal	£189
Colorado 350Mb Trakker External	£155
Colorado 700Mb Trakker External	£209
Colorado T1000 800Mb Travan	£205
<b>CONNER</b>	
Conner 420Mb Tape Store Internal	£97
Conner 850Mb Tape Store Internal	£160
Conner 4Gb TSM4000 Int. E-IDE ATAPI	£399
Conner 4Gb TSM4000 Int. SCSI ATAPI	£399
Conner 2Gb DAT Internal	£625
Conner 8Gb DAT Internal	£675
<b>EXABYTE</b>	
Exabyte 2Gb DAT Internal SCSI	£565
<b>HEWLETT PACKARD</b>	
HP 2Gb DAT Surestore Internal	£565
HP 4Gb DAT Surestore Internal	£659
HP 8Gb DAT Surestore Internal	£775
HP 2Gb DAT Surestore External	£645
HP 4Gb DAT Surestore External	£739
HP 8Gb DAT Surestore External	£885
<b>OMEGA</b>	
Jomega 800Mb Travan 10800 & tape, int	£122
Jomega 800Mb Travan 10800 & tape, ext	£203
Jomega 1, 6/3 2Gb 103200 Travan3 includes fast controller & tape	£255

## RECORDABLE CD

Plasmon RF4102 Int. SCSI (+ software)	£1,250
JVC XR-W2001 Internal SCSI	£1,295
Kodak PLD25 Internal SCSI	£2,100
Philips CDD522 Internal SCSI	£1,499
Fuji Writable Media	£8
HP SureStore C432A 4020 Internal + Alchemy DBase s/w & Incat CD Software	£815

## GRAPHICS CARDS

Trident 256K SVGA Card	£19
Trident 512K SVGA Card	£24
1MB SVGA Card Trident 8900	£38
1MB VLB Cirrus 5492	£45
1MB PCI LB Cirrus 5434	£54
1MB PCI LB Cirrus 5430	£43
Diamond Viper Pro Video 2MB PCI/VLB	£265
Diamond Viper Pro Video 4MB PCI/VLB	£365
<b>DIAMOND STEALTH GRAPHICS CARDS</b>	
1MB Diamond Stealth SE PCI	£69
1MB Diamond Stealth SE VLB	£55
2MB Diamond Stealth SE PCI or VLB	£117
1MB D/S 64 DRAM PCI	£85
1MB D/S 64 DRAM VLB	£85
2MB D/S 64 DRAM PCI	£125
2MB D/S 64 DRAM VLB	£125
2MB D/S 64 Video VRAM PCI	£208
2MB D/S 64 Video VRAM VLB	£208
4MB D/S 64 Video VRAM PCI	£305
4MB D/S 64 Video VRAM VLB	£329
<b>NUMBER 9</b>	
1MB 9FX Vision 330 PCI or VLB	£94
1MB 9FX Vision 531 PCI or VLB	£134
2MB 9FX Vision 330 PCI or VLB	£138
2MB 9FX Vision 531 PCI or VLB	£175
2MB 9FX Motion 771 PCI or VLB	£222
4MB 9FX Motion 771 PCI or VLB	£335
4MB Imagine 128 1280 PCI or VLB	£475
4MB Imagine 128 1600 PCI or VLB	£599
6MB Imagine 128 PCI or VLB	£1,025
<b>ORCHID</b>	
1MB Kelvin EZ PCI or VLB	£89
1MB Kelvin 64 PCI or VLB	£99
1MB Fahrenheit 64 PCI	£119
2MB Kelvin 64 PCI or VLB	£135
2MB Fahrenheit 64 PCI	£159
2MB Fahrenheit 64 VLB	£155
2MB Fahrenheit Pro 64 PCI or VLB	£245
4MB Fahrenheit Pro 64 PCI or VLB	£349

## CD-ROM DRIVES

<b>AT INTERFACE</b>	
Panasonic CR562 Internal Dual Speed	£45
Creative Labs 563 Internal Dual Speed	£67
Interface card for the above	£9

## IDE INTERFACE

<b>IDE INTERFACE</b>	
Goldstar GCD520B E-IDE Dual Speed	£59
Mitsumi FX400 E-IDE Quad Speed	£99
Toshiba XM5302B IDE Quad Speed	£113
Sony CDU-76E IDE Quad Speed	£122
NEC IDE Internal Quad Speed	£110
Panasonic IDE Internal Quad Speed	£96
Pioneer DR-VA124X Quad Speed	£122
Teac Quad Speed	£96
<b>Quad Speed CD-ROM &amp; 650MB Rewritable Optical</b>	
	£499
<b>SCSI INTERFACE</b>	
Toshiba XM5501 Internal Quad Spd	£175
Pioneer DRV124X Internal 4.4 Speed	£199
Toshiba XM3601 Internal 4.5 Speed	£229
Plexor 4PLEX Internal Quad Speed	£279
Plexor 4PLEX External Quad Speed	£359
NEC 6X1 Internal 6 Speed	£255
NEC 6XE External 6 Speed	£350

## PARALLEL PORT

Microsolutions Backpack Dual Speed	£215
Microsolutions Backpack Quad Spd	£265

## MULTIMEDIA BUNDLES (IDE)

Panasonic 2X CD-ROM with 16-Bit stereo sound card & 4W speakers	£95
Mitsumi 4X IDE CD Drive with 16-Bit stereo sound card and 25W speakers	£149

The sound cards supplied with Roldec kits are ATAPI cards which guarantees you high quality, true 16-bit sound and a built-in enhanced IDE interface. When these are used with a Quad Speed drive you get enhanced sound quality.

## MULTIMEDIA CARDS

<b>CREATIVE LABS</b>	
Video Spigot	£75
TV Coder (External)	£119
MP400 MPEG Player	£174
Video Blaster RT300	£255
<b>ORCHID</b>	
1Mb Kelvin MPEG	£249
2Mb Kelvin MPEG	£295
Videoala	£249
Videoala Pro	£439
Videoala Premium	£569
<b>HAUPPAGE</b>	
Win/TV Prisma	£149
Win/TV Cinema	£189
Win/TV Celebrity	£259
<b>VIDELOCK</b>	
1Mb 928 Movie ISA	£189
1Mb 928 Movie ISA Sound	£259
1Mb 928 Movie VLB	£189
1Mb 928 Movie VLB Sound	£259
1Mb 928 Movie with MPEG Player ISA	£425
1Mb 928 Movie with MPEG Player VLB	£425
1Mb 928 VRAM Upgrade Kit	£85
2Mb PCI Movie	£329
Captivator & Video for Windows	£165
Captivator & Video for Win/Action	£185
Captivator Pro	£189
Captivator Pro & TV	£219
MPEG Player for VMC	£239

## MONITORS

<b>15" SVGA FST COLOUR MONITOR</b>	
<b>ONLY £220</b>	
<b>ESP</b>	
14" VGA Mono	£65
14" SVGA 0.28mm MPRII	£145
14" SVGA 0.28 NI	£145
15" XGA 0.28 NI 1280x1024	£199
<b>SMILE</b>	
14" SVGA	£160
15" SVGA FST	£220
17" SVGA 0.26mm FST	£480
17" SVGA 0.28mm FST	£399
<b>SONY</b>	
15" SVGA SFI NI 1280x1024	£320
17" SVGA SFI NI	£637
20" SVGA SFI NI	£1,428
<b>CTX</b>	
14" CTX 1451 CD NI MPRII	£169
15" CTX CPS-1565GN NI SVGA MPRII	£239
17" CTX 1785GM SVGA MPRII 26	£499
17" CTX 1765GM SVGA MPRII 28	£445
LMT1000 16-Greyscale LCD VGA 9.4"	£495
LMT5020 4096-Colour LCD VGA 9.4"	£1,999
<b>IIVAMA</b>	
15" Vision Master FST MF-8115	£265
17" Vision Master FST MF-8617	£535
21" Vision Master FST MF-8221	£1,249
21" Vision Master FST MF-9121	£1,295
<b>VIEWSONIC</b>	
14" Viewsonic 6E 1024 x 768 NI	£165
15" Viewsonic 15E5 1280 x 1024 NI	£245
17" Viewsonic 17-2 1280 x 1024 NI	£669
20" Viewsonic 20G 1600 x 1200 NI	£989
21" Viewsonic 21 1600 x 1200 NI	£1,335
<b>MITSUBISHI</b>	
15" SD5520 Diamond Scan 15FS	£339
17" FFY7705 Diamond Scan 17FS	£595
17" THG8705 Diamond Pro 17TX	£919
21" THN9105 Diamond Pro 21TX	£1,295
<b>PHILIPS</b>	
14" Mono Monitor 14M	£89
14" Enhanced VGA 14C	£169
15" Brilliance Autocan 15B	£249
15" Brilliance Autocan NI 15A	£275
17" Autocan 17C	£429
17" Autocan 17B	£559
20" Autocan 20C	£775
20" Autocan 20T	£1,299
21" Autocan 21B	£1,439
21" Autocan with Cyberscreen21A	£1,749

## PRINTERS • PRINTERS

<b>BROTHER</b>	
HL-630 6ppm Windows Printer	£319
HL-631 6ppm (1Mb) Windows Printer	£359
HL-660 6ppm, 600dpi Windows Laser	£459
HL-1260 12ppm, 1200dpi B/W Laser	£899
<b>CANON</b>	
BJ30 Mono Portable	£152
BJ200e Bubblejet	£170
BJC70 Colour Portable	£225
BJ230	£239
BJ300 80-column Bubblejet	£355
BJ330 136-column Bubblejet	£399
BJC400 Colour	£229
BJ600e Colour Inkjet	£334
BJC800 Colour Bubblejet	£1,025
<b>HEWLETT PACKARD DESKJET 600</b>	
<b>ONLY £209</b>	
<b>IF YOU CAN'T SEE THE ITEM YOU NEED, CALL ROLDEC ON 01902 45 64 64</b>	
<b>EPSON</b>	
LX300 9-pin Dot Matrix	£95
LX1050 9-pin Dot Matrix	£195
FX870 9-pin Dot Matrix	£255
FX1170 9-pin Dot Matrix	£315
LQ300 24-pin Dot Matrix	£155
LQ570 24-pin Dot Matrix	£225
LQ1070 24-pin Dot Matrix	£303
LQ870 24-pin Dot Matrix	£385
LQ1170 24-pin Dot Matrix	£445
Stylus 1000	£329
Stylus Pro XL - Oversize A3	£1,589
SQ870 Inkjet	£449
SQ1170 Inkjet	£599
EPL-3000 4ppm Laser	£369
EPL-5200 6ppm Laser 600dpi	£479
EPL-9000 8ppm Laser 600dpi	£1,195
EPL-9000PS 8ppm PS Laser 600dpi	£1,375
<b>HEWLETT PACKARD - DESKJETS</b>	
HP Deskjet 600C	£214
HP Deskjet 340	£175
HP Deskjet 660C	£279
HP Deskjet 850C	£365
<b>HEWLETT PACKARD - LASER PRINTERS</b>	
HP Laserjet 5L	£375
HP Laserjet 5P	£585
HP Laserjet 5MP	£725
HP Laserjet 4 Plus	£985
HP Laserjet 4M Plus	£1,298
HP Laserjet 4si	£2,099
HP Laserjet 4si MX	£2,965
HP Laserjet 4V A3	£1,365
HP Laserjet 4MV A3 PostScript	£1,989
HP Colour Laserjet	£4,199
<b>HEWLETT PACKARD - PAINT PRINTERS</b>	
HP Paintjet XL300	£1,595
HP Paintjet XL300 PostScript	£2,575
<b>MITSUBISHI</b>	
CP-J10 Inkjet	£225
DiamondScript 210 Colour	£1,890
Colour Sublimation 53410-30	£3,699
Colour Thermal Transfer G6710-10	£4,099
Colour Sublimation 53600-30	£4,699
DiamondScript 230 Colour	£5,350
A3 Colour Sublimation S6600-30	£9,299
<b>NEC</b>	
Superscript 610 Plus 6ppm Laser	£294
Superscript 660 Plus 6ppm Laser	£405
Superscript 660i Plus 6ppm Laser	£555
S'cript Colour 3000 Plus 1ppm Laser	£668

## IF YOU CAN'T SEE THE ITEM YOU NEED, CALL ROLDEC ON 01902 45 64 64

## CREATIVE LABS SOUNDBLASTER CARDS

Value 16-bit Stereo	£59
16 Value IDE	£62
16 Pro IDE	£83
16 MCD	£45
Wave Blaster 2 Upgrade	£90
16 Pro IDE ASP	£104
16 SCSI-II	£65
AWE 32 IDE Value	£105
AWE 32, with 4M bit on board	£160
AWE 32 IDE	£155
Video Blaster MP400	£171
Digital Edge 3X	£195
Discovery 4X	£265
Multimedia Home CD	£275



TO PLACE YOUR ORDER CALL 01902 45 64 64



All prices are exclusive of VAT and delivery. All prices are correct at time of going to press, and are subject to change without prior notice. All trademarks are acknowledged. E&OE.

# ROLDEC'S YELLOW PAGES!

# ROLDEC SYSTEMS



## MEMORY

256K 256K 70ns SIMM.....	£10
SIM70 1MB 70ns SIMM.....	£26
SIM4M 4MB 70ns SIMM.....	£89
72 pin 4MB 70ns SIMM 1x32.....	£88
72 pin 4MB 70ns SIMM 1x36.....	£105
72 pin 4MB 70ns SIMM EDO.....	£105
72 pin 8MB 70ns SIMM 2x32.....	£182
72 pin 8MB 70ns SIMM 2x36.....	£205
72 pin 8MB 70ns SIMM EDO.....	£205
72 pin 16MB 70ns SIMM 4x32.....	£320
72 pin 16MB 70ns SIMM 4x36.....	£345

**CALL US FIRST ON  
01902 45 64 64**

FOR THE MOST UP-TO-DATE PRICES!



## FUNCTION CARDS

ISA Multi I/O 1P/2S/1G IDE controller.....	£8
VESA Multi I/O + Mode 3 Enhanced IDE.....	£12
VESA Multi I/O + Mode 4 Enhanced IDE.....	£15
VESA High Perf. I/O, 16550 UART.....	£14

### FUTURE DOMAIN FUNCTION CARDS

ISA Fast SCSI-II controller.....	£99
PCI Fast SCSI-II controller.....	£119

### ADAPTEC FUNCTION CARDS

ISA 1542CF Fast SCSI controller.....	£135
ISA 1542CF Fast SCSI controller kit.....	£169
VESA SCSI - 2842A kit.....	£179
PCI SCSI - 2490 kit.....	£175
EISA SCSI Master kit - 2742.....	£279



## FAX MODEMS (B.A.B.T. APPROVED)

Motorola Professional Sol'n 28.8 Ext.....	£165
Motorola Internet Solution 28.8 Ext.....	£175
PACE Microlin NB32+ PCMCIA.....	£169
PACE Linnet FX34+ External.....	£210
PACE Microlin NB34 PCMCIA.....	£217
PACE Microlin FX34 Pocket.....	£265
PACE Microlin FX34 Internal.....	£275
Roldec 14,400 V32 Internal.....	£66
Roldec 14,400 V32 External.....	£85
Roldec 14,400 V32 PCMCIA.....	£167
Roldec 28,800 V34 Internal.....	£119
Roldec 28,800 V34 External.....	£145
US Rob. Worldport 24/9.6 PCMCIA.....	£129
US Robotics Sportster V34 Internal.....	£168
US Robotics Sportster V34 External.....	£168
US Robotics Courier V34 Internal.....	£238
US Robotics Courier V34 External.....	£238

**IF YOU CAN'T SEE THE ITEM  
YOU NEED, CALL ROLDEC ON  
01902 45 64 64**



## NETWORK SOFTWARE

Novell Personnel Software.....	£42
Novell Personnel Software 5-user.....	£176
Novell Network 3.12 5-user.....	£415
Novell Network 3.12 10-user.....	£962
Novell Network 3.12 25-user.....	£1,430
Novell Network 3.12 100-user.....	£2,704
Novell Network 4.1 5-user.....	£412
Novell Network 4.1 10-user.....	£937
Novell Network 4.1 25-user.....	£1,450
Novell Network 4.1 100-user.....	£2,850



## NETWORK CARDS

NE2000-Compatible BNC.....	£19
NE2000-Compatible RJ45.....	£21
NE2000-Compatible Combo.....	£26
Novell NE2000 16-Bit BNC or RJ45.....	£57
3COM 3C509 16 Bit BNC or RJ45.....	£78
SMC Elite Ultra 16 Bit BNC or RJ45.....	£63
Intel Etherexpress 16 Bit BNC or RJ45.....	£73
D-Link PCI Ethernet 32 Bit combo.....	£89



## 486 MOTHERBOARDS

Intel CPUs	QDI	PB4-256	GA-486 AM	PCI 48AL
Bareboard	-	£62	£75	£92
486DX2-66	£55	£117	£130	£147
486DX4-75	£92	£154	£167	£184
486DX4-100	£110	£172	£185	£202
<b>AMD CPUs</b>				
486DX2-66	£50	£112	£125	£142
486DX2-80	£69	£131	£144	£161
486DX4-100	£79	£141	£154	£171
<b>SGS CPUs</b>				
486DX2-66	£29	£91	£104	£121
486DX2-80	£35	£97	£110	£127

### Q01

- 2/3 Baby AT size board with 256K cache, OPTI chipset, AMI Win BIOS Flash ROM.
- Memory 4 x 30 pin & 2 x 72 pin SIMM slots supports up to 64MB, 3 x VESA, 6 x ISA 16 Bit, 1 x 8 expansion slots. Supports DX4 Intel, AMD & Cyrix CPU, Green Functions.

### PB4-256

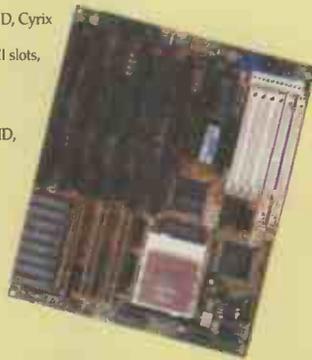
- 1/2 Baby AT size board. 486SX, SX2, DX, DX2, DX4 Intel, AMD, Cyrix Processors, 256K write-back cache,
- Up to 64MB RAM on-board, ALI Chipset, AWARD Bios, 3 PCI slots, 3 ISA, 1 PCI/ISA slots
- 2 PCI IDE channel and floppy controller
- 2 serial 16550 UART, 1 parallel ECP/EPP

### GA-486AM

- 1/2 Baby AT size board. 486SX, SX2, DX, DX2, DX4 Intel, AMD, Cyrix Processors, 256K or 512K write-back cache.
- Up to 64MB RAM on-board, UMC Chipset, AWARD Bios, 3 PCI slots, 4 ISA slots
- 2 PCI fast IDE channel and floppy controller
- 2 serial 16550 UART, 1 parallel ECP/EPP

### PCI48AL

- 486SX, SX2, DX, DX2, DX4 Processors Intel, AMD, Cyrix 256K or 512K write-back cache.
- Up to 64MB RAM on-board, ALI Chipset, AMI BIOS, 3 PCI slots, 4 ISA slots.
- 2 PCI E-IDE channel (mode 3/4) and floppy controller 2.88.
- 2 serial fast UART 16550 compt., 1 parallel ECP/EPP,
- 1 PS/2 mouse ports. 1/2 baby AT size.



## PENTIUM™ MOTHERBOARDS

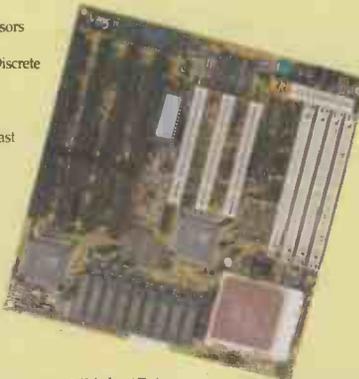
CPU	PH5-256	PCI-54IT	Intel™ ZAPPA	Intel™ ENDEAVOUR
Bareboard	-	£125	£159	£149
Pentium™-75	£129	£254	£288	£278
Pentium™-90	£210	£335	£369	£359
Pentium™-100	£250	£375	£409	£399
Pentium™-120	£390	-	£549	-
Pentium™-133	£499	-	£658	-

### PH5-256

- Intel P54C/CT 75/90/100/120/133/150/166/180/200MHz processors
- 256K or 512K write-back cache; Up to 64MB RAM
- Pipelined Burst Synchronous module, Asynchronous module, or Discrete Asynchronous on board
- Up to 128MB RAM Fast Page and EDO support
- SIS Chipset; Plug and Play AWARD BIOS; 4 PCI slots, 3 ISA slots
- 2 PCI E-IDE channel (mode 3/4) & floppy controller 2.88; 2 serial fast UART 16550 compt., 1 parallel ECP/EPP; 1 serial/2 mouse ports; 1/2 baby AT size

### PCI54IT

- Intel P54C/CT 75/90/100/120/133/150/166/180/200MHz processors
- 256K or 512K write-back cache; Up to 64MB RAM
- Pipelined Burst Synchronous module, Asynchronous module, or Discrete Asynchronous on board
- Up to 128MB RAM Fast Page and EDO support
- Intel Triton Chipset; Plug and Play AMI/AWARD BIOS; 4 PCI slots, 3 ISA slots
- 2 PCI E-IDE channel (mode 3/4) & floppy controller 2.88;
- 2 serial fast UART 16550 compt., 1 parallel ECP/EPP, 1 serial/2 mouse ports; 1/2 baby AT size



## SCANNERS

HP Scanjet IHP AT Interface.....	£384
HP Scanjet IIICX AT Interface.....	£759
HP Scanjet IIICX Document Feeder.....	£Call
Roldec 600/1200dpi Flatbed.....	£255
Roldec 1200/2400dpi Flatbed.....	£299
Mustek Hand-held 256-greyscale.....	£55
Mustek Hand-held 1200 Colour.....	£119



## KEYBOARDS

CKB33 Soft Touch.....	£10
RKB65 102 Key Click.....	£13
KB61102 Key Click Metal.....	£20
Cherry High Quality Keyboard.....	£23



## CASES

AW-4000 Workstation 90w PSU, TUV.....	£57
AS-4300 Slimline 200w PSU, TUV.....	£49
AD-4300 Desktop 200w PSU, TUV.....	£49
AM-4000 Mini Tower 200w PSU, TUV.....	£46
AM-4300 Midi Tower 200w PSU, TUV.....	£59
AB-4000 Big Tower 250w PSU, TUV.....	£81



## MICE & TRACKBALLS

ECN3 MS-Compatible Mouse.....	£5
TX-300A MS Compat Mouse & Mat.....	£9
MSM-2 Microsoft Mouse.....	£29
LTM Logitech Mouse.....	£25
TK-300 Desktop Trackball.....	£20

Low Cost Cases with Speed Display	
WE-827 Mini Tower Case, 200w PSU.....	£34
WE-837 Desktop Case, 200w PSU.....	£34
WE-935 Midi Tower Case, 200w PSU.....	£47
WE-990 Full Tower Case, 250w PSU.....	£75

**IF YOU CAN'T SEE THE ITEM  
YOU NEED, CALL ROLDEC ON  
01902 45 64 64**

• We are in our sixth year of trading, offering a huge range of popular brand PC peripherals, add-ons and software.

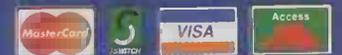
• Specialist skills and product knowledge. We have a fully-trained team with in-depth knowledge, specialist skills and expertise for a full range of scientific and industrial PC applications.

• Established in the Public Sector. Roldec are a reliable and well-established supplier to the Public Sector. Since May 1995, we have been awarded the following number of contracts: 37 National Government, 263 Local Government, 11 Ministry of Defence, 506 University, 162 Higher Education, 282 Schools and 498 Times 100. You're in safe hands!

• Distributor for Decision Computing International of Taiwan. We can bring you high quality of technical products and components at truly competitive prices.

• Genuine customer care policy. All our staff are trained to give you polite, knowledgeable and helpful service. We offer a 14-day "no-quibble" money back guarantee (subject to our terms and conditions). We also offer fast turnaround on warranty repairs and free telephone technical support for all our customers.

**Call us now on  
01902 45 64 64**



Roldec Systems Ltd.,  
Roldec House, 504 Dudley Road,  
Wolverhampton, WV2 3AA.

Fax: 01902 45 25 92

**PRICES CHANGE DAILY! CALL 01902 45 64 64**

.... DON'T FORGET! ALL PRICES ARE EXCLUSIVE OF VAT AND DELIVERY .....

# SALE SALE SALE SALE

LANTEC

g@lantec@ibmmail.com

LANTEC DIRECT ARE FULLY ACCREDITED BY THESE MANUFACTURERS

COMPAQ

digital

HEWLETT PACKARD  
Authorised Reseller  
Personal Computer  
Products

IBM  
Authorised Dealer

IBM Personal Computers

intel

LEXMARK

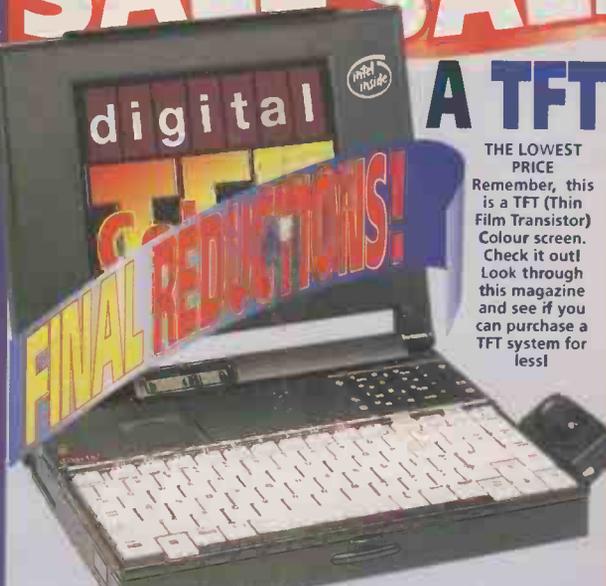
Microsoft

olivetti

TOSHIBA

g@lantec@ibmmail.com

LANTEC



## A TFT Colour notebook 486

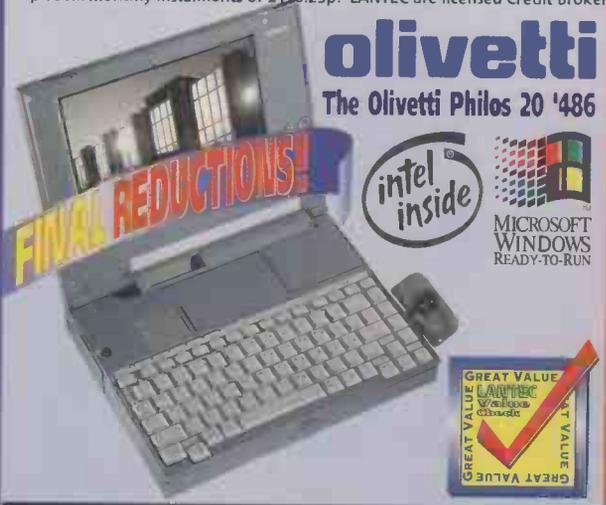
**THE LOWEST PRICE**  
Remember, this is a TFT (Thin Film Transistor) Colour screen. Check it out! Look through this magazine and see if you can purchase a TFT system for less!

Intel 486SL 25Mhz 3.3v processor • Integrated 486SL maths co-processor • 8Kb internal cache memory • Built-in sound system and speaker • 4Mb of fast system RAM • RAM expandable to 32Mb • Removable IDE 120Mb hard disk drive • 1.44Mb removable 3.5" floppy disk drive • 8.4" Thin Film Transistor (TFT) Active Matrix colour LCD display • On-board video controller with 512KB of video RAM • Resolution: 640 x 480 in 256 colours on integrated LCD TFT display, or up to 1024 x 768 in 16 colours on external monitor - simultaneous display in 640x480 mode • PCMCIA version 2.0 type III slot • 98/99 key keyboard • Integrated pop-up trackball mouse • Interfaces: 1 serial, 1 parallel, external monitor & PS/2 standard mouse / keyboard socket, dock box connector port • Nickel-Metal-Hydride (NiMH) battery pack • Battery life up to 9.45 hours (maximum) • Advanced power management • Intelligent peripheral time-outs and suspend mode • Service LCD panel "Fuel Gauge" • Autosensing power supply - quick charges in only 85 minutes with system off • MS DOS and Windows 3.1 included • Weighs only 2.5Kg including battery • FREE Carrying case • Three year return-to-base warranty.

**PLUS** Interest Free Credit Available!

DECpc 4255LC/e TFT  
**999** Top Value!

Personal and business INTEREST FREE CREDIT terms are available on this system at 0% APR to businesses and persons over the age of 18, subject to status and payment of instalments by direct debit. A deposit of 25% is required and six equal instalments. Example Purchase price: £1,410 including VAT. £352.50 deposit is required, plus six monthly instalments of £176.25p. LANTEC are licensed Credit Brokers. Offer is subject to change without notice. Written quotations available upon request.



## olivetti 486 mono Notebook

The Olivetti Philos 20 '486

intel inside  
MICROSOFT WINDOWS READY-TO-RUN

Intel 486SL, 25Mhz, (3.3v) Microprocessor • 4Mb RAM (expandable to 32Mb) • 2.5" hard disk drive • 120 Mb capacity • 3.5" 1.44Mb floppy drive (removable) • Backlit, 8.4" VGA passive Matrix Mono LCD screen with 64 grey shades • 82/83-key, PS/2 compatible keyboard • Rechargeable 15 Watt NiCad battery. (Battery life is from 3 to 6 hours depending upon peripherals used.) • Integrated Pop-Up Trackball • Serial port (RS232-C compatible) • Parallel printer port • External VGA video proprietary interface • External keyboard/mouse port (PS/2 compatible) • MS DOS 5.0 (or later) • MS Windows 3.1 • Lotus Organizer for Olivetti • Online manuals • Interlink for file transfer • File transfer cable • Dimensions - 279mm x 216mm x 45mm • Weight - 2.1kg • "ExtraTime" Power Management System.

Olivetti Philos 20 '486  
**499** Top Value!

\*You may ADD Lotus 1-2-3 spreadsheet v4.01 PLUS Lotus AmiPro word processing v3.01 AND a Carrying Case for JUST £50

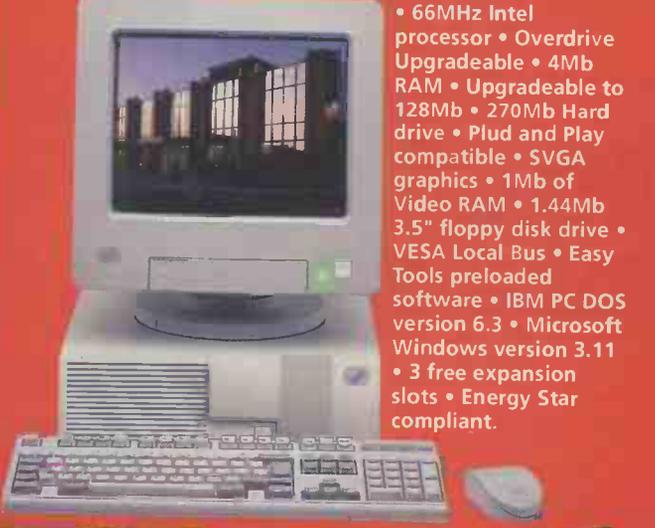


MICROSOFT WINDOWS READY-TO-RUN

Microsoft WORKS  
You may purchase Microsoft Works for just £33 when you buy this PC from LANTEC Direct!

An ideal base for creating a Multimedia system. Sound card and double-speed CD ROM drive fit easily!

## IBM PC 300 486/DX2 66MHz



• 66MHz Intel processor • Overdrive Upgradeable • 4Mb RAM • Upgradeable to 128Mb • 270Mb Hard drive • Plug and Play compatible • SVGA graphics • 1Mb of Video RAM • 1.44Mb 3.5" floppy disk drive • VESA Local Bus • Easy Tools preloaded software • IBM PC DOS version 6.3 • Microsoft Windows version 3.11 • 3 free expansion slots • Energy Star compliant.

Microsoft WORKS  
You may purchase Microsoft Works for just £33 when you buy this PC from LANTEC DIRECT

GREAT VALUE  
LANTEC  
GREAT VALUE

intel inside

MICROSOFT WINDOWS READY-TO-RUN

IBM PC 300 486/DX2 Model 270  
**659** LANTEC Stock Clearance Price.

For anyone looking for a great bargain in 486s, look no further, you've found it! But you'll have to call us for the details we're not allowed to print here - like the name of the manufacturer of this superb 50MHz 486 PC. Just check out this specification and price!

Manufactured in the UK by a VERY well known manufacturer to the highest quality • 80486 processor • 50 MHz clock speed • 240Mb Hard disk • Western Digital LocalBus Video Controller • Acer Low Emission SVGA Display • Display dot pitch 28mm • Windows version 3.1 • Quality keyboard • Quality mouse • MS DOS 6.2

The "PC 2000" 486/50 Complete System  
**599** Incredible value for money! Call for the details we can't print here!

A superb PC like this IBM deserves the best colour display. A highly suitable screen is the IBM 14" 2248 Colour Monitor.

IBM 14" 2248 Colour Monitor  
**218**

# Hewlett-Packard Printers

hp  
HEWLETT  
PACKARD  
Authorised Reseller  
Personal Computer  
Products

LANTEC



## The Hewlett-Packard DeskJet 660C



Fast, professional-quality black printing for crisp, sharp characters • Enhanced, clear and vivid colours • Easy to use • Easy to set up • Built-in sheet feeder • Three years warranty

Hewlett-Packard DeskJet 660C  
**£283** HP Support Pack: £65

HP DeskJet 660C SupportPack ..... £65  
HP DeskJet 660C spare black cartridge ..... £19  
HP DeskJet 660C spare colour cartridge ..... £21



## The Hewlett-Packard DeskJet 340 A great companion to any PC

• 3 pages per minute in black and white • Up to 4 minutes per page in colour (with optional colour kit) • 600 x 300 DPI with RET on plain paper (in monochrome), 300 x 300 DPI in colour • built-in HP ColourSmart Technology • 500 pages monthly usage • Optional wireless (Infra-red) printing • 30 sheet input tray • 6 typefaces and 13 scaleable Windows fonts • 1 year warranty included

Hewlett-Packard DeskJet 340  
**£176** Price now includes Sheet Feeder!

• Warranty extendable with HP SupportPack.  
• NOW INCLUDES SHEET FEEDER!  
Colour Kit - £28  
Battery pack ..... £25  
Spare black cartridge ..... £15  
Spare colour cartridge ..... £22

## The Hewlett-Packard LaserJet 5L

• 4 pages-per-minute • 600 DPI Resolution • 26 internal scalable typefaces • 26 TrueType fonts on floppy • 1Mb standard memory with MET • memory expandable to 9Mb • 4,000 Pages/month capacity • parallel interface • PCL5e or HP PrintSmart language • 1 year return-to-base warranty • Warranty extendable with HP SupportPack • Supports paper, envelopes, transparencies, cards and labels.



Hewlett-Packard LaserJet 5L  
**£357** HP Support Pack: £105

HP LaserJet 5L SupportPack ..... £105  
HP LaserJet 5L Toner cartridge ..... £POA  
HP LaserJet 5L 1Mb memory expansion kit ..... £POA



## The Hewlett-Packard DeskJet 600

Replacing the HP DeskJet 540, the HP DeskJet 600 is easy to set up and install. Designed to be "Family-friendly" the Dr. DeskJet troubleshooting software tools

will help you if things go wrong. Basically a monochrome printer, (at up to 4 pages per minute,) the DeskJet 600 will print occasional colour (with the optional Colour Kit) at up to 1 minute per page.

Hewlett-Packard DeskJet 600  
**£215** HP Support Pack just £40

HP DeskJet 600 SupportPack ..... £40  
HP DeskJet 600 Spare black cartridge ..... £19  
HP DeskJet 600 Optional Colour Kit ..... £29

Enjoy total peace of mind by purchasing a Hewlett-Packard SupportPack. This will extend your warranty to 3 years and will provide you with on-site, next day response for each of the above printers. The costs are: HP DeskJet 340 and HP DeskJet 600 - £40, HP DeskJet 660C - £65, and HP LaserJet 5L - £105.

## Windows '95 - What you Need to Know!

Microsoft Windows '95 represents a major step forward in PC ease of use and functionality. Microsoft say it will run on virtually any 386 or 486 system with 4Mb of RAM memory. However, LANTEC's opinion is that you really need a 486DX 33Mhz system and a minimum of 8Mb of RAM to use this new graphical environment. To really make it fly, we suggest 16Mb or more - especially if you plan to use the easy multi-tasking facilities in Windows '95. With memory upgrades being in short supply and quite expensive right now, we strongly advise you to buy your new PC with extra memory at the outset.

MS Windows '95 full copy ..... £118.00  
MS Windows '95 (3.1 upgrade) .... £63.00  
MS Office '95 full copy ..... £347.00  
MS Office Pro '95 full copy ..... £449.00  
MS Plus for Windows '95 ..... £27.00

Make the most of Windows '95 with a sound card, speakers and a CD ROM drive. We have easy-to-install complete packages at very reasonable prices. Call for details. We also sell all regular software packages.



LANTEC Direct is part of LANTEC Information Services Ltd, a successful £83m UK Company



Our huge warehouse holds millions of pounds worth of stock and thousands of product lines.

Your PC can be customised in our brand new State-of-the-art configuration facility.



These trucks carry over £1.5m worth of orders to LANTEC's UK customers every week. We can often deliver next day.

LANTEC Information Services Ltd are FULLY BSEN ISO 9002:994 Registered, Your guarantee of quality products and service.



Private and Business Sales: Corporate & Government:  
**01753 777777 01753 777744**

Prices EXCLUDE VAT and DELIVERY and are subject to change without notice. PC Delivery Charge £14. Call the LANTEC DIRECT Orderline or fax your order to 01753 777780 or send your order with a cheque or postal order to: LANTEC DIRECT • Langley Business Centre • Station Road • Berkshire • SL3 8YR. Please allow seven working days for cheque clearance. Although most orders are despatched the same or following day, please allow up to 28 days for delivery. Credit cards will not be debited until goods are ready for despatch. Screen displays may be simulated. E&OE. All orders are subject to LANTEC DIRECT Terms and Conditions of Sale, copies of which are available upon request. LANTEC Information Services Limited are licenced credit brokers.

Internet Addresses: Private and small business sales: gblantec@bmmail.com Corporate and Government sales: gblanac1@bmmail.com Computer services: INTERNET:gblantec@bmmail.com



LANTEC DIRECT

LANTEC

# TOSHIBA Portables from LANTEC Direct

LANTEC ARE A TOSHIBA SYSTEMS RESELLER - BUY IN CONFIDENCE FROM PEOPLE WHO REALLY KNOW THEIR PRODUCTS!

LANTEC

LANTEC DIRECT ARE FULLY ACCREDITED BY THESE MANUFACTURERS

COMPAQ

digital

HEWLETT PACKARD  
Authorised Reseller  
Personal Computer  
Products

IBM

Authorised Dealer

IBM Personal Computers

intel

LEXMARK

Microsoft

olivetti

TOSHIBA

LANTEC

## T2110CS



- Intel 486DX4 Processor
- 75Mhz clock speed
- 4Mb RAM expandable to 28Mb
- 350Mb hard disk
- 3.5" 1.44Mb floppy drive
- 10.4" STN colour display
- External SVGA monitor port
- 2 x PCMCIA type II or 1 x type III slot
- Mousepoint pointing device
- 4 hours battery life
- Built-in autosensing AC adapter
- Optional Port Replicator
- DOS 6.2 and Windows 3.1/W95
- 1 year world-wide warranty



## T2130CS



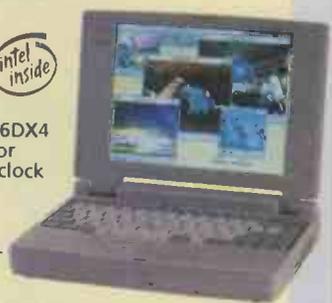
- Intel 486DX4 Processor
- 75Mhz clock speed
- 8Mb RAM expandable to 32Mb
- 520Mb hard disk
- 3.5" 1.44Mb floppy drive
- 10.4" STN colour display
- External SVGA monitor port
- 2 x PCMCIA type II or 1 x type III slot
- Mousepoint pointing device
- 4 hours battery life
- Built-in autosensing AC adapter
- Optional Port Replicator
- DOS 6.2 and Windows 3.1/W95
- 1 year world-wide warranty



## T2130CT



- Intel 486DX4 Processor
- 75Mhz clock speed
- 8Mb RAM expandable to 32Mb
- 520Mb hard disk
- 3.5" 1.44Mb floppy drive
- 10.4" TFT colour display
- External SVGA monitor port
- 2 x PCMCIA type II or 1 x type III slot
- Mousepoint pointing device
- 3.5 hours battery life
- Built-in autosensing AC adapter
- Optional Port Replicator
- DOS 6.2 and Windows 3.1/W95
- 1 year world-wide warranty



### LANTEC DIRECT PRICE

Toshiba T2110CS STN Colour

£1369 With FREE InfoMover Ethernet Card

### LANTEC DIRECT PRICE

Toshiba T2130CS STN Colour

£1619 With FREE InfoMover Ethernet Card

### LANTEC DIRECT PRICE

Toshiba T2130CT TFT Colour

£1969 With FREE InfoMover Ethernet Card

## T2150CD



- Intel 486DX4 Processor • 75Mhz clock speed • 8Mb RAM • RAM expandable to 32Mb • 520Mb hard disk • 1.44Mb 3.5" external floppy drive • Internal IDE CD-ROM drive • 10.4" TFT or STN colour displays • 640 x 480 x 256 colour on STN and up to 65,536 colours on TFT screen • External SVGA monitor port with up to 65,536 colours • 2 x PCMCIA type II or 1 x type III slots • Mousepoint pointing device • Up to 3 hours battery life • Built-in autosensing AC adapter • Built-in Sound system • Optional Port Replicator • 84 full-size keys and 12 function keys • DOS 6.2 and Windows for Workgroups 3.11/W95 • 3 years world-wide warranty.



## Portege 610CT



- Intel Pentium Processor • 90Mhz clock speed • 8Mb EDO RAM • RAM expandable to 40Mb • 720Mb hard disk • External 3.5" floppy drive • 9.5" TFT colour display • External SVGA monitor port • 2 x PCMCIA type II or 1 x type III slot • Mousepoint pointing device • 4.5 hours battery life • Built-in sound system • Optional Port Replicator • MS-DOS 6.2 • Windows for Workgroups 3.11/W95 • 3 years world-wide warranty.



### STN MODEL

Toshiba T2150CD STN Colour

£1699 With FREE InfoMover Ethernet Card

### TFT MODEL

Toshiba T2150CD TFT Colour

£2569 With FREE InfoMover Ethernet Card

FASTEST ULTRA-NOTEBOOK YOU CAN BUY TODAY!

Toshiba Portege 610CT TFT Colour

£2999 With FREE InfoMover Ethernet Card

# LANTEC present the digital PC HiNote family

## The Digital "HiNote" colour notebooks

- Choice of 486DX2 50Mhz with 340Mb hard drive or 486DX4 75Mhz with 510Mb hard drive
- 4Mb RAM expandable to 20Mb
- 9.5" DSTN screen
- Local Bus video providing 640 x 480 x 256 colours on internal screen or up to 1024 x 768 x 256 colours on external display
- Integrated trackball mouse and palm rest area
- 8Kb internal cache memory
- PCMCIA slots: 2 x Type II or 1 x Type III
- 1.44Mb floppy drive
- Long life Nickel-Metal-Hydrate (NiMH) Battery
- Serial and parallel port
- MS DOS 6.22 and Windows for Workgroups 3.11 pre-installed
- Windows '95 free Upgrade
- Free Lotus Organizer
- Weighs under 2.5kg

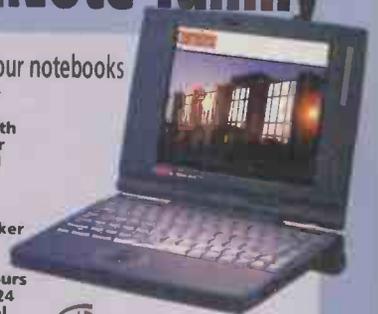


DEC 486DX2 50Mhz DSTN 340Mb  
£1299 With FREE WIN '95 Upgrade

DEC 486DX4 75Mhz DSTN 510Mb  
£1549 With FREE WIN '95 Upgrade

## The Digital "HiNote Ultra" colour notebooks

- 486DX2 50Mhz Intel processor
- 340Mb hard drive
- Choice of 9.5" colour DSTN with 4Mb RAM (maximum 20Mb) or 9.5" colour TFT with 8Mb RAM (maximum 24Mb)
- Integrated trackball mouse
- Business Audio/MS Sound System, microphone and speaker (SoundBlaster compatible)
- Local Bus video & accelerator providing 640 x 480 x 256 colours on internal screen or up to 1024 x 768 x 256 colours on external display
- Wireless InfraRed connectivity
- 1 x PCMCIA 2.1 type III or 2 x type II slots
- Zero footprint, hot dockable snap-on 1.44Mb floppy drive
- Long life Lithium Ion (Lilon) flip-down battery
- Serial and parallel port
- MS DOS 6.22 and Windows for Workgroups 3.11 pre-installed
- Windows '95 Free Upgrade!
- Free Lotus Organizer
- Unique ultra-thin design
- Lightweight - just 2.1kg
- 3 year return to base warranty



DEC 486DX2 50Mhz DSTN 340Mb  
£1659 With FREE WIN '95 Upgrade

DEC 486DX2 50Mhz TFT 340Mb  
£2259 With FREE WIN '95 Upgrade

apricot

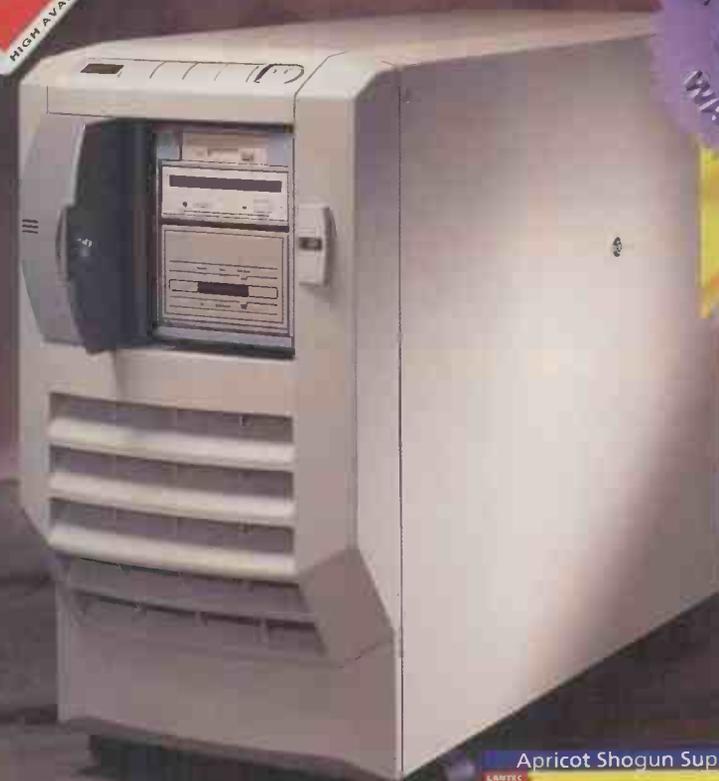
INDUSTRIAL STRENGTH ENGINEERING  
MISSION CRITICAL SYSTEM  
HIGH AVAILABILITY

LifeTime™ Warranty



- Up to four 133MHz Intel Pentium Processors
- Up to 768Mb of ECC-protected onboard RAM
- SCSI-II Fast and Wide drive controllers
- Twenty x 3.5" Hot-swap drive bays
- Four PCI slots plus six EISA slots (two shared with PCI)
- 1000w UPS with full power protection.
- Online Systems Management Controller
- 1Gb to 80Gb of hard disk capacity (using current drives)
- Triple 5.25" drive bays for CD ROM (included) and backup devices
- Industrial strength engineering incorporating Mitsubishi mainframe technology
- The Apricot Shogun supports:
  - Microsoft Windows NT, SCO UNIX, SCO OpenServer Rel 5, Novell NetWare, UnixWare

The Unshakeable Super Server



Apricot Shogun

CALL LANTEC ON 01753 777744 FOR CONFIGURATION DETAILS AND ADVICE

Apricot Shogun SuperServer  
LANTEC Special Price £ **8999** Prices from £8999 to over £84,000

**COMPAQ**  
**ProSignia 300 Network Server**



- The Compaq ProSignia 300 Server offers highly affordable performance. Indeed, you can enjoy server-specific features for the price of a desktop PC. In this model you will find:
- Choice of 75Mhz or 90Mhz Pentium processors
  - 16Mb of ECC memory as standard, expandable to 208Mb
  - CD ROM built-in
  - 1.05Gb & 2.1Gb hard disk drives, (or diskless model for you to customise).
  - Integrated PCI, SCSI and Ethernet controllers
  - True server reliability, fault management and prevention, rapid recovery and security features
  - Support for leading network operating systems, eg, Novell NetWare, SCO UNIX, Novell UNIXWare 1 & 2, Banyan Vines, Microsoft Windows for Workgroups, Microsoft Windows NT and IBM OS/2 all supplied on Compaq SmartStart CD disks for easy installation
  - Compaq Uptime pre-failure Warranty and 3 years on-site repair service

Example Configuration Price  
ProSignia 300 5/75 Model 1050  
£ **2049** Call for prices of other configs

CALL LANTEC ON 01753 777744 FOR CONFIGURATION DETAILS AND ADVICE

Private and Business Sales: Corporate & Government:  
CALL 01753 777777 CALL 01753 777744

Prices EXCLUDE VAT and DELIVERY and are subject to change without notice. PC Delivery Charge £14. Call the LANTEC DIRECT Orderline or fax your order to 01753 777780 or send your order with a cheque or postal order to: LANTEC DIRECT • Langley Business Centre • Station Road • Langley • Berkshire • SL3 8YR. Please allow seven working days for cheque clearance. Although most orders are despatched the same or following day, please allow up to 28 days for delivery. Credit cards will not be debited until goods are ready for despatch. Screen displays may be simulated. E&OE. All orders are subject to LANTEC DIRECT Terms and Conditions of Sale, copies of which are available upon request. LANTEC Information Services Limited are licenced credit brokers.



Internet Addresses: Private and small business sales: gblantec@ibmmail.com Corporate and Government sales: gblanc1@ibmmail.com Compuserver: INTERNET:gblantec@ibmmail.com

LANTEC DIRECT



# RICHNIGHT

SERVICING THE INDUSTRY SINCE 1987 - SPECIALISTS IN MEMORY UPGRADES

## 30 & 72 PIN SIMM

30 PIN SIMM	60NS	70NS	80NS	100NS	30 PIN SIMM	60NS	70NS	80NS	100NS
256K X 8 BIT - 2 CHIP				3	1MB X 9 BIT - 3 CHIP	CALL	30	28	
256K X 9 BIT - 3 & 9 CHIP		10	10	8	1MB X 9 BIT - 9 CHIP	CALL	31	31	CALL
1MB X 8 BIT - 8 CHIP			28		4MB X 9 BIT - 8 CHIP	115	105	105	
72 PIN SIMM	60NS	70NS	80NS	72 PIN SIMM	60NS	70NS	80NS		
1MB = 256K X 36 BIT		40	40	8MB = 2MB X 36 BIT		250	240		
2MB = 512K X 36 BIT		75	75	16MB = 4MB X 32 BIT		370	350		
4MB = 1MB X 32 BIT	115	110		16MB = 4MB X 32 BIT EDO			480		
4MB = 1MB X 32 BIT EDO		140		32MB = 8MB X 32 BIT		420	395		
4MB = 1MB X 36 BIT		130	125	32MB = 8MB X 32 BIT EDO			950		
8MB = 2MB X 32 BIT		230	220	32MB = 8MB X 36 BIT		740	720		
8MB = 2MB X 32 BIT EDO		260							

## CACHE RAM CHIPS

8K X 8 BIT - 20 NS	4.50	32K X 8 BIT - 20 NS	5.00
--------------------	------	---------------------	------

## DRAM CHIPS - PLEASE CALL

## CYRIX PROCESSOR UPGRADES

PROCESSOR UPGRADES				
80386DX - 16/ 20 MHZ TO 486 - 40 MHZ			135	
80386SX - 16/ 20 MHZ TO 486 - 40 MHZ	135	80386DX - 25 MHZ TO 486 - 50 MHZ	155	
80386SX - 25 MHZ TO 486 - 50 MHZ	155	80386DX - 33 MHZ TO 486 - 66 MHZ	175	
NUMERIC PROCESSORS	80387SX - 0 TO 33 MHZ	45	80387DX - 0 TO 40 MHZ	48

## WORKSTATION MEMORY

HEWLETT PACKARD	4MB	8MB	16M	32M	64M
HP 3000 9x7 SERIES 937; 947; 957; 967; 977; 987; 9x7LX SERIES 917LX; 927LX; 937LX; 947LX; 957LX; 967LX. 9000 SERIES 807S; 817S; 827S; 837S; 847S; 857S; 867S; 877S; 887S; 897S			520	980	1800
HP APOLLO 9000 SERIES 375; 380; 400dl; 400s; 400t; 425s; 425t; 433s	160	275	500	920	
HP APOLLO 9000 SERIES 382; 425e	160	275	500		
HP APOLLO 9000 SERIES 700/RX 16Ca; 16Ci; 19Ca; 19M	140	260			
HP APOLLO 9000 SERIES 705; 710		300	560	1000	
HP APOLLO 9000 SERIES 745; 747; 715/33; 715/50; 725/50		300	560	1000	1950
HP APOLLO 9000 SERIES 720; 730; 735; 750; 755			560	1000	1950
IBM	4MB	8MB	16M	32M	64M
XSTATION 120; 130	140				
RS/6000 POWERSTATION/ POWERSERVER 220 SERIES	140	260			
RS/6000 POWERSTATION/ POWERSERVER 320; 320E; 320H; 340; 340R; 350; 350R; 520; 520H; 530; 530E; 530H; 550; 550E; 550S; 560; 560F; 580; 730; 930; 950; 970; 980			780	1150	2100
SUN MICROSYSTEMS	4MB	8MB	16M	32M	64M
MODEL 3/60; 3/80; 4/110	140		440		
SPARCSTATION ELC (4/25); IPX (4/50)			420		
SPARC SERVER/ SPARCSTATION 330; 370; 390		260			
SPARCSTATION SLC (4/20)	140				
SPARCSTATION IPC (4/40); 1 (4/60); 1+ (4/65); 2 (4/75)	140		440		
SPARCSTATION CLASSIC LC (4/15); LX (4/30)		260		880	
SPARC SERVER/ STATION/ ENGINE 10 MODEL 30; MODEL 41; MODEL 52/ 54			500		1850
SPARC SERVER 630MP; 670MP; 690MP					1850

## DESKTOP MEMORY

AST	2MB	4MB	8MB	16M	32M	64M
ADVANTAGE 386SX/20; 386SX/25; PRO 386SX/25; BRAVO 3/25s; 3/33s	56		220			
ADVANTAGE 486/25; 486/33; 486/33p; 486SX/20; BRAVO 4/33(original); 486/25 PREMIUM 386/33TE; 486/25; 486/25E; 486/25TE; 486/33; 486/33E; 486/33TE PREMIUM II 386/35; 386/33; 486/33; 486SX/20. POWER PREMIUM 3/33; 4/33; 4/33s; 4/50d; 4/66d. PREMIUM SERVER SE 4/33	60		300			
ADVANTAGE PRO 486DX/33; 486SX/25; BRAVO 4/25s; 4/33; 4/33s; 4/50d; 4/66d BRAVO LC 4/25s; 4/33; 4/33s; 4/50d; 4/50s; 4/66d; 4/100t BRAVO LP 4/25s; 4/30s; 4/33; 4/33s; 4/66d BRAVO MS 4/50s; 4/66d; 4/100t; P/60; P/90; P/100. BRAVO MT 4/33; 4/33s; 4/50s; 4/66d; P/60	80	115	220	380	720	
ADVANTAGE PLUS 486DX/33; 486DX/2/50; 486DX/2/66		115	220	400		

AST (CONT.)	2MB	4MB	8MB	16M	32M	64M	
BRAVO 286s; 386SX/16; 386SX/20; 386SX/25	70		210				
PREMIUM 386; 386C		120					
PREMIUM 386/25; 386/33; 386/33T; 386SX/16; PREMIUM II 386SX/20; 386SX/25 PREMIUM SERVER SE 4/50; 4/66; CUPID MEMORY BOARD		140					
PREMMIA 4/33; 4/33s; 4/50d; 4/66d; PREMMIA SE 4/66d; P/60. PREMMIA MTE 4/66d; P/60	150	270	500	920			
PREMMIA GX P/90; P/100. PREMMIA LX P/60; PREMMIA MX 4/66d; 4/100t; P/60		240	470	810	1590		
COMPAQ	2MB	4MB	8MB	16M	32M	64M	
DESKPRO 286N; 3/25; 3/33; 386/25M; 386/33M; 386N; 386s/20; 386s/20N; 4/25; 4/33; 4/66; 486/33M; 486s/16M; 486s/25M; 486DX/2/50M; 486DX/2/66M; DESKPRO XE 4/33s; 4/50; 4/66. PROLIANT 1000 486DX/2/66. ENHANCED PROLINEA. PROLINEA 4/25s; 4/33; 4/33s CDS; 4/50; 4/66; NET 1/25e; 1/25s; 1/25r. PROLINEA MT 4/33s; 4/50; 4/66. PROSARIO 400; 425; 433; 520; 520 CDTV; 600; 633; 660; 720 CDS; 724; 800; 833 CDS; 850; 866; 860 CDS; 920 CDS; 920CDTV; 924; 924 CDS. PROSIGNIA PC SERVER 486/33; 486DX/2/66. PROSIGNIA VS. SYSTEMPRO/LT 386/25; 386/33; 486/33; 486DX/2/50; 486SX/25	75	130	240	400	790		
DESKPRO 386/33; 386/33L; 486/25; 486/33L; 486/50L. SYSTEMPRO 386/33; 486/33	80		280		1000		
DESKPRO 5/60M; 5/66M; XE 5/60; PROLIANT 1000 5/60; PROLIANT 2000 486/50; 5/66. PROLIANT 4000 486/50; 5/66. PROSIGNIA PC SERVER 5/60; 5/60			280	520	960	1800	
PROLINEA 3/25s; 3/25s	56		220				
SYSTEMPRO XL 486/50; PENTIUM				520	980	1800	
	1MB	1-2MB	4-8MB	8MB			
DESKPRO 386/16	80	180	320	470	DESKPRO 386s	150	185
					DESKPRO 386/2/0; 386/20e; 386/25; 386/25e	150	185

DELL	2MB	4MB	8MB	16M	32M	64M
SYSTEM 316SX; 320SX (REV.1); 325SX	70					
SYSTEM 320SX (REV.2); 325D; 325P; 333D; 333P; 433P		130				
DIMENSION 386DX/33; 486SX/25; 486SX/33; 486DX/2/50. LOW PROFILE DESKTOP 486P/16; 486P/20; 486P/25; 486P/33. LOW PROFILE POWER DESKTOP 486P/50; 486P/66. NETPLEX P SERIES: POWER DESKTOP 486D/16; 486D/20; 486D/25; 486D/33; 486D/50; 486D/66. PRECISION 386DX/33; 486 SERIES		130	420			
DIMENSION XPS 450V; 466V; 4100. DIMENSION XPS midsize 466. DIMENSION XPS midsize 4100. OPTIPLEX 433E; 450E; 466E; 4100E; 425s/L(V); 433L(V); 433s/L(V); 450L(V); 466L(V); 425s/M(V); 433M(V); 433s/M(V); 450M(V); 466M(V). PERFORMANCE 425s/L; 425s/M; 433L; 433M; 433s/L; 433s/M; 433T; 450L; 450M; 450T; 466L; 466M; 466T		130	240	420	750	
DIMENSION XPS P60; P60FS; P60MDT; P90; P90MDT. OMNIPLEX 433ME; 450ME; 466ME; 4100ME. OPTIPLEX XL590; XMS90. POWEREDGE XE433; XE433s; XE450; XE466			240	470	810	1590
OMNIPLEX 560ME; 566ME; 590ME POWEREDGE SP433; SP450; SP466; SP560; SP566; XE560; XE566; XE590; XE5100			260	520	925	1870
OPTIPLEX 425LXe; 433LXe; 450LXe; 460LXe; 4100LXe OPTIPLEX 425Mxe; 433Mxe; 450Mxe; 466Mxe; 4100Mxe		130	250	460	910	
PERFORMANCE 425s/ME; 433ME; 433s/ME; 450ME; 466ME 4000XE SERIES 486/33; 486/50; 486/66			260		925	
SYSTEM 425TE; 433TE. POWERLINE WORKSTATIONS 420DE; 420SE; 425DE; 425SE; 433DE; 433SE; 450DE; 450SE; 450SE/2; 466DE; 466SE	80	150	260	520		

HEWLETT PACKARD	2MB	4MB	8MB	16M	32M	64M
NETSERVER LE SERIES 486DX/33; 486DX/2/66; 486SX/33; NETSERVER LM SERIES 4/33 LM; 4/66 LM; 5/60 LM. VECTRA 386/25 PC; 486/25M; 486/25MI; 486/25NI; 486/25T; 486/25U PC; 486/33U PC; 486/25VL; 486/33M; 486/33MI; 486/33NI; 486/33T; 486/33U PC; 486/33VL; 486/33M; 486/50N; 486/50U PC; 486/50XMI; 486/66XMI; 486/66NI; 486/66T; 486/66U PC; 486/66VL; 486 PC; 486s/20; 486s/33M; 486s/33MI; 486s/33NI; 486s/33XM		130	260	460	910	
VECTRA 386/16N PC; 386/20N PC; 386/35N PC; 386/33N; 386/33NI	80		240			
VECTRA M2; N2; XM2; XP; XU. VECTRA VL2 4/25e; 4/33s; 4/33se; 4/50; 4/66; 4/100		130	260	460	910	
VECTRA QS/16S; QS/20; RS/20; RS/20C; RS/25; RS/25C		130				
IBM	1MB	2MB	4MB	8MB	16M	32M
APTIVA 310; 330; 350; 510; 530; 710; 730; PC 300 (6571); (6573); (6575); (6581); (6583); (6585); PC 700 (6875); (6878); (6885); (6886)			120	230	400	790
PS/1 286 (2011); PS/1 386SX (2121)	80	140				
PS/1 PRO 386SX (2123); (2133-72PIN); (2155-72PIN); (2168-72PIN) PS/Valuepoint (6381); (6382); (6384-72PIN); (6387); (6472); (6482); (6484); (6492); (6494)	75	130	240	400		
PS/1 (2133-30PIN); (2155-30PIN); PS/VALUEPOINT (6384-30PIN)			120		440	
PS/2 25/286; 30/286		75				
PS/2 25SX; 35LS; 35SX; 40SX; 50Z; 55LS; 55SX; 56; 56SLC LS; 56SX; 56LS; 57; 57SLC; 57SX; 60; 65SX; 70; 76; 77; 80; 90 XP 486; 95 XP 486 (8595); E (8533); SERVER 85: PREMIER PS/2 56; 57; 76; 77; ULTIMEDIA-M57; M77	40	75	130	240		
PS/2 95 XP 486 (9595); SERVER 95 (9595); SERVER 95 ARRAY (9595)			140	280	460	
PS/2 SERIES; 16/32 BIT MCA MEMORY BOARD (6450609 & 34F3077)		190	250	360	600	



APPLE & ZENITH MEMORY - PLEASE CALL  
KYOCERA PRINTER MEMORY - PLEASE CALL

# 0181 668 4199

# MEMORY

100% COMPATIBLE - LIFETIME WARRANTY - TECHNICAL SUPPORT - BEST PRICES

## PORTABLE MEMORY

AST	2MB	4MB	8MB	16M
ADVANTAGE EXPLORER: ASCENTIA 700N; BRAVO NB		140	430	
ASCENTIA 800N; 810N		140	270	460
ASCENTIA 900N; 910N		140	280	450
PREMIUM EXECUTIVE 286/12; 386SX/20; 386SX/25; 386SX/25C	140			
POWER EXECUTIVE 3/25SL; 3/25SL-C; 4/25SL (SB); 4/33SL; COLOUR; COLOUR PLUS; EL	75	140	260	430
POWER EXECUTIVE 4/25SL; COLOUR; COLOUR PLUS		140		450
<b>CANON</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	
NOTEJET 486/25 (BN-22)	75	130	250	
NOTEJET II 486C50 (BN-32P)	75	130	250	
NOTEJET 486C25 (BN-100C); 486C33 (BN-100C); 486M33 (BN-120); INNOVA 486NX		140	240	
<b>COMMODORE</b>	<b>2MB</b>	<b>4MB</b>		
C286-LT; C386SX-LT (16 MHZ)		85		
C386SX-LT (20 MHZ)			180	
<b>COMPAQ</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>
CONCERTO 4/25; 4/33; LTE ELITE		145	260	480
CONTURA 3/20; 3/25; 3/25C	75	130	240	
CONTURA 4/25; 4/25C; 4/25CX; 4/25EX		140	260	480
CONTURA 400; 410		145	260	480
CONTURA AERO		140	240	480
LT 286	45	80	130	
LTE 386s/20	60	90	160	
LTE LITE/20; LITE/25; LITE/25C; LITE/25E		90	160	290
LTE LITE 4/25; 4/25C; 4/25E; 4/33C		145	260	480
PORTABLE 486/66; 486C/66	40	75	120	240
SLT 286	60	120		
SLT 386s/20	55	95	160	
<b>DELL</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	<b>16M</b>
212N; 320N; 320N+	80			
316LT; 320LT; 320LX	70			
320SL; 325SL	80			
LATITUDE 433; 433C; 433CX; 450C; 450CX		140	430	
LATITUDE 433M; 433MC; 450NC; 450MCX		140	270	460
LATITUDE XP 450C; 450CX; 475C; 4100CX		130	245	435
NL20; NL25	80			
<b>EVEREX</b>	<b>2MB</b>	<b>4MB</b>	<b>16M</b>	
TEMPO CARRIER	80			
TEMPO LX	80			
STEPNOTE 486SX/33; 486DX/50; 486DX/4/75		130	435	
<b>IBM</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>
AMBRA TREKA 386SL	75			
LEXMARK SE10		145		
PS/2 CL575X; THINKPAD 700; 700C; 720; 720C		155	215	

IBM (CONT.)	1MB	2MB	4MB	8MB	16M
PS/2 L40 SX; N33 SX; PS/NOTE 182		75	135	280	
PS/2 N51 SLC; N51 SX		75	135	265	
PS/2 P70 031; 061; 121; P75	40	75	130	240	
PS/NOTE 2618 C45; E35; M40; THINKPAD 350; 350C			120	235	410
PS/NOTE N45 SL		90			
THINKPAD 230C; 230Cs			130	260	
THINKPAD 300		75	255		
THINKPAD 330; 340; 355; 360; 730T			140	265	430
THINKPAD 360; 360C; 360CS; 360P; 750; 750C; 750Ce; 750Cs; 750P; 755C; 755Cs; 755Cd			140	265	430
THINKPAD 500; 510Cs			145	270	525
THINKPAD 710T		75	135	280	
THINKPAD TP701 SERIES			130	260	460
<b>MITAC</b>	<b>4MB</b>				
3026E	180				
<b>PANASONIC</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	<b>16M</b>
CF-170; 270; 370	40				
CF-380; 480C		90	170	240	
CF-580			140	480	
CF-1000			170		
CF-V21P (CD-NOTE); CF-41			150	270	480
<b>PHILIPS</b>	<b>2MB</b>	<b>4MB</b>			
PCL 300; 304	85	180			
<b>SANYO</b>	<b>2MB</b>				
17/NB; 18/NB; NB6	80				
<b>SHARP</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	<b>16M</b>
PC 6200; 6220; 6240	55				
PC 6440		140			
PC 6600; 6621; 6641; 6661		90			
PC 6700; 6741; 6781; 6785; 6800; 6841; 6881; 6891		75	125		
PC 7700; 7750; 8150; 8650; 8650II; 8660			135	435	
PC 8501 COLOURSTAR		95			
PC 8700; 8900			140	245	460
<b>TEXAS INSTRUMENTS</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>16M</b>	
TRAVELMATE 2000	80				
TRAVELMATE 3000; 3000 WinSX; WinSLC/25		80			
TRAVELMATE SERIES 4000 Win; 4000E Win; 4000M			160	790	
<b>TOSHIBA</b>	<b>2MB</b>	<b>3MB</b>	<b>4MB</b>	<b>8MB</b>	<b>16M</b>
DYNAPAD T100NX			145		
T1000LE; 1000SE; 1000XE; 1800; 1850; 1850C; 2000; 2000SX; 2000SXe; 2200SX	40		145	260	
T1600	40				
T1900; 1900C; 1910; 1950; 1950CS; 1950CT; 1960 T4500; 4500C; 4600; 4600C; 4700; 4700CS; 4700CT; 4800; 4850; 4900; DYNAPAD T200			145	280	540
T2100; 2105; 2150CT			150	280	520

TOSHIBA (CONT.)	2MB	3MB	4MB	8MB	16M
T2400; 2450; 3400; 3600			140	260	480
T3100	60				
T3200		50			
T3300SL	80		145		
T4400C DX; 4400SX; 4400C SX; 4400SXC; 6400DX; 6400DXC; 6400SX; 6400SXC; 6600C; 6600C/D; 6600C/CDV	80		150	260	480
T5200; 5200/100; 5200/200; 5200C; 8500	80			320	
<b>TWINHEAD</b>			<b>4MB</b>	<b>8MB</b>	<b>16M</b>
SLIMNOTE 386SL; 386SX; 486SLC			145	440	
SLIMNOTE 330S; 550S; 550T; 575T; 5100T			145	260	470
<b>ZENITH</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	
SLIMSPORT 286; SUPERSPORT 286; 286e		50			
SUPERSPORT SX			100		
MASTERSPORT 386SL; 386SLC; ZDS- 600N; 620N; 625N; Z-STAR 433VL			80		
MASTERSPORT 386SX			80		
Z-SPORT 420S; 425S				160	
Z-STAR EX				140	
Z-NOTE 320L; 320Lb; 325L; 325Le; 325Lp		75		260	
Z-NOTE 200; 425Ln; 425Lnc; 425Lnp; 425Ln+; 425Lnc+; 425Lnp+; 433Lnc+; 433Lnp+			145	295	
Z-NOTEFLEX			140	260	

## LASER MEMORY

BROTHER	1MB	2MB	4MB	8MB	16M
HL-4; 4PS; 4V; 4Ve	70	100	165		
HL-8; 8D; 8e; 8V	75	105			
HL-6V		105	165		
HL-10DPS; 10DV; 10PS; 10V			100	165	
HL-10H; 660; 1260	40	130	240		
HL-630; 641; 645	65	85			
<b>CANON</b>	<b>1MB</b>	<b>2MB</b>	<b>3MB</b>	<b>4MB</b>	<b>8MB</b>
LBP-4; 4 LITE; 4 PLUS	90	125			
LBP-4SX	65	95			
LBP-430; 8IV; 4I; 4U	40			130	
LBP-8II; 8IIR; 8IIT	70	105	170		
LBP-8III; 8III PLUS	100	130	160		
LBP-8SX	75	100			
LBP-960; 1260	40	75	130	240	
<b>COMPAQ</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	<b>16M</b>	
PAGEMARQ 15; 20	80	150	240	440	
<b>EPSON</b>	<b>512</b>	<b>1MB</b>	<b>2MB</b>	<b>3MB</b>	<b>4MB</b>
ACTIONLASER 1000; 1500; 5000; 5200	15		70		
ACTIONLASER 1100; 1400		40	70	115	
ACTIONLASER 1600; EPL5600		40	75	135	
ACTIONLASER II; EPL-4000; 4100; 4300; 8000; 8100	50	80	120		
ACTIONLASER PLUS & EPL-6000			95	155	
EPL-7000		60	95	125	
EPL-7100; GQ-5000	24				

EPSON (CONT.)	512	1MB	2MB	3MB	4MB
EPL-7500			170		
<b>HEWLETT PACKARD</b>	<b>256</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>
DESKJET 500; 500C; 510; 520; 550C; 560C; PLUS	39				
DESIGNJET 200; 600; 650C; PLOTTER: DESKJET 1200; 1200C; 1200C/PS; LASERJET 4; 4 PLUS; 4M; 4MP; 4MV; 4M PLUS; 4P; 4S; 4SMX; 4V; COLOUR; 5		40	70	135	260
LASERJET II; IID		60	95	165	
LASERJET IIP; IIP PLUS; III; IID; IIIP; FAX		60	90	160	
LASERJET IIISi		40	70	115	240
LASERJET 4L		40			
PAINTJET XL300		95		185	300
<b>IBM/LEXMARK</b>	<b>1MB</b>	<b>2MB</b>	<b>3.5</b>	<b>4MB</b>	<b>8MB</b>
LASERPRINTER (4019-001); E(4019-E01); PENNANT SYSTEM (4028)	65	95	140		
LASERPRINTER 5E(4029- 010); 6(4029-020); 6A(4029- 021); 10(4029-030); 10A(4029- 041); 10L(4029-040); (4037- 5E); VALUEWRITER 300; 600; WINWRITER 200; 400; 600	40	75		130	
LASERPRINTER 4039 10R; 10R DUPLEX; 12L; 12R; 16L COLOUR JETPRINTER PS 4079; OPTRA L; Lx; Lx; R; Rx				130	250
<b>MANNESMAN TALLY</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	
MT-904; 904 PLUS	50				
MT-905		95	165		
MT-908	40	75			
MT-9008	40	75	130	240	
<b>OKI</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	<b>8MB</b>	
OL 400	65	95			
OL400e; 400ex; 410e; 410ex	65	95	165		
OL 410; 810	65	95	165		
OL 800; 820	65	95	165		
OL 830; 840; 850		85			
OL1200			165	280	
<b>PANASONIC</b>	<b>32K</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>	
IOXP-1124i	15				
IOXP-4410; 4430		65	95	165	
IOXP-4420; 4450; 4451		65	95	165	
IOXP-4400; 4401; 5400; SP100	55	85			
IOXP-4440; 5410		60	90	160	
IOXP-4450		70			
IOXP-4455			110		
<b>STAR</b>	<b>1MB</b>	<b>2MB</b>	<b>4MB</b>		
LASERPRINTER 4; STARSRIPT	65	95	170		
LASERPRINTER LS-5; 5EX; 5TT	65	110	190		
LASERPRINTER 8; 8II		70	95	175	
<b>TEXAS INSTRUMENTS</b>	<b>1MB</b>	<b>2MB</b>			
MICROLASER; PLUS; PLUS PS; PS; TURBO; XL; XL PS; XL TURBO				45	
MICROWRITER PS17; PS35				55	90

PRICES EXCLUDE VAT & CARRIAGE (8.00 N/D)

**COPORATE, EDUCATIONAL AND GOVERNMENT ORDERS WELCOME**  
**RICHNIGHT LTD. - 106 BRIGHTON ROAD, PURLEY, SURREY, CR8 4DB - FAX 0181 668 7249**  
**CALLERS WELCOME - MON. TO FRI. 9.30-6.00 / SAT. 10.00-3.00**

# 0181 668 4199

# COMPAQ PRESARIO MULTIMEDIA BARGAINS

**BEST PRICES IN UK**



From **Only £40** per mth\*

**FREE WINDOWS '95**

PRESARIO CDS 524 486 DX2/66, 8Mb, 420HD INT	<b>£995</b>
PRESARIO CDS 742 486 DX4/90, 8Mb, 420HD DT	<b>£995</b>
PRESARIO CDS 942 486 DX4/90, 8Mb, 420HD TW	<b>£995</b>
PRESARIO CD 5520 586/75, 8Mb, 630HD INT	<b>£1375</b>
PRESARIO CD 7150 586/75, 8Mb, 540HD DT	<b>£1249</b>
PRESARIO CD 7170 586/90, 8Mb, 840HD DT	<b>£1349</b>
PRESARIO CD 9520 586/90, 8Mb, 630HD, TW	<b>£1449</b>
PRESARIO CD 9538 586/90, 8Mb, 1Gb, TW	<b>£1759</b>

**IF YOU FIND A BETTER PRICE CALL US AND WE WILL IN MOST CASES BEAT IT**

QUAD SPEED CD, FULL MULTIMEDIA, FAX/MODEM, 3 YR WARR. LARGE SPEC SO PLEASE CALL FOR FULL DETAILS. \*£99 Deposit APR 23.1% 36 months

## COMPAQ NEW PCI ENHANCED PROLINEA

V3 (3 Slot/3 Bays) Desktop		V4 (4 Slot/4 Bays) Desktop		V5 (5 Slot/5 Bays) Mini Tower		Compaq Monitors	
4/50 270HD, 4MB	<b>£635</b>	4/66 420HD, 8MB	<b>£859</b>	4/66 270HD, 8MB	<b>£ 865</b>	SVGA 800 14"	<b>£207</b>
4/66 270HD, 8MB	<b>£795</b>	4/100 420HD, 8MB	<b>£929</b>	4/66 420HD, 8MB	<b>£ 899</b>	SVGA 14" 1024	<b>£239</b>
4/66 420HD, 8MB	<b>£835</b>	5/75 420HD, 8MB	<b>£1085</b>	5/75 420HD, 8MB	<b>£1129</b>	15" 150	<b>£269</b>
4/100 270HD, 8MB	<b>£869</b>	5/75 720HD, 16MB	<b>£1365</b>	5/75CD 420HD, 8MB	<b>£1299</b>	15" 151	<b>£339</b>
4/100 420HD, 8MB	<b>£1025</b>	5/90 420HD, 8MB	<b>£1170</b>	5/90 420HD, 8MB	<b>£1215</b>	17"	<b>£659</b>
5/75 630HD, 8MB	<b>£1085</b>	5/90 720HD, 16MB	<b>£1449</b>	5/90CD 420HD, 8MB	<b>£1385</b>	Q VISION 172	<b>£CALL</b>
5/90 720HD, 8MB	<b>£1199</b>	5/100 630HD, 8MB	<b>£1315</b>	5/90 720HD, 16MB	<b>£1495</b>	Q VISION 200	<b>£CALL</b>
5/100 630HD, 8MB	<b>£1315</b>	5/120 1080HD, 16MB	<b>£1839</b>	5/100 720HD, 16MB	<b>£1635</b>		
5/120 1GB HD, 16MB	<b>£1799</b>	5/133 1080HD, 16MB	<b>£1985</b>	5/133 1080HD, 16MB	<b>£2195</b>		

**DESKPRO - FULL RANGE - BEST PRICES - PLEASE CALL**



## NEW APTIVA - BRAND LEADER LOW PRICES

**Help ware**

DX2-66 DT, 4MB, 540HD	<b>£ 774</b>	DX2-66 MM, DT 8MB, 540MB, Q	<b>£995</b>
DX4-100 MM, DT, 8MB, 850MB, Q	<b>£1095</b>	P-75 DT, 8MB, 540MB	<b>£1055</b>
P-100 MM, DT, 8MB, 850MB, Q	<b>£1699</b>	P-75, MM, TOWER, 8MB, 540MB, Q	<b>£1249</b>

DOS, WINDOWS, MS WORKS, RAPID RESUME: MM=MULTIMEDIA Q=QUADSPEED DT=DESKTOP 4MB UPGRADE - £129

<b>HP</b> HEWLETT PACKARD <b>HP VL</b>	HP Vectra VE 4/66 8MB/420HD	<b>£829</b>	VL 5/75 8MB/420HD	<b>£1075</b>
	HP Vectra VL 5/90 16MB/840HD	<b>£1439</b>	VL 5/75 8MB/840HD	<b>£1099</b>

**AST BRAVO, DIGITAL & ICL PC'S AT NEW LOW PRICES - CALL NOW!!**

# No. 1 for NOTEBOOKS!

COMPAQ CANTURA 410/420/430 FAMILY						TOSHIBA					
CPU	Ram	H Disk	Display	Price		Processor	Ram	H Disk	Display	Price	
410MS	486DX2/50	4MB	250HD	9.5" Mono	£ 843	T2110M	486DX4/75	4MB	350MB	9.5" STN LCD Mono	£849
410CS	486DX2/50	4MB	350HD	9.5" Dual Scan Col	£1369	T2110CS	486DX4/75	4MB	350MB	10.4" Dual Scan Col	£1349
410CX	486DX2/50	4MB	350HD	8.4" TFT Col	£1495	T2130CS	486DX4/75	8MB	520MB	10.4" Dual Scan Col	£1598
420C-350MS	486DX4/75	4MB	350HD	10.4" Dual Scan Col	£1449	T2130CT	486DX4/75	8MB	520MB	10.4" TFT Col	£1939
420C-420	486DX4/75	8MB	420HD	10.4" Dual Scan Col	£1619	T2150CDS	486DX4/75	4MB	260MB	10.4" Dual Scan Col	£1489
420CX	486DX4/75	8MB	420HD	10.4" TFT Col	£1969	T2150CDT	486DX4/75	8MB	520MB	10.4" Dual Scan Col	£1715
430C	486DX4/100	8MB	720HD	10.4" Dual Scan Col	£1969	T3600CT	486DX4/75	8MB	520MB	10.4" TFT Col	£2559
430CX	486DX4/100	8MB	720HD	10.4" TFT Colour	£2395	T4850CT	486DX4/75	8MB	500MB	10.4" TFT Col	£2114
3yr Int. Warr. MS=Microsoft Works for WIN. Mem upgr. - 4MB £145, 8MB £285, 16MB £529						T4900CT	5/75	8MB	810MB	10.4" TFT Col	£3175
COMPAQ LTE ELITE						TEXAS INSTRUMENTS - TRAVEL MATE					
CPU	Ram	H Disk	Display	Price							
4/75C340	486DX4/75	8MB	340HD	9.5" Dual Scan Col	£1789	4000M	486DX4/75	4MB	455MB	10.4" Dualscan Col	£LOW
4/75 C510	486DX4/75	8MB	510HD	9.5" Dual Scan Col	£2639	4000M	486DX4/75	4MB	455MB	10.4" TFT Col	£LOW
4/75 CXL510	486DX4/75	8MB	510HD	10.4" TFT Col	£2639	4000M	486DX4/100	4MB	525MB	10.4" TFT Col	£LOW
5000-510	586 75MHz	8MB	510HD	10.4" Dual Scan Col	£2445	5000M	5/75	8MB	500MB	10.4" TFT Col	£LOW
5100-810	586 90MHz	8MB	810HD	10.4" TFT Col	£2615	5000M	5/75	8MB	722MB	10.4" TFT Col	£LOW
5100-810CD	586 90MHz	8MB	810HD	10.4" TFT Col	£2915	EXTENSA	486DX4/75	4MB	340HD	10.4" Dual Scan Col	£1289
5200-1350	586 120MHz	8MB	1.35GB	10.4" TFT Col	£3165	HP PALMTOP/OMNIBOOK					
IBM THINK PADS NEW LOW PRICES											
CPU	Ram	H Disk	Display	Price							
340 DS1	486SLC/50	4MB	200HD	9.5" Dual Scan Col	£969	200LX	80-186	1 or 2MB	CGA		£LOW
340 DS3	486SLC/66	4MB	360HD	10.4" Dual Scan Col	£1145	1000CX	80-186	1MB	CGA		£LOW
345 DS5	486DX4/75	4MB	540HD	10.4" Dual Scan Col	£1395	600C	DX2/50	4MB	260MB	8.5" Dual Scan Col	£LOW
370 TC1	4386DX4/75	4MB	340HD	10.4" TFT Col	£2239	600CT	DX4/75	8MB	260MB	9.5" TFT Col	£LOW
370 TC2	486DX4/75	4MB	540HD	10.4" TFT Col	£2439	4000CT	DX4/100	16MB	810MB	10.4" TFT Col	£LOW
701 DS1	486DX2/50	4MB	360HD	10.4" Dual Scan Col	£1846	5000CT	586/90	16MB	1.2GB	10.4" TFT Col	£LOW
701 DS3	486DX4/75	8MB	360HD	10.4" Dual Scan Col	£2475	AST ASCENTIA					
701 DS4	486DX4/75	8MB	540HD	10.4" Dual Scan Col	£2619						
701 TF1	486DX2/50	4MB	360HD	10.4" TFT Col	£2159	810N	486DX2/66	4MB	250MB	10.4" Dual Scan Col	£LOW
701 TF3	486DX4/75	8MB	360HD	10.4" TFT Col	£2829	910N	486DX4/75	8MB	510MB	10.4" TFT Col	£LOW
701 TF4	486DX4/75	8MB	540HD	10.4" TFT Col	£2965	950N	586/75	8MB	510MB	10.4" Dual Scan Col	£LOW
701 TF5	486DX4/75	8MB	720HD	10.4" TFT Col	£3099	950N	586/75	8MB	800MB	10.4" TFT Col	£LOW
755 CE2	486DX4/100	8MB	340HD	10.4" TFT Col	£3575	950N	586/75	8MB	1200MB	10.4" TFT Col	£LOW
755 CD3	486DX4/100	8MB	540HD	10.4" TFT Col	£4119						
755 CX1	5/75	8MB	540HD	10.4" TFT Col	£3869						

# TECHNOWORLD PLC

**NEXT DAY DELIVERY**

SUBJ. TO AVAIL.

US Robotics PCMCIA 28.8 V34 **£158**

HP 660 Deskjet **£271**

HP 5L NEW **£344**

SAGE FIN CONT +2 WIN SU **£349**

Epson Stylus Colour II 720dpi **£295**

MS OFFICE 95 STD UPGRADE **£139**

US Robotics Sportster 28.8 V34 ext. **£155**

Canon BJC 4000C Colour **£217**

Toshiba T2110 MONO **£849**

Windows 95 Upgrade **£58.99**

**Best Prices**

**Part of Multi Million Pound company**

**UK Sourced Products Only**

**All goods supplied with full manufacturer's Warranty**

**Personal finance or leasing available subject to status**

**+ Technical Support**

**Worldwide Export Specialist**

Subject to our terms & conditions available on request, 15% surcharge on returns so please make sure all orders are correct to your specification.



2% Surcharge



**LASER PRINTERS**

<b>BROTHER</b>		
HL 630	£316	HL 660 £458
HL 631	£358	HL 1260 £895
<b>HP</b>		
HP5L	£344	HP5P £568
HP5MP	£717	HP4 PLUS £967
HP4M PLUS	£1293	HP 4V - A3 £1359
HP4MV	£1965	HP4Si £2053
HP4Si MX	£2925	HP COLOUR £4185
<b>KYOCERA</b>		
FS 400	£339	FS 1600 £1065
FS 3400	£1385	FS 3600 £1748
<b>PANASONIC</b>		
KXP6100	£267	KXP6150 £298
KXP4430	£499	KXP4440 £698

LEXMARK OPTRA BEST PRICES PLEASE CALL

**SOFTWARE**

MS OFFICE STD 95 UPGRADE	£139
MS OFFICE STD 95 FULL	£335
MS OFFICE PRO 95 UPGRADE	£209
MS OFFICE PRO 95 FULL	£429
MS WORKS FOR WINDOWS 95	£159
LOTUS SMARTSUITE	£CALL
NOVELL PERFECTOFFICE	£CALL
RAM DOUBLER	£CALL
QUICKEN V4 FOR WIN	£27.95
QUICKEN DELUX HOME	£46.95
QUICKEN DELUX BUSINESS	£46.95
QUICKBOOKS V3	£84.95

**WINDOWS '95**  
UPGRADE FROM WINDOWS 3.1 AT ONLY **£58.99**

**INKJET PRINTERS**

<b>Canon</b>		
BJ30	£139	BJC 70 £217
BJ200EX	£159	BJC4000 £217
BJC600E	£318	BJC800 £1065
<b>EPSON</b>		
STYLUS Colour	£295	STYLUS 1000 £324
<b>HEWLETT PACKARD</b>		
320+CSF	£169	600 NEW £205
660C	£271	850C £329
1600C	£817	1600CM £1215
<b>LEXMARK</b>		
150C Winwriter		£258
ExecJet IIC		£209
<b>STAR</b>		
SJ48	£140	SJ144 £189

**NEW HP 600 £205**

**HP 660 £271**

**MULTIMEDIA BUNDLES**

DIAMOND RANGE MULTIMEDIA	£CALL
CREATIVE CD DISCOVERY	£159
CREATIVE QUAD MS HOME	£265
CREATIVE SOUND CARDS AWE32	£CALL

**£265**

**4X**

**MONITORS**

SONY CPD-15SF1	£304
SONY CPD-17SF1	£635
SAMSUNG SYNCMASTER	£CALL
NEC MULTISYNC XV15	£278
TAXAN ERGOVISION	£CALL
PHILIPS	£CALL

**HARD DRIVES**

<b>CONNOR/SEAGATE/QUANTUM</b>		
420 IDE 3.5"	£89	850 IDE 3.5" £149
1GB IDE 3.5"	£179	1GB SCSI 3.5" £275

**SCANNERS**

<b>EPSON</b>		
GTX 6500 Parallel	£384	GTx8500 SCSI £571
GTi 9000 SCSI	£854	GTi8500 SCSI £747
GTi Includes FULL PHOTOSHOP SOFTWARE		
<b>HP</b>		
Scanjet 3P	£228	Scanjet IIC NEW! £607
<b>LOGITECH (Free Mobile Phone Offer)</b>		
Scanman 32 DOS + OCR	£57	Scan 32 Win + OCR £57
Scanman 256	£82	Scanman Colour £167
Easy Couch	£115	Powerpage £305
PRIMAX AND AGFA NOW AVAILABLE CALL FOR LOW PRICES		

**MEMORY PRICE CRASH!!**

**Get ready for WINDOWS '95 10 Year Warranty**

AST ASCENTIA, POWEREXEC fr	4Mb 8Mb 16Mb	£155 £285 £559
COMPAQ CONTURA 410/420/430		£145 £269 £529
LTE 4/40, 4/50, 4/75		£155 £269 £519
IBM THINKPAD 340/360/370/701		£149 £269 £539
700, 755		£149 £289 £529
TEXAS INSTR 4000M		£155 £295 £545
TOSHIBA Whole range from		£149 £289 £519

CALL FOR ALL OTHER PC'S/NOTEBOOKS

**MEMORY**



**Upgrade 386 to 486**

386SX 25MHz to 486 50MHz	£135
386DX 25MHz to 486 50MHz	£135
386DX 20MHz to 486DX 40MHz	£120
386DX 33MHz to 486DX 66MHz	£144



Call for best prices - SAVE £££££ WE STOCK MEMORY FOR PC'S, NOTBOOKS, PRINTERS FOR ALL LEADING BRANDS

**£99 14.4 EXT.**

**£155 28.8 EXT. FREE INTERNET BUNDLE.**

**FAX MODEMS**

<b>Robotics</b>	INT	EXT
Sportster 28.8 + Fax	£158	£155
Sportster 14.4 + Fax	£102	£99
Courier V34 28.8	£237	£237
Worldport PCMCIA 28.8 V34	£158	

<b>ZOOM</b>	28.8 V34 INT	£138
<b>PSION DACOM</b>	28.8 PCMCIA V34	£185
<b>PACE</b>	Message Desk AnswerPhone/Fax/Modem	£165
<b>Hayes</b>	Accura 28.8 + Fax V34 Ext	£175
	Accura 14.4 + Fax Ext	£98
<b>MOTOROLA 28.8</b>	Pro PC Desktop	£156
	Pro PC Online/Internet	£168

**FAX MACHINES**

<b>HEWLETT PACKARD</b>	NEW OFFICEJET LX	£465
	FAX, PRINTER, SCANNER	

**SAGE**

<b>DOS</b>	<b>WINDOWS + 2</b>
Bookkeeper V7 £54	Bookkeeper V3 £78
Accountant V7 £159	Accountant V3 £189
Accountant + V7 £238	Accountant + V3 £271
FIN Cont V.7 SU £315	FIN Cont V3 SU £349
FIN Cont V.7 MU £495	FIN Cont V.2.11 MU £545
Payroll V.5.1 SU £127	Payroll V.2.2 SU £127
Job Costing SU £115	Instant Accountant £79
Telemagic SU £89	Instant Payroll £68
Paylips £28.50/1000	Laser Stat/Rem £24/1000

**SAGE**

Best Prices on Sage Training, Upgrades. Also Special Rate for Education Orders.

Above prices exclude VAT & Carriage, E&OE. A £5 Handling Charge will apply for any collections. Prices and specifications are subject to change without notice. Government, hospital & educational establishments along with major PLCs can usually obtain credit facilities.

**FINANCE AVAILABLE (SUBJECT TO STATUS)**

**0181 830 5555 • 0181-452 6815**  
22-26 Cricklewood Broadway, London NW2 3HD

**CALL FOR LATEST PRODUCTS & PRICES**



**11.3"**  
Dual Scan  
**£1199.00**

# MBC Congress



**11.3" SUPERSIZED SCREEN**

- 11.3" Dual-scan Colour VGA Display; CRT: 1024 X 768, 256 colours
- Intel upgradeable 486 CPU
- 1MB Video RAM
- 32-bit VESA Local Bus with Windows Accelerator
- 16-bit Stereo Audio with 2 Stereo Speakers & Microphone
- 4MB RAM expandable to 20MB
- Removable 340MB Hard Drive (510MB, 810MB, 1.0 Gb optional)
- 3.5" 1.44MB Floppy Drive (can be replaced with 2nd Battery Pack)
- Simultaneous CRT & LCD operation
- Integrated Pointing Device
- Intelligent power management w/SMM
- 2 PCMCIA Type I & II or 1 Type III Slots

- Extra Long Life NiMH Battery
- 1 16C550 compatible Serial Port
- 1 Parallel Port with ECP/EPP support
- Other Ports: Ext. Keyboard, Ext. VGA Monitor & 200 pin Connector for Docking Station
- Jacks - 1 line in & 1 line out
- 86 key Keyboard
- Carrying Bag & AC Adaptor
- Weight: 5.9lb with Battery
- 11.81" W x 9.64"D x 1.65"H

### MBC Congress

486DX4-75	£1199
486DX4-100	£1249

MBC was the first to bring you almost every important advance - then we ran with it! This included the CRT Portable Lunchbox 1988, Gas Plasma Lunchbox 1989, Laptop 1990, Notebook 1991, Colour 486 Notebook 1992, Colour 486 Subnotebook 1993 and the Pentium Local Bus Colour Notebook 1994. Today we bring you the MBC Diplomat, Delegate and Congress, yet again demonstrating our commitment to bringing you the latest technology - at an excellent price.



**PENTIUM**  
**£1499.00**

### MBC Diplomat

- Intel Pentium Processor
- 256KB Secondary Cache
- 8MB RAM expandable to 40MB
- 1 16C550-compatible Serial Port
- 1 Parallel Port with ECP/EPP support

### MBC Delegate

- Intel 486 Processor
- 4MB RAM expandable to 36 MB
- 1 serial and 1 parallel port

### Common Features

- 1MB Video RAM
- 32-bit VESA Local Bus with Windows Accelerator
- 32-bit Local Bus IDE
- 16-bit Stereo Audio with 2 Stereo Speakers & Microphone
- Removable 340MB Hard Drive (520MB, 810MB, 1.0 Gb optional)
- 9.5" Mono, 10.3" Dual Scan or 10.2" TFT Active Matrix VGA Display - CRT: 1024 x 768, 256 colours

- 3.5" 1.44MB Floppy Drive
- Simultaneous CRT & LCD operation\*
- Large Built-in 19mm Trackball and handrest
- Intel upgradeable CPU
- Intelligent power management w/SMM
- 2 PCMCIA Type I & II or 1 Type III Slots
- Super-long-life NiMH Battery
- Other Ports: Ext. Keyboard, Ext. VGA Monitor & 200 pin Connector for Docking Station
- Jacks - 1 line in & 1 line out
- 86 key Keyboard
- Carrying Bag & AC Adaptor
- Weight: 6.6lb with Battery
- 11.14" W x 9.48"D x 1.95"H

### MBC Diplomat

PENTIUM	Mono VGA 9.5"	DualScan Colour 10.3"	TFT-Active Colour 10.2"
PENTIUM-75	£ -	£1499	£1849
PENTIUM-90	£ -	£1599	£1949

### MBC Delegate

PROCESSOR	Mono VGA 9.5"	DualScan Colour 10.3"	TFT-Active Colour 10.2"
486DX4-75	£869	£1169	£1549
486DX4-100	£919	£1219	£1599

# MBC Diplomat/Delegate

**90MHZ PENTIUM/486**



Warranty: 12 months back to base parts and labour. (excludes software and printers). Prices and specifications subject to change without notice. Prices exclude VAT@ 17.5% and delivery. All sales are subject to MBC plc terms and conditions which are available on request. The Intel logo is a trademark of Intel Co.

# The One & Only

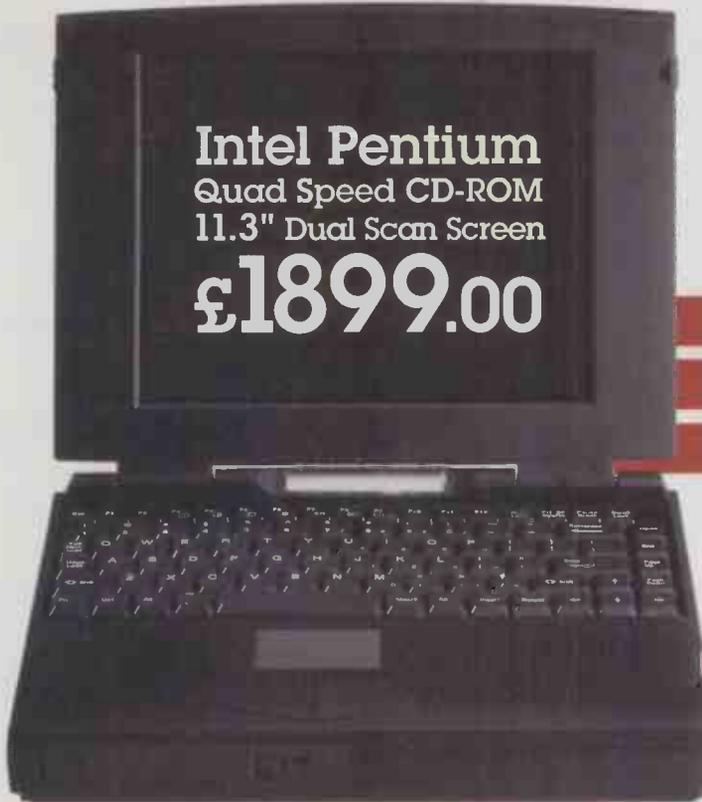


## MBC Enigma

WITH QUAD SPEED CD-ROM

PLUS SUPER VGA 11.3" SUPERSIZED SCREEN

PCI ARCHITECTURE



Intel Pentium  
Quad Speed CD-ROM  
11.3" Dual Scan Screen  
**£1899.00**

Today's demanding professionals look to see how many powerful features they can pack in to a single notebook. **More is better. More functions. More features. More power. Greater flexibility.** And **no-one** has more simultaneous high-performance features and more power in a single notebook than MBC. Allow us to introduce the *Enigma*: it's MBC's version of the high-performance multimedia desktop PC! So contact MBC today - we continue to bring you the **latest technology** at an excellent price.



PROCESSOR	11.3" Dual-Scan Colour	10.4" TFT Colour
PENTIUM-75	£1899	£2299
PENTIUM-90	£1999	£2399
PENTIUM-100	£2099	£2499
PENTIUM-120	£2299	£2699

- Intel Pentium CPU
- 256 kb Pipeline Burst Cache
- 1 MB video RAM
- 32-bit PCI local bus with Windows accelerator
- PCI bus HDD controller
- Supports Plug & Play execution
- 16-bit stereo sound card with stereo speakers & microphone
- 8 MB RAM expandable to 40 MB
- Removable 340 MB HDD (510MB, 810 MB or 1.0 GB optional)
- 11.3" dual-scan colour or 10.4" TFT-active colour display
- Simultaneous LCD & CRT 1280 x 1024
- Built-in Toshiba quad speed CD-ROM
- Built-in 3.5" 1.44MB FDD
- Built-in touchpad pointing device
- Advanced power management
- 2 PCMCIA type II or 1 x Type III
- Long life Duracell NiMH battery with battery level indicator and Smart Technology
- Infra-red wireless "IR" interface
- 1 x 16C550 compatible serial port
- 1 x EPP/ECP compliant parallel port
- Midi port; Ext. keyboard/mouse port; Ext. CRT & 160-pin docking station connector
- Jacks: 1 line in; 1 line out; 1 Mic
- A4 size 86 key keyboard
- Carrying bag & AC adaptor/charger
- Weight: 6.9lb with Battery
- 11.8" (w) x 8.9" (d) x 2.1" (h)

256K PIPELINE BURST CACHE

SVGA

SVGA 800 X 600



INTERNAL QUAD-SPEED CD-ROM & 3.5" FDD at same time



PCI VESA LOCAL BUS VIDEO & PCI LOCAL BUS IDE



LONG-LIFE DURACELL NiMH BATTERY & SMART TECHNOLOGY



EXTRA PORT FOR GAMES OR MIDI

### UPGRADES

4MB RAM Card	£160	2.5" 1.0GB IDE HDD	£760
8MB RAM Card	£320	2.5" 510MB IDE HDD	£295
12MB/16MB/32MB RAM Card	£CALL	2.5" 810MB IDE HDD	£495
Upgrade HDD from 340 to 510	£130	HDD Housing Kit	£39
Upgrade HDD from 340 to 810	£330	AC Adaptor	£55
Upgrade HDD from 340 to 1.0GB	£480	Battery	£75
Mobile CD-ROM	£275	Car Adaptor	£45
• 5.25" 2X CD-ROM with PC Card interface • Operates on 6 AA batteries or supplied AC adaptor		Docking Station	£320
• Complies with PCMCIA 2.1 standard • Lightweight - only 2.8lb		MS-DOS 6.22	£39
2.5" 340MB IDE HDD	£165	MS-DOS 6.22 & WFWG 3.11	£79
		Windows 95	£79
		PCMCIA	
		14,400 Fax/Modem	£195
		28,800 Fax/Modem	£295
		Ethernet	£145
		SCSI-2	£199

SALES HOTLINE  
**0181-208 2333**

Showroom Hours: Monday - Friday 10 AM - 6 PM



**MBC**  
*be ahead in technology*

Micro Business Computers plc, MBC House,  
Edge Business Centre, Humber Road, London NW2 6EW  
Tel: 0181-208 2333 Fax: 0181-452 6522

Warranty: 12 months back to base parts and labour (excludes software and printers). Prices and specifications subject to change without notice. Prices exclude VAT@ 17.5% and delivery. All sales are subject to MBC plc terms and conditions which are available on request. The Intel logo is a trademark of Intel Co.







P&P

# Microsoft Windows® 95

## UPGRADES MADE EASY

### WITH P&P IT'S AS EASY AS...



**MICROSOFT WINDOWS® 95**  
WITH  
INTEL 486DX2™ 66MHz  
OVERDRIVE® PROCESSOR  
FROM

**£173.99** £204.44  
inc VAT

**MICROSOFT WINDOWS® 95**  
WITH  
HYPERTEC 4Mb RAM  
DESKTOP UPGRADE  
FROM

**£199.95** £234.94  
inc VAT

**MICROSOFT WINDOWS® 95**  
WITH  
CONNOR 425Mb IDE  
HARD DRIVE  
FROM

**£179.99** £211.49  
inc VAT

# Microsoft Windows® 95

**+**  
INTEL 486DX2™  
66MHz OVERDRIVE®  
PROCESSOR  
AND CONNOR 425Mb  
IDE HARD DRIVE  
FROM

**£288.99** £339.56  
inc VAT

**+**  
HYPERTEC  
4Mb RAM DESKTOP  
UPGRADE AND  
CONNOR 425Mb IDE  
HARD DRIVE  
FROM

**£314.95** £370.06  
inc VAT

**+**  
INTEL 486DX2™  
66MHz OVERDRIVE®  
PROCESSOR AND  
HYPERTEC 4Mb RAM  
DESKTOP UPGRADE  
FROM

**£292.99** £344.26  
inc VAT

**+**  
INTEL 486DX2™ 66MHz  
OVERDRIVE® PROCESSOR AND  
HYPERTEC 4Mb RAM DESKTOP  
UPGRADE PLUS CONNOR  
425Mb IDE HARD DRIVE  
FROM

**£395.95** £465.24  
inc VAT

The above prices may vary depending on requirement - please call us for advice



## Windows® 95

Microsoft Windows® 95 the most innovative upgrade to Microsoft's graphical operating system is designed to propel you into the world of object-based computing.

Microsoft Windows 95 Std CD-ROM

**£64.99** £76.36 inc VAT  
quote order no MSU611/PP940F  
For 3.5" version quote order no MSU12/PP940F



## Office® 95

Microsoft Office Standard for Windows® 95 contains new 32-bit versions of Word, Excel and PowerPoint and an updated version of Schedule+. The Professional edition contains the 32-bit version of Access and Visual Basic for Applications.

Microsoft Office 95 Std CD-ROM

Microsoft Office 95 Pro CD-ROM

**£372** £437.10 inc VAT  
quote order no MST796/PP940F  
For 3.5" version quote order no MST796/PP940F

**£483** £567.53 inc VAT  
quote order no MST452/PP940F  
For 3.5" version quote order no MST452/PP940F

## UPGRADE YOUR PC MEMORY NOW!



With Windows® 95 hot off the launchpad, now is a critical time to evaluate your system memory. Even if you just want to give your PC a boost, HyperRam memory modules are the perfect upgrade.

- Different specifications and capacities from 2Mb to 128Mb
- Guaranteed to fit and work perfectly in your PC
- 5 year Hypertec warranty
- Free Technical Support

**DESKTOP**  
4Mb FROM

**£146** £171.55  
inc VAT

**8Mb FROM**  
**£302** £354.85  
inc VAT

**16Mb FROM**  
**£523** £614.52  
inc VAT

**PORTABLE**  
4Mb FROM

**£165** £193.87  
inc VAT

**8Mb FROM**  
**£351** £412.42  
inc VAT

**16Mb FROM**  
**£596** £700.30  
inc VAT

**digital**<sup>TM</sup>  
**PC**

**PENTIUM®**

## DIGITAL VENTURIS 560 PENTIUM®

- 60MHz Intel™ Pentium® Processor • 540Mb Hard Disk
- 8Mb RAM (expandable to 128Mb) • 14" SVGA Monitor
- 3.5" 1.44Mb Floppy Drive • One PCI, one ISA, one PCI/ISA interleaved
- 2 free Drive Bays • Intel™ Pentium® OverDrive® Upgrade Socket • 256Kb Secondary Cache
- Plug & Play Compatible

### SOFTWARE\*

- MS-DOS 6.22 and MS Windows for WorkGroups 3.11 pre-loaded.



### WARRANTY

**3 Year Digital Warranty, 1st Year On-Site (CPU ONLY)  
One Year Warranty on Monitor**



**£1099** (£1291.33 inc VAT)  
quote order no  
**DKP655/PP940F**  
\*Disks and manuals not included.

## COMPAQ

**40  
MHz**

## COMPAQ ELITE 4/40C

- Intel 486DX2™ 40MHz SL-Enhanced processor • 170Mb Hard Disk
- 4Mb RAM (expandable to 20Mb) • 256 Sharp Colours on the 9.5" Compaq Advanced Dual Scan Passive Matrix Colour VGA Screen
- Fast screen response without ghosting using the Local Bus Graphics Accelerator
- Secure storage of important data with the removable Hard Disk
- Internal AC Adapter - just plug in and go
- PCMCIA Type III slot - for a host of connectivity options

### SOFTWARE\*

- MS-DOS 6.2 • MS Windows 3.1



### WARRANTY

**3 Year Compaq World-Wide Warranty**



**£1099** (£1291.33 inc VAT)  
quote order no  
**CDP252/PP940F**  
\*Disks and manuals not included.

**These pages show only a small sample of our vast range of computer related products.  
For information on any other IT requirements CALL US.**

**ORDER NOW**

P&P SOUTH CALL **0171 265 4570**

P&P NORTH CALL **01706 832 832**

**FOR PUBLIC SECTOR ORDERS**

RING YOUR ACCOUNT MANAGER ON **01706 832 081**

OR FAX YOUR ORDER ON **01706 832 189**



**P & P**

P&P Direct, Todd Hall Road, Haslingden, Rossendale, Lancashire BB4 5HU Reg. No. 2380230



**PP940F**

\*All offers are made subject to availability \*24 hour delivery (£15 excluding VAT) subject to credit and availability \*All prices are subject to change without notice, E&OE etc \*Goods are not sold on a trial basis \*Subject to our standard terms and conditions (available on request) \*While stocks last \*P&P Direct is a trading division of P&P Corporate Systems Limited which is part of the P&P plc group of companies.

# MICRO CARD

A division of Ambar Components Ltd.

# The PC Card Specialist

# TEL: 01844 263063

Most people know what they need from their mobile computer but what about add-ons: more memory? a modem? an ethernet adapter or additional disk drives? In fact, the choice of PCMCIA peripherals is probably as wide as the computers which support them! When the time comes for an add-on make MicroCard you first call. Our trained staff will answer your queries and help you find the PCMCIA Card you need.

## LAN ADAPTERS

Connectivity in a card!  
Combines the freedom to move around with the power to connect to most of the popular networks.

### Key Features:

- Low Power
- Easy menu driven installation
- Fully 10 base t compliant
- Supports: NetWare, LAN Manager, LAN Server, Vines, PC/TCP and DEC Pathworks.
- HOT Insertion and Removal. No need to power down.

CT-10BT-01 Ten Base ..... **£139.00**  
CT-10B2-01 Thin net coax ..... **£139.00**



## DRAM MEMORY CARDS

Standard 88 pin memory cards for use in notebook IBM, COMPAQ and TOSHIBA notebooks and portables. Available in 4Mbyte, 8Mbyte and 16Mbyte capacities with access times of 70nS and 80nS.

100% compatible with the following host system hardware and software. Adaptable to future platforms: Toshiba: T1800, T1800C, T1910, T1950, T1950C, T1960, T1960C, T4500, T4600, T4700, T4700C, T4800, T4800C.

IBM: ThinkPad 700, 700C, 720, 720C, 750, 750C, CL57SX, ThinkPad 360, 755, 755C.  
ComPaq: LTE4/25, 4/25C, 4/33.

### Key Features:

- JEIDA/JEDEC standard specifications
- Industry standard DRAM functions and timing

4MB ..... **£153.00**  
8MB ..... **£318.00**  
16MB ..... **£589.00**

## SCSI CARDS

True peripheral connectivity to any portable computer with a PCMCIA Revision 2 socket. What better way to connect that CD ROM drive to your lap top?

### Key Features:

- Driver for DOS and Windows
- Supports up to 7 SCSI Devices
- Hot Swappable
- Easy Menu Driven Installation

CT-SCSI-01 ..... **£168.00**



## FAX MODEMS

State of the art 14.4Kbps and 28.8Kbps modems with send/receive fax capability and Hayes compatibility. With plug in installation, cellular compatibility and low power circuitry these are the perfect travelling companions.

### Key Features:

- Free Winfax Software
- Free Systemssoft Card and Socket Services
- BABT Approved
- Full PCMCIA compatibility
- Cellular Ready
- Automatic speed sensing



14.4K FaxModem ..... **£189.00**  
28.8K FaxModem ..... **£289.00**

## SRAM CARDS

Unique on-card circuitry and a rechargeable battery removing the danger of battery failure during critical times. Card charges itself in the PC.

### Key Features:

- Rechargeable cell up to 10 year life
- Wide range of capacities 128k to 4MB

128KB ..... **£39.00**  
256KB ..... **£54.00**  
512KB ..... **£84.00**  
1MB ..... **£CALL!!**

Call now for best prices on higher capacities!!



## FLASH CARDS

This extensive range of PCMCIA Flash cards is the ideal choice for non volatile storage applications where low power, speed and data reliability is important. The data once written is retained even in the absence of power, ideal for data storage.

### Key features:

- Low Power - 120mA max
  - Capacities from 256k to 20MB
- 256k ..... **£39.35**  
512k ..... **£57.42**  
1MB ..... **£93.55**  
2MB ..... **£102.58**  
4MB ..... **£185.81**

Call for higher capacities.

Save ££££££££££££££££!

### STOP PRESS

New 'PALMFLASH' cards for H.P. Palmtop PCs  
Call for details.



## FLASH DISKS

High capacity, high reliability solid state alternative to a disk drive PC card ATA (PCMCIA) standard interface. Built in controller means that the card behaves like a disk drive, without Flash File software. Compatible with DOS and other operating systems which support IDE drives.

### Key features:

- Capacities from 1.8MB to 40MB (type 2) 80MB to 175MB (type 3)
- Low Power (Programmable - Extending battery life)
- Withstands High Operating Shock (1000G)
- Full PCMCIA compatibility - Ideal for data transfer

## INTRODUCTORY OFFER

Double FlashDisk capacity with FREE Stacker™ software. Our 1.8MB and 2.5MB cards come with the Stacker option preloaded AT NO EXTRA COST!! Look at these prices...  
1.8MB (3.6MB Stacked) ..... **£129.00**  
2.5MB (5MB Stacked) ..... **£149.00**



## MICRODRIVES

Are you still lugging a portable around? Why not just carry your data? PCMCIA Hard disk drives free your data and your hands whilst maintaining compatibility.

### Key Features:

- Low Power 300mA active
- Low Cost

130MB ..... **£313.55**  
170MB ..... **£360.00**  
260MB ..... **£499.35**  
Call now!!!



Money back guarantee

All quoted prices exclude VAT  
Add £9.50 for next day delivery



TELEPHONE 01844 263063 FAX: 01844 261789

17 Thame Park Road, Thame, Oxfordshire OX9 3XD

Email: ambar @ ambarcom.demon.co.uk

# FREE 3 YEARS ON-SITE WARRANTY



PCWDEC95

## FUJITSU ICL ErgoPro e-series



The ErgoPro e-series brings you a professional computer that has all the characteristics of the Fujitsu ICL brand but at a price that puts them street ahead of the competition. You can choose from either the Intel Pentium 75 or Intel Pentium 90, both delivering brilliant performance. Included in all the packages are large capacity 540MB or 850MB Local Bus hard disks, a superb Local Bus Graphics card which can put you in touch

with the most demanding applications. Upgrading your ErgoPro has never been easier, if you want to add capacity later, ErgoPro PC's offer expansion potential with Plug & Play and Overdrive support, room for a second hard disk, and four free slots for network cards, modems, etc. We have backed these features by including a full 3 year warranty.

**What better way to protect your investment?**

**FUJITSU ICL**



**ErgoPro e450/75**

- Intel 75MHz Pentium Processor
- 8MB or 16MB RAM
- 540MB Hard Disk Drive
- Quad Speed CD-ROM (optional)
- Integrated PCI Graphics
- Compact 4-Slot Housing
- ISA/PCI Plug and Play
- Extremely Quiet
- Windows '95

CareFREE 3 YEARS ON-SITE WARRANTY INCLUDED

ErgoPro e450/75 8MB 540MB **£875**  
ErgoPro e450/75 16MB 540MB Q/S CD **£1275**

**FUJITSU ICL**



**ErgoPro e450/90**

- Intel 90MHz Pentium Processor
- 8MB or 16MB RAM
- 540MB or 850MB Hard Disk Drive
- Quad Speed CD-ROM (optional)
- Integrated PCI Graphics
- ISA/PCI Plug and Play
- Compact 4-Slot Housing
- Extremely Quiet
- Windows '95

CareFREE 3 YEARS ON-SITE WARRANTY INCLUDED

ErgoPro e450/90 8MB 540MB **£1075**  
ErgoPro e450/90 16MB 850MB **£1445**  
ErgoPro e450/133 16MB 1GB Q/S CD **£2325**

**FUJITSU ICL**



**ErgoPro e650/90**

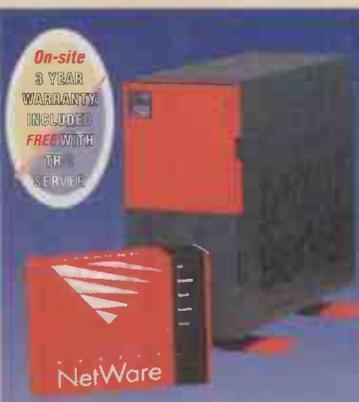
- Intel 90MHz Pentium Processor
- 16MB RAM
- 540MB Hard Disk Drive
- Quad Speed CD-ROM
- Integrated PCI Graphics
- Mini tower 6-Slot Housing
- ISA/PCI Plug and Play
- Extremely Quiet
- Windows '95

CareFREE 3 YEARS ON-SITE WARRANTY INCLUDED

ErgoPro e650/90 16MB 540MB Q/S CD **£1595**

## FUJITSU ICL teamserver C450i

The "out-of-the-box" Network™ server. Using the Intel Pentium Processor, PCI-SCSI and PCI-Ethernet technology and pre-loaded with Novell Network 4.1, the C450i is a fully configured, high performance LAN server for the price of a desktop PC.



- Intel 75MHz Pentium Processor
- 16MB RAM Upgradable to 128MB
- 1Gb SCSI-2 Hard Disk Drive
- Double Speed CD ROM Drive
- 3.5" 1.44MB Floppy Disk Drive
- SuperVGA EISA Local Bus Graphics
- 1 PCI and 3 EISA Free Expansion Slots
- PCI Ethernet Card
- Novell Network 4.1

**£1995**

## FUJITSU ICL ErgoLite e50



### Exclusive to Alternatives Specification

- Intel 50MHz SL Enhanced 486DX2 Processor
- 4MB RAM Upgradable to 12MB
- 260MB Removable Hard Disk Drive
- External 3.5" 1.44MB Floppy Disk Drive
- Local Bus Graphics with External Monitor Support
- 256 Colours
- STN Colour VGA Display
- 2 x PCMCIA Rel. 2.0 Type II/III Slots
- 80 Key Keyboard with RollPOINT Mouse
- MS DOS 6.2, MS Window for Workgroups 3.11
- PowerMASTER with APM Support
- NiMH Battery
- Weighs 2.1Kg



**£799**

### ErgoPro V-Series Monitor Options

ErgoPro 141V	<b>£195</b>
ErgoPro 151V	<b>£295</b>
ErgoPro 171V	<b>£515</b>

### ERGOPRO

**NOW INSTALLED WITH Microsoft Windows 95**

Windows '95 is installed in addition to DOS & Windows 3.11 as a user install option.

**CareFREE™**  
3 Years FREE on-site warranty included on all PCs.  
Call for details.

CALL **01925 700007**

Most methods of payment accepted. Government/Education orders welcomed. All prices exclusive of V.A.T. & delivery and are subject to change without notice. All trademarks acknowledged. E. & O. E. Alternatives, Stanford House Science Park South, Birchwood Warrington, Cheshire WA3 7BH Tel: 01925 700007. Fax: 01925 700009. These cards will not be debited until purchase is despatched.

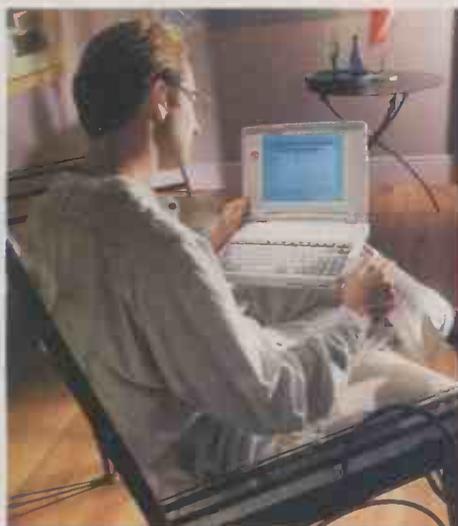


**OPENING TIMES: 8.30am - 6.00pm Monday - Friday**

**Alternatives**  
WHERE THE WORLD'S BEST PC PRODUCTS COME TOGETHER

# FREE 3 YEARS ON-SITE WARRANTY

## Number 1 for TOSHIBA



**400CS**

Care **FREE**.  
3 YEARS  
ON-SITE  
WARRANTY  
INCLUDED  
**FREE**

400CS 10.4" VGA STN Colour Display **£2395**

### The **NEW** Satellite Pro

- Intel 75MHz Pentium Processor
- 8MB EDO RAM Upgradable to 40MB
- 810Mi.B Hard Disk Drive
- Swappable Quad Speed CD ROM Drive
- Swappable 3.5" 1.44MB Floppy Disk Drive
- Local Bus Graphics
- PCMCIA Rel. 2.0 Type II/III Slots
- Port Replicator Interface
- 84 key Keyboard, 12 function keys with MousePoint
- Built in Microphone and Speaker
- MS DOS 6.22, MS Windows for Workgroups 3.11
- 4.0 Hours Battery Life
- Weighs 3.1Kg
- Dimensions:

**400CDT**

Care **FREE**.  
3 YEARS  
ON-SITE  
WARRANTY  
INCLUDED  
**FREE**

400CDT 10.4" VGA TFT Colour Display **£3095**

## TOSHIBA The **NEW** T2100 Series.



- Intel 75MHz 486DX4 Processor
- 4MB or 8MB RAM Upgradable to 32Mb
- 260Mi.B, 350Mi.B or 520Mi.B Hard Disk Drive
- 3.5" 1.44 Floppy Disk Drive
- Mono, VGA STN Colour or VGA TFT Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- 84 Key Keyboard, 12 Function Keys with Mousepoint
- MS DOS 6.22, MS Windows 3.11
- Up to 4 Hours per Charge
- Dual Speed CD ROM on T2150's
- Optional Port Replicators

<b>T2110 DX4/4MB</b>	
T2110/350	<b>£835</b>
T2110CS/350	<b>£1335</b>
<b>T2130 DX4/8MB</b>	
T2130CS/520	<b>£1595</b>
T2130CT/520	<b>£1925</b>
<b>T2150 DX4/CD</b>	
T2150CDS/260	<b>£1475</b>
T2150CDS/520	<b>£1695</b>
T2150CDT/520	<b>£2525</b>

**T4850CT**

Care **FREE**.  
3 YEARS  
ON-SITE  
WARRANTY  
INCLUDED  
**FREE**

T4850CT **£2395**

### TOSHIBA

- Intel 75MHz 486 DX4
- 8MB RAM Upgradable to 40MB
- 810Mi.B HDD
- 3.5" 1.44MB FDD
- 10.4" VGA TFT Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- 84 Key Keyboard, 12 Function Keys
- MS DOS 6.2, MS Windows for Workgroups 3.11
- MS Windows Sound System
- Up to 3.5 Hours per Charge

**T4900CT**

Care **FREE**.  
3 YEARS  
ON-SITE  
WARRANTY  
INCLUDED  
**FREE**

T4900CT **£3025**

### TOSHIBA

- Intel 75MHz Pentium Processor
- 8MB RAM Upgradable to 40MB
- 810Mi.B HDD
- 3.5" 1.44MB FDD
- 10.4" VGA TFT Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- 84 Key Keyboard, 12 Function keys and Ballpoint Mouse
- MS DOS 6.2, MS Windows for Workgroups 3.11
- MS Windows Sound System
- Up to 3 Hours per Charge
- Weight 3.1kg

**DESK STATION IV £395**

**Deskstation IV** A powerful expansion unit that allows your Toshiba PC to give you the benefits of portable and desktop computing.

- Centronics parallel printer port
- External Floppy Disk Drive Port
- RS-232C serial port
- External PS/2 keyboard port
- VGA monitor port
- PS/2 mouse port
- Two full size 16-bit ISA slots
- Industry standard 5 1/4 drive bay
- Monitor stand
- 346w x 385d x 111h (mm)
- Weighs 7.3Kg
- Kensington cable lock provision
- Power LED, lock/unlock indicator
- 3 year warranty
- Compatible with T4600C, T4700CT, T4800CT, T4850CT, T4900CT

<b>Options &amp; Accessories</b>			
<b>ACCESSORIES</b>	<b>T19's, T47's, T48's, T49's</b>	<b>T2100's</b>	
PCMCIA 14.4 Fax/Modem <b>£210</b>	4MB RAM Upgrade <b>£175</b>	4MB RAM Upgrade	<b>£195</b>
PCMCIA 28.8 Fax/Modem <b>£335</b>	8MB RAM Upgrade <b>£310</b>	8MB RAM Upgrade	<b>£355</b>
Toshiba Nylon Carry Case <b>£35</b>	16MB RAM Upgrade <b>£795</b>	16MB RAM Upgrade	<b>£795</b>



# on all PC's from Alternatives

## The World's Leading Printers from Hewlett-Packard



PCWDEC95

**HP DESKJET 600**

**NEW**



- 4ppm Print Speed
- 600dpi (600 x 300dpi Colour) Resolution
- 14 Scalable Fonts
- HP PrintSmart
- 100 Sheet Tray
- Parallel Interface
- 3 Years Warranty

**£189**

**HP LASERJET 5L**

**NEW**



- 4ppm Print Speed
- 600 x 600dpi Resolution
- 1MB Memory Upgradable to 9MB
- 26 Scalable Fonts
- HP PCL5e or HP PrintSmart
- 100 Sheet Paper Tray
- Parallel Interface
- 1 Year Warranty

**£355**

**HP DESKJET 660C**



- 4ppm Print Speed
- 600dpi (600 x 300dpi Colour) Resolution
- 14 Scalable Fonts
- HP PCL3 Emulation
- 100 Sheet Tray
- Parallel Interface
- 2 Button Control Panel
- 3 Years Warranty

**£249**

**HP LASERJET 5P**



- 6ppm Print Speed
- 600 x 600dpi Resolution
- 1MB Memory Upgradable to 50MB
- 45 Scalable Fonts
- HP PCL5e Language
- 100 & 250 Sheet Paper Trays
- Parallel Interface
- 1 Year Warranty

**HP LaserJet 5P £595**    **HP LaserJet 5MP £719**

**HP DESKJET 850C**



- 6ppm Print Speed
- 600dpi (600 x 300dpi Colour) Resolution
- Supports PC and Macintosh
- 26 Scalable Fonts
- 150 Sheet Tray
- Parallel Interface
- 2 Button Control Panel
- 3 Years Warranty

**£339**

**HP LASERJET 4 PLUS**



- 12ppm Print Speed
- 600 x 600dpi Resolution
- 2MB Memory Upgradable to 66MB
- 45 Scalable Fonts
- HP PCL5e Language
- 100 & 250 Sheet Paper Trays
- Parallel Interface
- 1 Year Warranty

**HP LaserJet 4 PLUS £999**    **HP LaserJet 4M PLUS £1329**

**Hewlett Packard Deskjet 540 - with FREE Colour Kit now only £199**

## EPSON A Breakthrough in Inkjet Quality

**STYLUS 800+**



- 3ppm with very fast return to application times
- 360 x 360dpi resolution
- Built in Enhancements eliminate banding and improves print resolution
- 100 Sheet A4 input tray
- Small footprint
- Low running costs
- Inbuilt 5LQ & 4 scalable fonts
- Suitable for DOS & Windows
- 3 Year Warranty

**£169**

**STYLUS COLOUR II**



- 4ppm with very fast return to application times
- 720dpi colour resolution
- PC Bi-direction Parallel and RS 422 Mac Support
- Built in Enhancements eliminate banding and improves print resolution
- Smart drivers allow for image handling prior to printing
- 4 colour cartridge, for true colour and black image production
- Low running cost
- Suitable for DOS & Windows

**£295**

**STYLUS 820**



- 2.5ppm with very fast return to application times
- 720 dpi resolution
- Colour Kit available
- Built in Enhancements eliminate banding
- 100 Sheet A4 input tray
- Small footprint
- Low running costs
- Suitable for DOS & Windows
- 3 Year Warranty

**£199**

**STYLUS COLOUR IIs**



- 2.5ppm with very fast return to application times
- 720dpi colour resolution
- PC Bi-direction Parallel
- Built in Enhancements eliminate banding
- Smart drivers allow for image handling prior to printing
- Interchangeable colour and black cartridges
- Low running costs
- Suitable for DOS & Windows
- 3 Year Warranty

**£249**

# Alternatives

WHERE THE WORLD'S BEST PC PRODUCTS COME TOGETHER

call the "A" team NOW  
 OPENING TIMES: 8.30-6.00pm  
 Monday-Friday

CALL 01925 700007

Most methods of payment accepted. Government/Education orders welcomed. All prices exclusive of V.A.T. & delivery and are subject to change without notice. All trademarks acknowledged. E. & O. E. Alternatives, Stanford House, Science Park South, Birchwood, Warrington, Cheshire WA3 7BH. Tel: 01925 700007. Fax: 01925 700009. These cards will not be debited until purchase is despatched.



OPENING TIMES: 8.30am - 6.00pm Monday - Friday

**STORAGE UPGRADES: PC'S, COMPAQ SERVERS, PS2'S RS6000, SUN SPARC, SILICON GRAPHICS, HP 9000, APPLE MAC'S +++**

## SUSTAINED DATA TRANSFER RATE

SCSI-1	IDE	SCSI-2	FAST SCSI	WIDE SCSI	DRIVE ARRAY
1.5MB/SEC	2MB/SEC	5MB/SEC	10MB/SEC	20MB/SEC	45MB/SEC

## TAPE BACKUP SYSTEMS

Prices are for internal drives + £75 external

800MB HP QIC £119

2GB HP DAT £475

16GB HP DAT £650

	Native Size	Comp Size	Transfer Rate/Min	Comp Rate	Price
HP T-1000	400MB	800MB	4MB	9MB	£119
HP 1534	2GB	-	11MB	-	£475
HP 1536	2GB	8GB	11MB	16MB	£565
SONY SDT5000	4GB	16GB	21MB	30MB	£650
WANGDAT 3400DX	4GB	16GB	21MB	30MB	£650
HP C1533A	4GB	16GB	30MB	45MB	£650
HP C1553A	24GB	96GB	30MB	45MB	£1500
HP C1533AR-7	28GB	112GB	140MB	210MB	£8500
CONNER 4586	48GB	192GB	24MB	36MB	£2500
EXABYTE 8205X1	2.5GB	5GB	16MB	30MB	£950
EXABYTE 8505XL	7GB	14GB	30MB	45MB	£1450
DLT 3500	15GB	30GB	75MB	150MB	£3000
DLT 4000	20GB	40GB	90MB	180MB	£4500
DLT JUKEBOX	140GB	280GB	90MB	180MB	£POA
ARCADA CHEYANNE LEGATO PALINDRONE					BEST PRICES

## HARD DRIVES

Prices are for internal drives + £75 external

1.0GB IDE DRIVE £155

1.0GB SCSI DRIVE £225

2.0GB SCSI DRIVE £450

4.0GB SCSI DRIVE £695

	Size	TYPE	SDTR	Seek	Price
IBM PEGASUS	1.0GB	IDE	2MB	10MS	£225
QUANTUM FIREBALL	1.0GB	IDE	2MB	12MS	£165
CONNER CFS1275A	1.2GB	IDE	2MB	12MS	£185
SEAGATE 31220A	1.0GB	IDE	2MB	12MS	£165
FUJITSU	1.0GB	IDE	2MB	12MS	£165
WEST DIG 31200	1.2GB	IDE	2MB	10MS	£200
WEST DIG 31600	1.6GB	IDE	2MB	10MS	£285
CONNER CFP1080S	1.0GB	F-SCSI	4MB	9MS	£225
FUJITSU M1606SA	1.0GB	F-SCSI	4MB	9MS	£225
IBM PEGASUS	1.0GB	F-SCSI	4MB	9ms	£250
HP 3724S	1.2MB	F-SCSI	4MB	9MS	£300
QUANTUM FIREBALL	1.0GB	F-SCSI	4MB	9ms	£225
SEAGATE 31230N	1.0GB	F-SCSI	4MB	9ms	£295
QUANTUM CAPELLA	2.1GB	F-SCSI	6MB	9ms	£550
CONNER 2105	2.1GB	F-SCSI	5MB	9MS	£450
CONNER 2107	2.1GB	F-SCSI	6MB	9MS	£500
HP 3725	2.0GB	F-SCSI	5MB	9MS	£475
QUANTUM ATLAS	2.1GB	F-SCSI	7MB	8ms	£575
MICROPOLIS 4221	2.1GB	F-SCSI	6MB	9MS	£575
MICROP 4221AV	2.1GB	F-SCSI	6MB	9MS	£625
MICROPOLIS 4221W	2.1GB	WIDE	7MB	9MS	£650
FUJITSU M2903	2.1GB	F-SCSI	5MB	9MS	£475
SEAGATE 32430N	2.1GB	F-SCSI	6MB	8ms	£575
IBM ULTRASTAR	2.0GB	F-SCSI	7MB	8ms	£675
CONNER 2107W	2.0GB	WIDE	7MB	9ms	£625
SEAGATE 32550N	2.1GB	F-SCSI	7MB	8ms	£700
SEAGATE 32550W	2.1GB	WIDE	7MB	8ms	£800
SEAGATE 12450W	2.1GB	WIDE	9MB	8ms	£1250
QUANTUM G-PRIX	4.0GB	F-SCSI	6MB	9ms	£695
CONNER 4207	4.0GB	F-SCSI	6MB	9MS	£725
MICROP 3243	4.0GB	F-SCSI	6MB	9ms	£750
MICROP 3243AV	4.0GB	F-SCSI	6MB	9ms	£775
SEAGATE 15230N	4.0GB	F-SCSI	6MB	9ms	£750
QUANTUM ATLAS	4.0GB	F-SCSI	7MB	8ms	£1095
SEAGATE 15150N	4.1GB	F-SCSI	7MB	8ms	£1050
SEAGATE 15150W	4.1GB	WIDE	7MB	8ms	£1150
CONNER 4207W	4.1GB	WIDE	7MB	9ms	£850
IBM ULTRASTAR	4.1GB	F-SCSI	7MB	8ms	£1050
IBM ULTRASTAR	5.1GB	F-SCSI	7MB	8ms	£1250
MICROP 1991	9.0GB	F-SCSI	5MB	12MS	£1450
MICROP 1991AV	9.0GB	F-SCSI	5MB	12MS	£1500
SEAGATE ELITE 9	9.0GB	F-SCSI	5MB	12ms	£1600

## PANASONIC PD SYSTEM

650MB RE-WRITABLE DRIVE

+ QUAD SPEED CD ROM

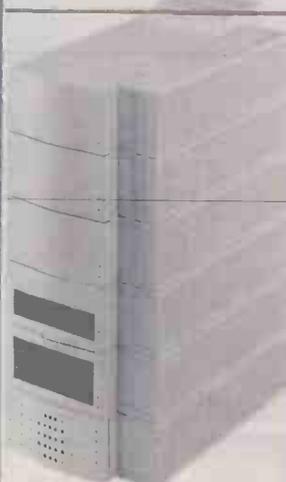
IN SINGLE DRIVE UNIT

**£439**  
DRIVE

**£35**  
MEDIA

## MODULAR DRIVE EXPANSION

The modular expansion chassis is designed so that capacity can be increased by stacking additional interlocking disk modules. Each disk module is removable for hot swap and portability. The system can operate with a single module and expand to keep pace with growing system demands. As many as 49 modules can be connected in a SCSI chain. The system provides for up to 150GB of fault tolerant storage. Support is provided for: Netware NT WINDOWS SUN SG APPLE IBM...



# ELECTRONIC DOCUMENT STORAGE

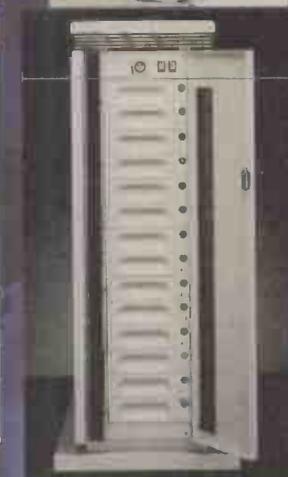


Custom document management solutions are available for a wide range of industries and professions including Legal, CAD, Medical, Insurance and many more. Solutions based on CD ROM or Re-Writable technology are available for individual or corporate implementation.

A complete installation service including large scale batch scanning and conversion of existing files is available. Solutions are based on non proprietary open ended technology with easy integration with both Microsoft Office and Lotus Notes.

## ARCHIVAL TECHNOLOGY

A4 10PPM DOCUMENT SCANNER	£1400
A4 27PPM DOCUMENT SCANNER	£3500
A3 20PPM DOCUMENT SCANNER	£4900
7 ROM QUAD SPEED TOWER	£2300
14 ROM QUAD SPEED TOWER	£4500
18 ROM JUKEBOX	£1850
500 ROM JUKEBOX	£12900
20GB RE-WRITABLE JUKEBOX	£4500
40GB RE-WRITABLE JUKEBOX	POA
120GB RE-WRITABLE JUKEBOX	POA
CD MANAGEMENT SOFTWARE	POA
DOCUMENT MANAGEMENT SOFTWARE	POA



## RE-WRITABLE OPTICAL DRIVES

Optical drives use removable media which have a typical life span of 25 years. The media is encased in a protective plastic layer which makes it virtually indestructible. Data can be written and erased just like a conventional hard drive. The Optical drives are available in both SCSI & Parallel port versions and can be connected to a wide range of machines including PC's MAC's & Unix Workstations SUN SG IBM E.T.C..

### 230MB + 5 DISKS

230MB INTERNAL	£425
230MB EXTERNAL	£525
230MB PARALLEL	£625

### 650MB + 1 DISK

650MB INTERNAL	£750
650MB EXTERNAL	£850
650MB PARALLEL	£950

### 1.3GB + 1 DISK

1.3GB INTERNAL	£1150
1.3GB EXTERNAL	£1250
1.3GB PARALLEL	£1350



## OPTICAL MEDIA

TYPE	1	5	10
128MB	£18	£14	£13
230MB	£20	£17	£16
600MB	£45	£43	£40
650MB	£45	£43	£40
1.2GB	£55	£46	£42
1.3GB	£55	£46	£42

## CD ROM WRITERS

### MASTER YOUR OWN CD ROMS

**Backup 640MB  
on CD ROM  
for £4.50**

- BACKUP UP DATA ON PERMANENT ARCHIVAL MEDIA.
- DISTRIBUTE DATA TO ANY ONE EQUIPPED WITH A CD PLAYER.
- BUILD A LIBRARY OF PICTURES DOCUMENTS E.T.C.
- BUILD MULTI MEDIA PROGRAMS FOR DISTRIBUTION.

YAMAHA	DUAL SPEED	£795
HP	DUAL SPEED	£795
PHILLIPS	DUAL SPEED	£1095
YAMAHA	QUAD SPEED	£1495

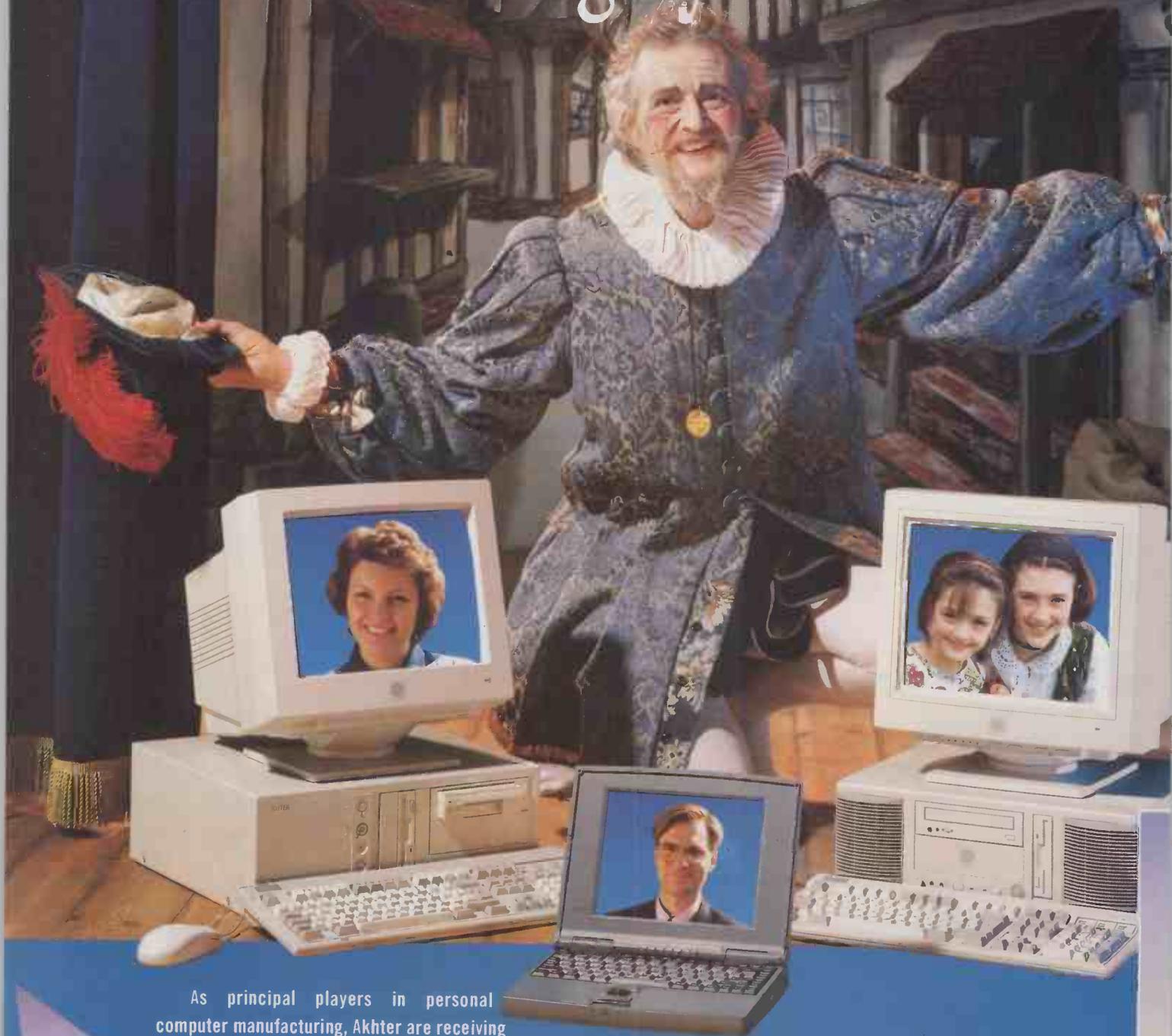
## CD-R 74Min Media

10+ : £6 25+ : £.50 50+ : £5 100+ : £4.50

### \*\*\* Special Offer \*\*\*

Buy a CD Writer from us and you can buy media from us any quantity at our 100+ price for life !

# Whatever stage you're at...



As principal players in personal computer manufacturing, Akhter are receiving enthusiastic reviews from the most discriminating audiences. With a repertoire that includes supply of equipment to the Department of Education and Science and the Ministry of Defence, you can be assured of a spectacular performance from your Akhter.

**0%**  
FINANCE PACKAGES  
AVAILABLE

Firstly, we would like to introduce an Akhter of note, the *AkhterNote!* This is one of our finest lines, bringing modular construction to deliver one of the most flexible notebook packages around. With an unlimited upgrade path and digitised audio record and playback capabilities, this performer has a surprise up its sleeve – an *unbelievably low price*. Just look at the specification and be enthralled!

Some of our top Akhters are demonstrating their audio and video talents. Our *multimedia workstations* bring fun to education, games and business applications using music and moving pictures. With dual speed CD-ROM and enhanced PCI graphics they are destined for a long and successful run.

And at prices like these you can afford to get in on the act, too! *Our finance packages* are a smash hit with everyone, and of course all our lines are delivered right on cue.

*So, if you are at a stage where you need an experienced Akhter, your first act is to ring now!*

freephone **0800 - 413 412** Fax 01282-831 900

# you need an Akhter

## A Classic performance from the AkhterNote

From **£899**

True outstanding Windows performance with supporting sound capabilities, with an unlimited upgrade path – at an unbelievable price!

System supplied with carrycase, AC/DC adaptor and rechargeable NiMH battery offering double the capacity of NiCAD batteries and giving a maximum of 5.15 hours of continuous operation with quick recharge of 90 minutes.

### SPECIFICATION

- 66MHz, 75MHz or 100MHz SL enhanced processors
- 4Mb memory expandable to 20Mb
- 1Mb VESA local bus Windows accelerator
- removable LCD screens, Mono 64 gray-scale, Colour DSTN 256 colours or TFT 512 colours
- Built-in SoundBlaster compatible card with multi-directional microphone, earphone and audio-in jacks
- Removable 3.5" 1.44Mb floppy drive
- Two PCMCIA Type II or one Type III slots
- 1 serial port, parallel port with EPP support, SVGA monitor, external keyboard/mouse port, 160-pin docking station port
- Full-function 85/86 key keyboard with soft-key switch and 19mm diameter trackball
- Weight 5.7lbs approx., size 286mm (w) x 224mm (d) x 44mm (h) Mono or 49mm (h) Colour
- 12 months Warranty

### NOTEBOOKS

LCN486DX2-66	REMOVABLE HARD DISK DRIVE				
	170Mb	340Mb	540Mb	810Mb	1.2GB
MONOCHROME	£899	£999	£1099	£1199	£1349
DUAL-SCAN COLOUR	£1249	£1349	£1449	£1549	£1699
TFT COLOUR	£1549	£1649	£1749	£1849	£1999

WINDOWS 95 £79.00, MSDOS 6.22 + WINDOWS 3.1 £59.00  
DX4-100 UPGRADE £100.00

from **£6** per week

Over 36 Months at 9.7% APR, 10% Deposit, Monthly Payments of £27.54 including DOS and Windows.

## Multimedia – now that's entertainment!

### Multimedia Workstations from **£1065**

Everything you need for multimedia – utilising the latest PCI local-bus technology with dramatically enhanced throughput speeds for graphics and video plus superb sound capability. All at a very reasonable price.

### SPECIFICATION

- 8Mb memory expandable to 128 Mbyte
- PCI motherboard, incorporating enhanced IDE, EPPECP parallel port and fast (16550) serial port
- 256kbyte cache memory expandable to 512K
- Choice of 428Mb, 525Mb, 850Mb and 1.2Gb IDE hard disks
- 1Mb PCI Windows accelerator card
- 16-bit SoundBlaster compatible card with headphone and microphone
- 3.5", 1.44Mb floppy disk drive
- Internal quad-speed, multi-session, MPC2 compatible CD-ROM drive
- 2 Serial and 1 Parallel ports & Zero Insertion Force (ZIF) CPU socket
- Power saving modes: On/Doze/Stand By and Suspend
- 102 key tactile keyboard and mouse
- Standard Desktop case with built-in speakers, size: 420mm (w) x 420mm (d) x 145 (h)
- 12 month Warranty

### MULTIMEDIA WORKSTATIONS

Includes 14" MPRII NI Colour Monitor	428Mb	525Mb	850Mb	1.2Gb
LC486DX2-66MHz	£1065	£1075	£1105	£1145
LCP75-M 75MHz (Pentium Processor)	£1195	£1205	£1235	£1275
LCP90-M 90MHz (Pentium Processor)	£1295	£1305	£1335	£1375
LCP120-M 120MHz (Pentium Processor)	£1495	£1505	£1535	£1575

MS-DOS 6.22 + WINDOWS 3.11 add £59 – For WINDOWS 95 add £79. For 15" FST monitor add £80, 17" add £330

from **£7** per week

Monthly Payments of £30.62

### FINANCE AND ORDERING INFORMATION

For 0% finance all you need is 30% deposit and you can pay the balance over 12 months.  
Or you can choose to spread payments over 24 or 36 months with a 10% deposit and a flat rate of 5% p.a. (APR 9.7%).

All schemes subject to status.

Insurance cover against redundancy, sickness and accident is also available.

Akhter Computers Ltd is a Licensed Credit Broker.  
Akhter Computers' Consumer Credit License Number is 257923.

Ordering your Akhter Computer couldn't be easier...

All you need to do is telephone us on 01279 411 111. Delivery costs from £10 for a complete system and is made by national courier for security.

Full catalogue on personal computers, peripherals, software, services and installation available on request. For options & upgrades please telephone.



ALL PRICES SHOWN EXCLUDE VAT.

All our products are subject to continuous development and improvement and we reserve the right to change specification at any time. All prices quoted are correct at time of going to print. E. & O.E. All trademarks acknowledged. Caddy not included.



Akhter Computers Limited  
Akhter House, Perry Road, Harlow,  
Essex CM18 7PN.

freephone **0800 - 413 412** Fax 01282-831 900



# WESTLAKES

440 HIGH ROAD, WEMBLEY, MIDDX. HA9 6AH

TEL: 0181-902 2392  
FAX: 0181-902 1780

LASER PRINTER • TONERS • DRUMS • PHOTOCONDUCTORS • DEVELOPERS • FUSERS

**Photoconductor Unit		TONER	DRUM	**Photoconductor Unit		TONER	DRUM
HP II / IID / III / IIID	(92295A) £35	HP II / IID / III / IIID	(92295A) £46	Nec LC08 / Silentwriter OPC Kit	£10	£89	
HP IIP / IIIP	(92275A) £35	HP IIP / IIIP	(92275A) £50	Nec Silentwriter S60P/S62P/S102P	£109		
HP 4L / 4ML / 4P / 4MP	(92274A) £35	HP 4L / 4ML / 4P / 4MP	(92274A) £46	Nec SuperScript SS610	£79		
**Photoconductor Unit		TONER		DRUM			
Apple Laserwriter Pro 600/630	£95	HP 5P / 5MP	(C3903A) £56	Oki Laserline 6 / Ricoh PC 6000	£12	£85	
Apple Personal Laserwriter 300/320	£60	HP 4 / 4M / 4+ / 4M+	(92298A) £66	Oki 100-400/410-800/30/40/50/70	£18	£155	
Apple Select 310	£59	HP IIISI / 4SI	(92291A) £79	Oki Lasertron OL400E / 410E-EX	£17	£129	
Brother HL630/631/660	£22	HP 4V / 4MV	(C3900A) £105	Olivetti PG306 / 308 / 404 / 408	(2's) £26	£89	
Brother HL1260	£99	IBM Lexmark 4019/4028/9	(High Yield) £159	Panasonic KXP4400/4401	£12	£64	
Compaq Pagemarq 15/20	£235	IBM Lexmark 4039 / 3916	(Standard) £139	Panasonic KXP4420	£26	£69	
DataProducts LZR 600/650/900/960	£35	IBM Lexmark 4039 / 3916	(High Yield) £159	Panasonic KXP4410 / 4430	£29	£95	
DataProducts LZR 1200	(6's) £90	IBM Lexmark Optra/OptraL	(High Yield) £169	Panasonic KXP4450 / 4451 / 4455	£19	£85	
Digital Dec LN03	£27	Kodak Ektaplus 7008	£20	Panasonic KXP6100	£12	£109	
Epson GQ3500 / GQ5000	£14	Kodak Ektaplus 7016	£89	QMS 860 / 860+	£115		
Epson EPL3000	£69	Kyocera F800 / 800T / 820	(TK6/DK5) £29	Ricoh 4080 / 4081 / 4150	£28	£95	
Epson EPL4000 / 4100 / 4300	£82	Kyocera F1000 / 1010	(TK4/DK3) £26	Ricoh LP1200	£82	£99	
Epson EPL5200	£95	Kyocera FS1500 / 3500	(TK9) £38	Sharp JX9400 / 9460 / 9600 / 9660	£114	**£99	
Epson EPL5600	£109	Kyocera FS1550 / 1600	(TK12) £49	Sharp JX9500	£35	**£97	
Epson EPL7100 / 7500 / 8100	£135	Kyocera F1800 / 3300	(TK7/DK6) £29	Star LS-5 / LS-5 EX / LS-5 TT	£72		
Epson EPL9000 / 9100	£145	Kyocera F2200 / 2200S	(TK3/DK3) £26	Texas Instruments MicroLaser	£38	£105	
Facit P6060 / 8040 / 8045 / 8048	(2's) £21	Mannesmann Tally MT904/908	(2's) £18	Texas Instruments MicroLaser XL	£49	£129	
Fujitsu VMS800	£129	Mannesmann Tally MT905 or MT906	£18	Texas Ins MicroLaser Power-Pro/E	£135	**£129	
		Mannesmann Tally MT910	£14	Xerox 4030	£79	£209	

## INKJET SUPPLIES

### INKJET PAPER (A4)

HP LX Glossy Inkjet (50)	32.95
HP CX Inkjet Paper (200)	14.95
Canon Glossy Paper (50)	22.95
Canon Coated Paper (200)	19.95
Epson Stylus Glossy (30)	42.50
Epson Stylus 720Dpi (200)	19.95
Epson Stylus 360Dpi (200)	17.95
Esselte Inkjet Colour Printing (250)	16.95
Esselte Inkjet Mono Printing (250)	6.95
IBM Execjet II Coated Paper (250)	25.95
PlusJet Inkjet For Mono Printing (500)	6.95

### INKJET TRANSPARENCY (A4)

3M Inkjet Film Removable Stripe (50)	19.95
3M Inkjet Film Paper Backed (50)	24.95
Canon B/Jet Transparency (50)	39.95
Epson Stylus Transparency (50)	48.95
HP LX Inkjet Transparency (50)	34.95
IBM Execjet II Transparency (50)	43.95

## BRANDED INKJET CARTRIDGES

	Black	Colour
Apple Stylewriter I/II	14.95	
Canon BN22/32 (BJ1101)	4.25	
Canon BJ10/20 (BC01)	13.95	
Canon BJ200 (BC02)	15.95	
Canon BJ130 (BJ481)	10.95	
Canon BJ300/330 (BJ642)	10.95	
Canon BJ30/70 PRINTHEAD	25.95	
Canon BJ30/70 TANKS 3's	10.75	
Canon BJ70 PRINTHEAD	29.95	
Canon BJ70 TANKS 3's	8.95	13.95

### CANON BJC-600 (BJI-201)

Set of 4 Colours **£23.95**

Canon BJC600 BLACK STANDARD	5.95	6.50
Canon BJC600 BLACK HIGH CAP	7.95	6.50
Canon BJC800 (BJI643)	13.95	17.95
Canon BJC4000	24.50	38.50
Canon BJC4000 (TANKS)	6.95	13.95

	Black	Colour
Epson Stylus Colour	11.95	22.95
Epson Stylus Colour II/820	14.95	22.95
Epson Stylus 800/1000 (2's)	15.50	31.00

### EPSON STYLUS 800 / 1000

3 + Twin Packs @ **£14.95**

HP Deskjet Portable	12.95	18.50
HP Deskjet 500 Series	15.95	18.50

### HP DESKJET 500 SERIES BLACK

3 + Ink Cartridge @ **£15.75**

HP Deskjet 600 Series	19.95	21.95
HP Deskjet 850C	17.95	17.50
HP Deskjet 1600C	17.95	19.50
HP Deskjet 1200C	16.95	19.50
HP Paintjet XL	20.95	22.95
HP Paintjet XL300	13.95	14.95
Kodak Diconix 150/330	9.95	14.95

	Black	Colour
IBM Execjet II / 150C	20.95	27.95
IBM 4079 Plus (CYMK)(6's)	14.95	19.95
Olivetti JP150 Mono Black	17.95	
Olivetti Printhead +4Ink	34.95	
Xerox 4020 (Pack of 2's)	8.50	8.50

## INKJET REFILLS

Jetfill Epson Stylus800 Refills 2's	£9.95
Jetfill Canon BC01/02 Refills 2's	£9.95
Jetfill HP Double/Cap. Refills 2's	£14.95

## LASER SUPPLIES

### LASER FILM TRANSPARENCY

Copy Speed Paper (60gsm) (500)	4.95
PlusJet Laser Paper (90gsm) (500)	6.95

### LASER FILM TRANSPARENCY

3M Laser Film Unbacked (50)	10.95
3M Laser Film Paper Backed (50)	11.95
HP Laser Film (HP-92296U)(50)	13.95

## DATA STORAGE CARTRIDGES

3M Data Cartridges	1's	5's
DC 2120	7.75	£36
DC 2120 (QIC-80 Formatted)	7.95	£39
DC 2120XLI (Formatted)	12.75	£59
MC 3000	17.95	£84
MC 3000XL (PIMAT)	19.50	£92
MC 3000XL (TAUMAT)	22.50	£105

### HP Colorado Cartridges 1's 3's

HP DT-120 (QIC 40)	9.95	£27
HP DT-250 (QIC80)	9.95	£27
HP DT-350 (QIC80XL)	13.95	£39
HP DT-740 (QIC3010)	20.95	£60
HP DT-1000 (TRAVAN)	29.95	£85

3M Data Cartridges	1's	5's
DC 6150 150Mb	8.95	£43
DC 6250 250Mb	12.95	£62
DC 6320 320Mb	14.25	£69
DC 6525 525Mb	14.95	£72

### 3M Travan Technology Formatted

TR1 Travan 400Mb	20.95	£99
TR2 Travan 800Mb	24.95	£118
TR3 Travan 1600Mb	25.95	£125

### SONY Qic Wide Cartridges

QW5122F 240Mb	16.95	£78
QW3010XLF 850Mb	20.50	£98
QW3080XLF 4.0Gb	23.50	£109

## DDS TAPES

Digital Data Storage	1's	10's
3M D4-120 4mm 120M	15.50	£145
3M D4-90 4mm 90M	6.95	£65

### 3M D4/90 Digital Data Tape

10 x 4mm/90m for **£65**

3M D4-60 4mm 60M	6.50	£60
3M D8-112 8mm 112M	6.25	£58
Maxell 4mm/8mm Cleaning Tape	10.95	
HP 4mm 120M (92300A)	14.95	£145
HP 4mm 90M (92283B)	8.50	£81
HP 4mm 60M (92283A)	8.75	£83
HP Cleaning Tape 2's (92283K)	21.00	

## MAGNATO OPTICAL

### 3M Formatted Magnato Optical

5 x 3.5" 230Mb for **£105**

Magnato Optical	1's	5's
3M 3.5" 128Mb	15.95	£75
3M 3.5" 128Mb (Formatted)	17.95	£85
3M 3.5" 230Mb	19.95	£95
3M 3.5" 230Mb (Formatted)	23.50	£105
TDK 3.5" 230Mb	19.95	£95
3M 5.25" 600Mb 512 Bytes	53.50	£250
3M 5.25" 650Mb 1024 Bytes	53.50	£250
3M 5.25" 1.2Gb 512 Bytes	62.95	£295
3M 5.25" 1.3Gb 1024 Bytes	62.95	£295

## 3 1/2" DS/HD DISKS

Branded	Unformatted	Formatted
3M	£45	£45
SONY	£46	£45
TDK	£44	£45
MAXELL	£44	£45

### Unbranded Formatted

50 HD Disks	£15.00
100 HD Disks	£28.00
250 HD Disks	£68.00
500 HD Disks	£130.00

Guaranteed (1 for 1 Replacement)

## 3M DISKS OFFER

**3M 3M**

**FORMATTED**

**3 1/2" DS/HD**

**100 Disks**

**£45**

## 3 1/2" DS / HD OFFER

**UNBRANDED FORMATTED**

**3 1/2" DS/HD**

**100 Disks**

**+100 CAPACITY DISKBOX**

**£30**

## CD-RECORDABLE

### TDK Recordable CD-Rom

100xCDR-74 Media for **£485**

CD-Recordable	1's	10's
3M CDR-74 650Mb	7.95	£69
TDK CDR-74 650Mb	6.95	£58
KODAK CDR-74 650Mb	7.50	£65

## IOMEGA ZIP DISKS

Zip 100Mb Disk (PC)	10.95	£99
---------------------	-------	-----

## SYQUEST CARTRIDGES

Syquest SQ3135 3.5" 135Mb	12.95
Syquest SQ3270 3.5" 270Mb	47.95

## MICE

Logitech Pilot II Mouse Serial	£19.00
Logitech Pilot II Mouse PS/2	£19.00
Logic 3 Mouse Serial	£12.00
Imsi Mouse PS/2	£14.95

**Cherry Keyboard**  
(Genuine) 102 Key **£25.95**

## CABLES

Parallel Cable Moulded 2m	£3.95
Parallel Cable Moulded 3m	£5.95
Parallel Cable Moulded 5m	£6.95
25M-25M D-Sub Moulded 3m	£5.95
36M-36M Cen. Moulded 3m	£7.95
Serial / Null Modern Cables 2m	£9.95

## DATA SWITCHES

2 Way Manual (Parallel / Serial)	£9.95
3 Way Manual (Parallel / Serial)	£14.95
4 Way Manual (Parallel / Serial)	£18.95
2 Way Crossover (Parallel/Serial)	£22.95
AutoSwitch 2 PC to 1 Printer	£19.95
AutoSwitch 4 PC to 1 Printer	£29.95

## ACCESSORIES

3.5" 100 Capacity Disk Box	3.95
3.5" 240 Capacity Disk Drawer	12.95
Glass VDU Screen Filter 14"	7.95
Removable / Lockable HDD Racks	
3.5" Hard Disk Rack - IDE	19.95
3.5" Hard Disk Rack - SCSI	24.95



Carriage	Standard	Next Day
UK Mainland +	£3.50	£5.00
Outside UK Mainland +	P.O.A.	P.O.A.
Hardware +	£8.00	£12.00

**TERMS & CONDITIONS**  
TRADING HOURS: 9:00 A.M. - 5:30 P.M. (MON - SAT)  
PAYMENT MUST ACCOMPANY ALL ORDERS. TELEPHONE CREDIT CARD ORDERS ARE NORMALLY DESPATCHED SAME DAY. PLEASE ALLOW 5 WORKING DAYS FOR CHEQUES TO CLEAR.  
WE ACCEPT VISA, MASTERCARD, ACCESS, DELTA & SWITCH. NO CREDIT CARD SURCHARGE.  
PRICES & SPECIFICATION MAY CHANGE WITHOUT NOTICE (ALL TRADEMARKS ACKNOWLEDGED).  
GOODS OFFERED SUBJECT TO AVAILABILITY. ALL PRICES EXCLUDE DELIVERY & V.A.T. (E & O.E.)

# Business & Public Sector Specialists

Established for almost eight years, Time Direct is part of the Granville Group of companies, the leading direct supplier of PC products with a customer base of well over 150,000.

Our aim is to provide quality IT products and services for the needs of business customers including Corporates, Central and Local Government, Educational establishments, the Health Service, and other large establishments in the UK.



Time Direct's front line sales staff will provide you with a flexible level of service, from the quick response order taking facility right through to the most complex network and application solution.

When you buy from Time Direct, you buy from a multi product supplier focused on the needs of business buyers with full support and backing of the world's leading brands such as IBM, ICL, Compaq, Toshiba, Hewlett-Packard, Intel, Colossus, Mitac, Novell, Lotus and Microsoft.

## ▶ Notebook Specialists

Notebooks are fast becoming the standard PC in the business and corporate environment. Our sales staff are trained on the complete ranges from Toshiba, Compaq, IBM, Mitac, Texas Instruments, Colossus and Hewlett Packard. We can fulfil all your notebook requirements including options such as the latest PCMCIA devices.



## ▶ Desktop Solutions

We carry an extensive range of top quality desktop and workstation solutions from Compaq, IBM, ICL, Colossus and Mitac all with full technical back-up and warranty services.



## ▶ Quality Peripherals

We stock the entire range of Hewlett Packard printers, scanners and plotters together with a wide range of products from other leading manufacturers, including Kyocera and NEC.



## ▶ Networks

Our networking division can provide advice on complete network solutions. They are able to offer the entire range of services including consultancy, comprehensive quotation, full installation cabling, implementation of multi-user network applications, training and support.



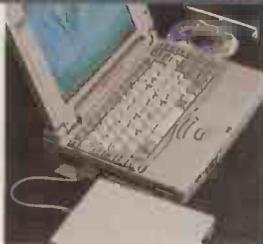
**Call 01282 770066**

Sales Lines Open: Monday - Friday 9.00a.m. - 6.00p.m.  
Fax No 01282 770608

Networking/Volume enquiries Telephone 01282 770099



▶ Call today for our brochure



The Satellite Pro 400 has a versatile configurable storage format via swappable CD-ROM and floppy disk drive



The easy to use integral Mousepoint on all except T4850



All systems include PS/2 mouse, external PS/2 keyboard parallel printer, serial and external SVGA ports. (no PS/2 mouse on T21 series)



Port replicator (mini docking station) option is available for the T21 series, plus enhanced port replicator for Satellite Pro

## COMMON TOSHIBA FEATURES

Toshiba notebooks are unbeatable in terms of quality, advanced features, performance and ease of use. Do not consider a low quality clone-buy the best. The following common features are standard with all models:-

### SCREENS

Mono notebooks include a high quality sidelit Super Twist Nematic (STN) mono LCD capable of 64 grey scales and VGA resolution. STN colour portables utilise the latest advanced STN (Dual Scan) screens for enhanced contrast and faster response. Thin Film Transistor (TFT) or active matrix screens provide the best displays with up to 16.7 million bright colours, ultra fast response and the ability to use motion video.

### KEYBOARD

Ergonomically designed 84 key full-size keys with 12 function keys and overlay numeric keypad. Dedicated cursor control keys.

### INTERFACES

Standard ports include centronics parallel, RS-232C serial, PS/2 ext. keyboard, PS/2 mouse and VGA/SVGA for ext. monitor. Either Quickport port with bundled Ballpoint mouse or integral MousePoint device included. Other ports and PCMCIA details see individual notebook. (NB. PS/2 mouse port on T21 series via port rep)

### POWER

Autosensing AC adaptor (100 to 240V) suitable for world wide usage provides power for notebook and recharges batteries. Removable rechargeable batteries are standard (type of battery and life varies as shown).

### SOFTWARE

Microsoft MS DOS 6.2 with Toshiba notebook enhancements, Windows 3.1 (Rel 3.11) or WFWG 3.11 are pre-loaded. CardWare PCMCIA support provides transparent use of PCMCIA cards without incompatibility problems and supports 'insertion'.

### SPECIAL FEATURES

Intel 3.3v or 2.9v SL technology with low power consumption. Reset button for warm reboot. AutoResume puts your systems in standby mode for upto 7 days. AutoSave automatically saves your data if your battery power is running out. LIM EMS/XMS/Hard RAM support. MaxTime Power Management can be set to switch off your disk drive, screen, keyboard and CPU after a certain time. Advanced Power Management is also supported. Flash BIOS allows easy upgradeability in the future. Kensington Cable Lock Provision for physical security. Password/MultiSafe security with various levels of protection.

## MONO 486DX4-75



### T2110

New powerful 486DX4 notebook combines ultra-fast 75MHz with innovative ergonomics. An advanced high-resolution 9.5" mono STN screen enhances the level of performance yet further.

- Intel DX4-75 processor
- 4Mb RAM expandable to 28Mb
- 350Mb hard disk
- Internal 3.5" 1.44Mb floppy drive
- VGA/SVGA (640 x 480 pixel resolution) 9.5" diagonal display
- 84 key keyboard with mouseport and overlay numeric keypad
- Standard ports
- 11.8" x 8.9" x 1.9" with 3.0Kg (6.6lb) weight
- Built-in autosensing AC adaptor
- NiH2 removable battery. Up to 4 hours usage

Options	
4Mb RAM (PA2012U)	£170
8Mb RAM (PA2013U)	£298
16Mb RAM (PA2014U)	£745
NiH2 Battery (PA2429UR)	£94

**£845**

## COLOUR 486DX4-75



### T2110 CS

A superb large colour 10.4" dual scan screen. Local bus video makes this 486DX4-75 the ideal platform for high-quality graphics and mobile presentations.

- Intel DX4-75 processor
- 4Mb RAM expandable to 28Mb
- 350Mb hard disk
- Internal 3.5" 1.44Mb floppy drive
- VGA/SVGA (640 x 480 pixel resolution) STN 10.4" diagonal display
- 84 Key keyboard
- Standard ports and port replicator
- PCMCIA Rel 2.0 one type III or two type II)
- 11.8" x 8.9" x 2.1" with 3.1Kg (6.8lb) weight
- NiH2 removable battery (4 hours use)
- MS DOS 6.22, MS Windows 3.11

T1910CS (illustrated above) ..... Call for details and availability

Options	
4Mb RAM (PA2026U)	£187
8Mb RAM (PA2027U)	£340
16Mb RAM (PA2028U)	£745
Port replicator (PA2708U)	£128
Battery (PA2437U)	£95
Battery charger (PA2436U)	£149

**£1356**

## COLOUR DX4-75 CD ROM



### T2150CDT

The DX4-75 notebook offers spectacular performance using a 520Mb hard disk and top of the range TFT colour LCD 10.4" screen.

- Intel DX4-75 processor
- 8Mb RAM expandable to 32Mb
- 520Mb hard disk
- Dual Spin internal 5.25" CD-ROM
- External 3.5" 1.44Mb floppy drive
- VGA/SVGA (640x480 pixel resolution) TFT 10.4" diagonal display
- 84 Key keyboard with mousepoint
- Standard ports, and port replicator
- Built in AC adaptor
- PCMCIA Rel 2.0 two Type II or one Type III
- 11.8" x 8.9" x 2.1" with 3.2kg (7 lb) weight
- Soundblaster Pro compatible sound system
- NiH2 removable battery (3 hours use)
- MS DOS 6.22 and MS Windows for workgroups 3.11

T2150CDT5200	£1659
T2150CDT520	£1966

Options	
4Mb RAM (PA2026U)	£187
8Mb RAM (PA2027U)	£340
16Mb RAM (PA2028U)	£745
Port Replicator (PA2708U)	£128
Battery (PA2437U)	£95
Battery charger (PA2436U)	£149

**£2546**

## TFT COLOUR PENTIUM NOTEBOOK



### Satellite Pro 400CS

Toshiba's first modular notebook with Pentium processing power. Swappable CD-ROM and floppy disk drive modules and one touch docking.

- Intel 75MHz Pentium® processor
- 8Mb EDO RAM expandable to 40Mb
- 810Mb hard disk
- Swappable internal external 3.5" 1.44Mb floppy drive
- VGA/SVGA (640 x 480 pixel resolution) colour STN 10.4" diagonal display
- 84 key keyboard and mousepoint device
- Parallel, serial port
- Serial infra-red port
- Enhanced port
- Replicator port
- SVGA port
- External FDD port
- Memory exp slot
- PCMCIA Rel.2.0 slot, 2 x type II slot or 1 x type III
- Rechargeable, removable Lithium Ion battery (4 hrs use)
- Microphone, headphone and speaker sockets
- MS DOS 6.22 and Windows for workgroups 3.11

OPTION	
8Mb EDO RAM (PA2031U)	£420
16Mb EDO RAM (PA2032U)	£904
32Mb EDO RAM (PA2034U)	Call
Quad speed CD-ROM (PA2653U)	£285
Li ion battery 4hrs use (PA2467UR)	£166
Battery charger (PA2468UR)	£166

**£2425**

## TFT COLOUR PENTIUM NOTEBOOK



### Satellite Pro 400CDT

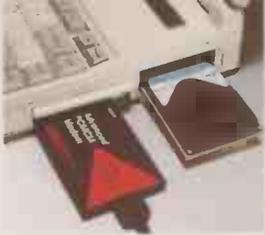
Unbeatable high end performance A4 package with modular storage and Pentium® processing power coupled with flexible connectivity facilities.

- Intel Pentium® 75MHz processor
- 8Mb EDO RAM expandable to 40Mb
- 810Mb hard disk
- Swappable enhanced IDE quad speed CD-ROM
- Swappable internal external 3.5" 1.44Mb floppy drive
- VGA/SVGA (640 x 480 pixel resolution) colour TFT 10.4" diagonal display
- 84 key keyboard and mousepoint device
- Parallel, serial port
- Serial infra-red port
- Enhanced port
- Replicator port
- SVGA port
- External FDD port
- Memory exp slot
- PCMCIA Rel.2.0 slot, 2 x type II slot or 1 x type III
- Rechargeable, removable Lithium Ion battery (4 hrs use)
- Microphone, headphone and speaker sockets
- MS DOS 6.22 and Windows for workgroups 3.11

8Mb EDO RAM (PA2031U)	£420
16Mb EDO RAM (PA2032U)	£904
32Mb EDO RAM (PA2034U)	Call
Li ion battery 4hrs use (PA2467UR)	£166
Battery charger (PA2468UR)	£166

**£3139**

# TOSHIBA



Two PCMCIA slots on all models provide ultimate expansion. Intel fax/data modem at an incredible £99 (except T3600)



Built-in Microsoft Sound System on T4850, and T4900



With Soundblaster Pro compatible sound system on T2150, Portégé and Satellite Pro



Deskstation IV turns your T4850 and T4900 notebooks into expandable desktop systems

### TFT COLOUR DX4-75

### TFT COLOUR DX4-75

### TFT COLOUR SUBNOTE



T2130CS

Brilliant notebook, offers greater memory than the T2110CS. Has top end 75MHz DX4 processor and a large 10.4" dual scan screen combine with a high capacity nickel hydride battery providing long-lasting quality performance.

- Intel DX4-75 processor
- 8Mb RAM expandable to 28Mb
- 520Mi.b hard disk upgradeable
- Internal 3.5" 1.44Mb floppy drive
- VGA/VSVA (640 x 480 pixel resolution) STN 10.4" diagonal display
- 84 key keyboard and mousepoint device
- Parallel, serial port
- Replicator port
- SVGA port
- Memory exp slot
- PS2 keyboard port.
- PCMCIA Rel.2.0 slot, 2 x type II slot or 1 x type III
- Rechargeable, removable nickel hydride battery (4 hrs use)
- MS DOS 6.22 and Windows 3.11

Options

4Mb RAM (PA2026U).....	£187
8Mb RAM (PA2027U).....	£340
16Mb RAM (PA2028U).....	£744
24Mb RAM (PA2029U).....	£1526
Battery (PA2437U).....	£90
Battery charger (PA2438U).....	£149

# £1611



T2130CT

The T2130CT combines top-end DX4-75 processing with a TFT 10.4" colour screen and comes with 8Mb RAM, 520Mi.b hard disk.

- Intel DX4-75 processor
- 8Mb RAM expandable to 32Mb
- 520Mb hard disk upgradeable
- Internal 3.5" 1.44Mb floppy drive
- VGA/VSVA (640 x 480 pixel resolution) TFT 10.4" diagonal display
- 84 key keyboard and mousepoint device
- Parallel, serial port
- Replicator port
- SVGA port
- Memory exp slot
- PS2 keyboard port.
- PCMCIA Rel.2.0 slot, 2 x type II slot or 1 x type III
- Rechargeable, removable nickel hydride battery (4 hrs use)
- MS DOS 6.22 and Windows 3.11

Options

4Mb RAM (PA2026U).....	£187
8Mb RAM (PA2027U).....	£340
16Mb RAM (PA2028U).....	£744
24Mb RAM (PA2029U).....	£1526
Battery (PA2437U).....	£90
Battery charger (PA2438U).....	£149

# £1951



Portégé 610CT

The world's first Pentium 90 ultra notebook and the most powerful Toshiba portable. It offers very high performance in a lightweight ultra notebook package.

- Intel Pentium\*75MHz processor
- 8Mb EDO RAM expandable to 40Mb
- 720Mi.b hard disk
- External 3.5" 1.44Mb floppy drive
- VGA/VSVA (640 x 480 pixel resolution) TFT 9.5" diagonal display
- 84 key keyboard and mousepoint device
- Parallel, serial port
- Replicator port
- SVGA port
- External FDD port
- Memory exp slot
- PCMCIA Rel.2.0 slot, 2 x type II slot or 1 x type III
- Rechargeable, removable Lithium Ion battery (4 hrs use)
- Microphone, headphone and speaker sockets
- MS DOS 6.22 and Windows for workgroups 3.11

Options

8Mb EDO RAM (PA2031U).....	£420
16Mb EDO RAM (PA2032U).....	£804
32Mb EDO RAM (PA2034U).....	Call
Li Ion battery (PA2489U).....	£166
Battery charger (PA2482U).....	£166

# £3019

### TFT COLOUR DX4-75

### TFT COLOUR PENTIUM

### TOSHIBA OPTIONS

### THIRD PARTY OPTIONS

## SPECIAL OFFER



T4850CT

The DX4-75 has all the power you will ever need out on the road - even for multimedia applications. Whatever your requirements, the T4850CT is perfectly equipped to handle them all.

- Intel DX4-75 processor
- 8Mb RAM expandable to 40Mb
- 810Mi.b hard disk
- Internal 3.5" 1.44Mb floppy drive
- VGA/VSVA (640x480 pixel resolution) TFT 10.4" diagonal display
- 84 full size keys with overlay numeric keypad, 12 function keys
- Standard ports
- PCMCIA Rel 2.0 one Type II and one Type III
- 11.7" x 8.3" x 2.2" with 3.2kg (6.9 lb) weight
- NiH2 removable battery 3.5 hours use
- MS DOS 6.2 and MS Windows for workgroups 3.11

Options

4Mb RAM (PA2012U).....	£170
8Mb RAM (PA2013U).....	£298
16Mb RAM (PA2014U).....	£745
NiH2 battery (PA2429UR).....	£94
DeskStation IV.....	£374

# £2395



T4900CT

The T4900CT is the first notebook to have Intel 3.3volt 75MHz Pentium processor. It takes mobile computing into a spectacular new dimension offering unsurpassed performance for all power-hungry applications.

- Intel 75MHz Pentium\* processor
- 8Mb RAM expandable to 40Mb
- 810Mi.b hard disk
- Internal 3.5" 1.44Mb floppy drive
- VGA/VSVA (640 x 480 pixel resolution) TFT 10.4" diagonal display
- 84 key keyboard with mouse point
- Standard ports
- PCMCIA Rel 2.0 one Type II and one Type III
- 11.7" x 8.3" x 2.2" with 3.1Kg (6.8 lb) weight
- Soundblaster Pro compatible sound system
- Built in speakers and microphone
- NiH2 removable battery 3 hours use
- MS DOS 6.2 and MS Windows for workgroups 3.11

Options

8Mb EDO RAM (PA2031U).....	£420
16Mb EDO RAM (PA2032U).....	£804
32Mb EDO RAM (PA2034U).....	Call
Li Ion battery 4hrs use (PA2489UR).....	£166
Battery charger (PA2482U).....	£166

# £3056

- External Battery Charger:
- T3400/T3600 (2482U).....£166
  - T2100.....£149
  - T1910CS.....£107
  - Others (PA2422U-E).....£107

- ExtraUniversal AC Adaptor:
- T1910, T4700CT, T4800 (PA2478U).....£56
  - T2400 (PA2430U).....£48
  - T4600 (PA2411U).....£48
  - T3400, T3600 (PA2426U-E).....£48

- Toshiba PCMCIA cards:
- PCMCIA ethernet adaptor (PCE-10BC).....£192
  - PCMCIA V34 modem.....£254

- Other Options:
- Carry case T6600C (T239L).....£39
  - Carry case others (T202L).....£34
  - Ballpoint Quickport mouse (PA2805U).....£73
  - Deskstation IV.....£374 (Docking station for T4900, T4700 and T4800 models. It includes all standard ports, two full-size 16-bit slots, 5.25" drive bay, power supply and monitor stand)

- PCMCIA Options
- Intel 2496 fax/data modem.....£99
  - New media Bus Toaster SCSI adaptor.....£173
  - New Media Visual SCSI adaptor.....£149
  - New Media 16-bit sound card.....£196
  - New Media Combo ethernet card.....£125
  - MiniStore 130Mb hard disk.....£399
- Parallel Port Devices
- Backpack DS CD-ROM drive.....£299
  - Backpack 5.25" floppy drive.....£149
  - Logitech Scanman Easytouch scanner.....£142
  - Trakker 250Mb tape back-up.....£208

- Keyboards & Mice
- External COL 130 key keyboard (needs PS/2 adaptor).....£29
  - PS/2 to DIN keyboard adaptor.....£9
  - Microsoft Natural keyboard.....£69
  - IMSI PC Stylus PS/2.....£29
  - IMSI Mini Thumbball.....£24
  - Logitech Trackman portable.....£32

- Portable Printers
- HP DeskJet 320.....£169
  - Canon BJ30.....£193

- Other Options:
- Universal third party car adaptor.....£99
  - Laplink XL & serial cable.....£39
  - Laplink Pro v5 for Win.....£74
  - Time external speakers.....£18

TDRT0B1B

All prices exclude delivery and VAT (17.5%). Delivery: Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. E&OE.



# TIME DIRECT

Granville House, Blackburn Road, Simonstone, Burnley, Lancashire BB12 7GT

# 01282 77 00 66

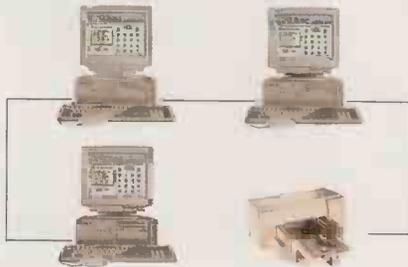
SALES LINES OPEN  
Monday - Friday 9.00am - 6.00pm

Networking/Volume enquires Telephone 01282 77 00 99

Mitac's new range of high performance desktop systems and workstations are ideally suited for business users. Models are available with 486 or Pentium® processors and can be configured to your individual requirements whether they be as stand alone systems or network workstations.

Our networks division will also be able to provide you with a full range of services including consultancy & planning, full quotation, site survey, installation, cabling, training and on-going support.

The new Omega desktop range offers more expandability with seven drive bays. These models are only £29 more than Mitac models. Please call for details.



3 User Workgroup Networks from **£1999**

### MITAC 486DX2-66



- 486DX2-66 processor
- 4Mb or 8Mb RAM expandable to 64Mb
- Pentium® technology upgradeable
- 120Mb, 170Mb or 540Mb IDE hard disk
- 3.5" 1.44Mb floppy drive
- 1Mb local bus graphics with Windows accelerator
- 14" SVGA colour screen
- IDE hard and floppy controller
- Parallel, 2 serial & keyboard ports
- Expandable desktopcase
- 4 drive bays and 7 expansion slots (2 VESA)
- 102 enhanced keyboard
- Mouse optional (from £9)
- Select required operating system

<b>Models</b>	
486DX2-66 170Mb drive 4Mb RAM.....	£499
486DX2-66 540Mb drive 4Mb RAM.....	£529
486DX2-66 540Mb drive 8Mb RAM.....	£629
Omega models with 7 drive bays.....	£29 extra

See options for other configurations

**£479**

### MITAC 486DX4-100



- 486DX4-100 processor
- 4Mb or 8Mb RAM expandable to 64Mb
- Pentium® technology upgradeable
- 540Mb IDE hard disk
- 3.5" 1.44Mb floppy drive
- 1Mb local bus graphics with Windows accelerator
- Parallel, 2 serial & keyboard ports
- 14" SVGA colour screen
- IDE hard and floppy controller
- Expandable desktop case
- 4 drive bays and 7 expansion slots (2 VESA)
- 102 enhanced keyboard
- Mouse optional (from £9)
- Select required operating system

<b>Models</b>	
486DX4-100 540Mb drive 4Mb RAM.....	£549
486DX4-100 540Mb drive 8Mb RAM.....	£649
Omega models with 7 drive bays.....	£29 extra

**£549**

### MITAC 75MHz PENTIUM®



- Intel 75MHz Pentium® processor
- 8Mb or 16Mb RAM expandable to 128Mb
- 540Mb or 850Mb enhanced IDE (fast ATA) hard disk with 256K hard disk Cache
- 256K external SRAM Cache
- 3.5" 1.44Mb floppy drive
- PCI bus with 4 PCI slots
- Parallel, 2 fast serial & keyboard ports
- 14" SVGA colour screen
- PCI bus 64-bit s3 graphics with 1Mb video RAM
- Enhanced PCI IDE hard and floppy controller
- Expandable desktop case
- 4 drive bays and 7 expansion slots (4 PCI)
- 102 enhanced keyboard
- Mouse optional (from £9)

<b>Models</b>	
75MHz Pentium® 850Mb drive 8Mb RAM.....	£779
16Mb RAM models.....	£200 extra
Omega models with 7 drive bays.....	£29 extra

See options for other configurations

**£749**

All prices exclude delivery and VAT (17.5%). Delivery: Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. E&OE.



Granville House, Blackburn Road, Simonstone, Burnley, Lancashire BB12 7GT

**01282 77 00 66**

SALES LINES OPEN : Monday - Friday 9.00am - 6.00pm  
FAX No : (01282) 77 06 08

Networking/Volume enquires Telephone 01282 77 00 99

# COLOSSUS

For users requiring ultimate performance we recommend the new range from the Colossus Computer Corporation. These systems are amongst the most powerful available and are suited to the power user.

We can also offer a full range of Colossus Network Servers configured to your requirements

## NOVELL



Colossus 4 station Novell Server Network From **£4999**

### COLOSSUS 486DX4-100



- 486DX4-100 processor
- 256K external Cache
- 4Mb or 8Mb RAM expandable to 64Mb
- Pentium® technology upgradeable
- Enhanced 540Mb or 850Mb IDE hard disk with 256K Cache
- 3.5" 1.44Mb floppy drive
- 1Mb 64-bit PCI local bus graphics with Windows accelerator
- 14" SVGA colour screen
- PCI enhanced IDE hard and floppy controller
- Parallel, 2 serial & keyboard ports
- Expandable desktop case with 7 drive bays
- 102 enhanced keyboard
- Microsoft compatible mouse

<b>Models</b>	
540Mb drive 8Mb RAM	£759
850Mb drive 8Mb RAM	£789
Multimedia models	£99 extra

See options for other configurations

# £659

### COLOSSUS 75MHz PENTIUM®



- Intel 75MHz Pentium® processor
- Intel Triton chipset
- 8Mb or 16Mb RAM expandable to 128Mb
- 540Mb, 850Mb or 1.08Gb enhanced IDE (fast ATA) hard disk with 256K hard disk Cache
- 256K external SRAM Cache
- 3.5" 1.44Mb floppy drive
- PCI Enhanced IDE hard and floppy controller
- 1Mb 64-bit PCI local bus graphics with Windows accelerator
- 14" SVGA colour screen
- Parallel, 2 serial & keyboard ports
- Expandable desktop case with 7 drive bays
- 102 enhanced keyboard
- Microsoft compatible mouse

<b>Models</b>	
90MHz Pentium 540Mb drive 8Mb RAM	£959
100MHz Pentium 540Mb drive 8Mb RAM	£1059
133MHz Pentium 540Mb drive 8Mb RAM	£1259
850Mb drives models	£30 extra
1.08Gb drive models	£80 extra

See options for other configurations

# £859

### DESKTOP/NETWORKING OPTIONS

<b>RAM</b>	
System RAM upgrade per 4Mb	£100 extra
Video RAM upgrade to 2Mb	£50 extra
<b>Hard Drive Upgrades from 540Mb</b>	
850Mb	£30 extra
1.08Gb	£80 extra
1.6Gb	£180 extra
2Gb SCSI II	£380 extra
Adaptec PCI SCSI Controller	£200 extra
<b>Screen Upgrades from 14"</b>	
14" NI	£40
15" NI	£110
17" NI	£270
<b>Multimedia Upgrades</b>	
Double speed CD	£50
Quad speed CD	£100
Six speed IDE CD	£150
16-bit sound card	£40
Twin stereo speakers	£10
<b>Tape Backup</b>	
250Mb tape backup	£90
800Mb tape backup	£150
3.2Gb tape backup	£220
2Gb SCSI DAT drive only	£600
4Gb SCSI DAT drive only	£750
<b>Modems</b>	
14.4 Fax/Data	£80
28.8 Fax/Data	£160
<b>Networking</b>	
16-bit ethernet NE2000 compatible combi	£40
32-bit PCI ethernet card	£150
APC Smart UPS 600	£call
APC Smart UPS 900	£call
<b>Operating Systems</b>	
MSDOS 6.22 & Windows 3.11 for Workgroups	£60
Windows 95	£60
Novell Netware 4	£Call
<b>Mice (For Mitac systems)</b>	
Standard mouse	£9
Deluxe mouse	£19

TDRM&C1B

All prices exclude delivery and VAT (17.5%). Delivery:- Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. E&OE.



# TIME DIRECT

Granville House, Blackburn Road, Simonstone, Burnley, Lancashire BB12 7GT

**01282 77 00 66**  
SALES LINES OPEN : Monday - Friday 9.00am - 6.00pm  
FAX No : (01282) 77 05 08

Networking/Volume enquires Telephone 01282 77 00 99

## New Extensa Range

The new Extensa range from Texas Instruments features three types of high performance notebooks.

The 450 range features 486DX4-75 processor with 10.4" dual scan or 9.4" TFT screens and 4Mb RAM with 340Mb hard disk.

The 75MHz Pentium® based 550 model

features a 10.4" dual scan screen, large 524Mb hard disk and 8Mb RAM with optional CD-ROM.

The 75MHz Pentium® based 550CD models also include the CD-ROM drive and are available with 10.4" dual scan or TFT colour displays.

Common features include:

- **BATTERY:** Primary NiMH battery, 100-240v AC Adapter
- **STORAGE:** Removable hard disk, interchangeable floppy drive
- **POINTING DEVICE:** Built-in touchpad pointing device located at centre of ergonomic palm rest
- **PCMCIA:** PCMCIA slots
- **WINDOWS:** Windows 95
- **INTERFACES:** Serial infrared port
- **WARRANTY:** One year limited warranty

10.4" Dual scan colour display  
(9.4" TFT on 450T model)

Super fast 486 Power Intel  
486DX4-75 or 75MHz  
Pentium® processor

CD-ROM drive  
available on 550/550CD  
models

Built-in 16-Bit sound, including an  
internal speaker and microphone  
on 550CD model

Long-lasting NiMH batteries

PCMCIA card slot

Integrated pointing device

1.44Mb 3.5" floppy drive

From  
**£1299**

### Extensa 450/450T

The new Extensa 450 notebook gives you power, flexibility and above all, value for money. There's a choice of 10.4" dual scan or 9.4" TFT colour screens with Intel DX4-75 processor, 340Mb hard disk and 4Mb RAM.

- Intel® DX4-75 processor
- 4Mb RAM, 32Mb max
- 340Mb hard disk
- 1.44mb 3.5" Floppy Drive
- 10.4" Dual scan colour display (450) or 9.4" active matrix colour (450T)
- 640 x 480 Resolution at 256 colours
- 512Kb video RAM
- Interfaces: EPP/ECP parallel; 16550 serial; external VGA port; PS/2 keypad / keyboard / mouse port; PCMCIA type II slot; serial infrared port
- Primary NiMH battery
- 100-240v AC adapter
- Built in touchpad pointing device
- Windows 95
- 5.0lbs (2.27kg) with primary battery
- One year limited warranty

#### Models

Extensa 450 DX4-75 4Mb with dual scan .....£1299  
Extensa 450T DX4-75 4Mb with TFT .....£1699

#### Options

Lithium ion battery .....£159  
PCMCIA Fax modem .....£249  
Numeric keypad .....£60  
External battery charger .....£149  
Additional AC adapter .....£77  
Auto adapter .....£99  
Port replicator .....£85  
Carrying case .....£50  
4Mb RAM module .....£185  
8Mb RAM module .....£375  
16Mb RAM module .....£849

**£1299**

### Extensa 550

The Extensa 550 series has a 10.4" dual scan screen, 75MHz Pentium® processor, 8Mb RAM, 524Mb removable hard disk and removable floppy drive which is interchangeable with an extra lithium ion battery or CD-ROM module (both are optional).

- 75MHz Pentium® processor
- 8Mb RAM, 40Mb max
- 524Mb hard disk
- 1.44Mb 3.5" floppy drive
- 10.4" Dual scan colour display
- 640 x 480 Resolution at 256 colours
- 1Mb video RAM
- Interfaces: EPP/ECP parallel; 16550 serial; external VGA port; PS/2 keypad / keyboard / mouse port; PCMCIA type III slot; audio in/out, microphone in; serial infrared port for wireless connection; external PCI expansion bus
- Primary NiMH battery
- 100-240v AC adapter
- Built in touchpad pointing device
- Windows 95
- 6.2lbs with primary battery
- One year limited warranty

#### Options

Lithium ion battery .....£159  
PCMCIA cards .....£Call  
Numeric keypad .....£Call  
External battery charger .....£149  
Additional AC adapter .....£77  
Auto adapter .....£99  
Port replicator .....£Call  
Carrying case .....£50  
CD-ROM module .....£Call

**£1899**

### Extensa 550CD/550CDT

Power and portability, the Extensa 550CD multimedia notebook has the power of the Pentium® with CD-ROM drive, plus all the other features of the Extensa range. There is a choice of 10.4" dual scan or 10.4" TFT (on 550CDT) colour screens, yet another example of Texas Instruments value.

- 75MHz Pentium® processor
- 8Mb RAM, 40Mb max
- 524Mb hard disk
- 1.44Mb 3.5" floppy drive
- 10.4" Dual scan colour display
- 640 x 480 Resolution at 256 colours
- 1Mb Video RAM
- Interchangeable CD-ROM (2x)
- Interfaces: EPP/ECP parallel; 16550 serial; external VGA port; PS/2 keypad / keyboard / mouse port; PCMCIA type III slot; audio in/out, microphone in; serial infrared port for wireless connection; external PCI expansion bus
- Primary NiMH battery
- 100-240v AC adapter
- Built in touchpad pointing device
- Windows 95
- 6.4lbs with primary battery
- One year limited warranty

#### Models

Extensa 550CD 75MHz Pentium® processor 8Mb dual scan .....£2299  
Extensa 550CDT 75MHz Pentium® processor 8Mb TFT .....£2699

#### Options

Lithium ion battery .....£159  
PCMCIA cards .....£Call  
Numeric keypad .....£Call  
External battery charger .....£149  
Additional AC adapter .....£77  
Auto adapter .....£99  
Port replicator .....£Call  
Carrying case .....£50

**£2299**

TDREX1B

All prices exclude delivery and VAT (17.5%). Delivery:- Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. E&OE.



Granville House, Blackburn Road, Simonstone, Burnley, Lancashire BB12 7GT

**01282 77 00 66**  
SALES LINES OPEN  
Monday - Friday 9.00am - 6.00pm

Networking/Volume enquires Telephone 01282 77 00 99

# KYOCERA

## ABOUT KYOCERA

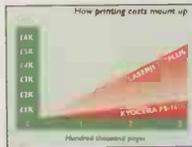
KYOCERA printers offer a different approach to running costs. Other page printers use disposable cartridges which contain one of the printer's key components - its print drum - along with toner and numerous complex moving parts. Every 5,000 pages or so they are thrown away. KYOCERA printers are cartridge free, because their print drum lasts the rated life of the printer, the only consumable needed is toner. Replacing just the toner is a great deal cheaper. So much cheaper, in fact, that over a lifetime of 300,000 pages, an ECOSYS printer can save you up to £9,000.

### ECOSYS

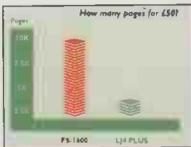
KYOCERA printers can also be network ready with the inclusion of the appropriate Ethernet interface card. KYOCERA guarantee its ECOSYS printer drums against manufacturing defects for the printer's entire rated life of three years, whichever is reached first. The rated life of all ECOSYS printers is 300,000 pages, with the exception of the low volume FS-400 which has a life of 100,000 pages.



Compared with ECOSYS printers the cost of using your current printer becomes much more than you paid for it. The showroom figure being not so much a price, more a down payment.



The market leading page printers printing cost is 1.58 pence per page. Little enough - until you total up the refills over a typical printer lifetime of 300,000 pages...



In printing costs, the market-leading page printer can seriously short-change you. You could be paying nearly four times more than you need - simply for the privilege of using it.

## KYOCERA PERSONAL PRINTERS



### KYOCERA FS-400

A compact 4ppm personal page printer that also offers full system printer capabilities and savings on print due to its cartridge-free design. As standard, this printer is an advanced personal page printer that has a wealth of features, including 300dpi resolution enhanced to 300 x 1200dpi by Kyocera resolution technology, 13 scalable in-built fonts, and for additional cost savings, Energy Star compliance and draft print mode.

- Print speed of 4ppm
- Resolution 300dpi
- 1Mb RAM
- Standard emulations with optional PostScript
- 13 Internal scalable typefaces
- Centronics parallel Interface.
- 100 Sheet paper feeder.

Options  
 250 Sheet paper feeder (PF-8).....£125  
 50 Sheet output tray (PT-1).....£12  
 PostScript upg (PK-2).....£205  
 (Requires 2Mb printer memory)

# £375

All prices exclude delivery and VAT (17.5%). Delivery - Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. E&OE.

## SYSTEM/NETWORK PRINTERS



### KYOCERA FS-1550

The low cost 10ppm system printer that offers industry beating savings on printing costs. Part of the ECOSYS range, the FS-1550 offers substantial savings on running costs compared with competitive printers. As the entry-level model, the FS-1550 also offers a low capital cost with no sacrifice of ECOSYS versatility. It is ideal for word processing, database and spreadsheet printing, and with resolution enhancement, graphics.

- Print speed of 10ppm
- Resolution 300dpi
- 1Mb RAM
- Standard emulations with optional PostScript
- 13 Internal scalable typefaces
- Centronics parallel interface
- 250 Sheet paper feeder

#### OPTIONS

- 500 Sheet paper feeder(PF-5).....£243
- Duplex unit(DU-1).....£405
- Envelope feeder(EF-1).....£153
- 500 Sheet output tray(HS-1).....£135
- Document manager(SO-6).....£1279
- PostScript upg(PK-2).....£205
- (Requires 2Mb printer memory)
- Serial Interface(HB-9).....£99

# £971

### KYOCERA FS-1600

The high speed 600 dpi printer that combines high resolution output with industry beating printing costs. To these cost-saving benefits, the FS-1600 adds 600dpi capability - making it ideal for high resolution text and graphics applications, with fast processing through its 25MHz CPU.



- Print speed of 10 ppm
- Resolution 600 dpi
- Standard emulations and optional PostScript
- 45 Internal scalable typefaces
- Centronics parallel interface
- 250 Sheet paper feeder

#### OPTIONS

- 500 Sheet paper feeder(PF-5).....£243
- Duplex unit (DU-1).....£405
- Envelope feeder (EF-1).....£153
- 500 Sheet output tray (HS-1).....£135
- Document manager (SO-6).....£1279
- PostScript upg (PK-2).....£205
- (Requires 2Mb printer memory)
- Serial Interface (HB-9).....£99

# £1189

### KYOCERA FS-3400

The ECOSYS FS-3400 high volume, 18ppm network printer offers unbeatable cost savings, unparalleled productivity and environmental safety.

- Print speed of 18ppm
- Resolution 300dpi
- Standard emulations and optional PostScript
- 13 Internal scalable typefaces
- Centronics parallel interface
- 250 Sheet paper feeder

# £1506

### KYOCERA FS-6500

Excellent new A3 addition to the ECOSYS range. The FS-6500 features PCL5E emulation with 45 scalable fonts and 300dpi resolution enhanced to 300 x 1200dpi by Kyocera image refinement. Print speed is 13ppm - A4, 7ppm - A3

# £1699

## KYOCERA OPTIONS

KYOCERA printer enhancement products simply clip on and can be used to produce a tailor made network printer solution.

### UNIVERSAL FEEDER UF-1

Automatic feeder for paper, light card, laser labels, overhead transparencies and envelopes from A5 to A4 and letter size. The UF-1 does not support duplex printing.



# 178

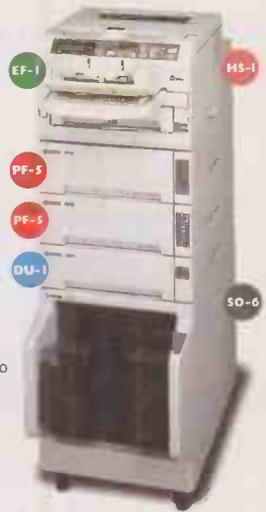
### POWER ENVELOPE FEEDER EF-1

Enables convenient, automatic feed for envelopes in six sizes including DL and C5. 70 envelope capacity.

# £153

### PAPER CASSETTE PF-5

Up to two additional paper cassettes may be added to each printer to give an input capacity of up to 1250 sheets. As well as catering for large print volumes, this enables different paper types such as letterheads and continuation sheets to be selected from the host. Universal size accepts A4, A5, B5, letter and legal.



# £243

### HIGH CAPACITY PAPER FEEDER PF-7

Provides 2,000 sheet variable size input for paper, light card, laser labels and envelopes. (Not available for FS-1500)

# £429

### DUPLEX UNIT DU-1

Provides a double-sided print facility to reduce paper use and postage costs and enhance document presentation. Requires HS-1.

# £405

### DOCUMENT MANAGER SO-6

Comprises 1 x 500 sheet face-down stacker plus 15 x 50 sheet face-down trays, providing an intelligent document management facility in network environments. In multi-user mailbox mode, up to 15 users can each have their own individual output tray. Inserter mode, up to 15 copies of a single document may be printed in one operation. Requires HS-1.

# £1279

### FACE-UP OUTPUT STACKER HS-1

Provides a low-cost bulk output stacker for applications where the order of documents is not critical, such as mailshots. Also required to transfer paper to DU-1 and SO-6.

# £135

### HIGH CAPACITY OUTPUT STACKER HS-3

2,000 sheet, variable width face-up motorised output stacker. Provides straight paper path when used with PF-7. Can be used with two PF-5's and UF-1 or EF-1 Duplex option not available.



# £429

TDRKY15C

# THE DIRECT

Granville House, Blackburn Road, Simonstone, Burnley, Lancashire BB12 7GT

# 01282 77 00 66

SALES LINES OPEN  
Monday - Friday 9.00am - 6.00pm

Networking/Volume enquires Telephone 01282 77 00 99

# Colossus Power Notebooks

The new range of high performance Colossus notebooks incorporate advanced features and high specification such as removable hard disks up to 1.2Gb, 32Mb RAM, multimedia capability, advanced touchpad mouse, VESA local bus graphics and a choice of advanced upgradeable screens. These high specification systems are now available directly from Time Direct at truly amazing prices.

**Choice of Removable Screens**  
9.5" STN VGA mono screen, 10.5" dual scan colour or 9.5" TFT colour screens with 256 vivid colours. Modular design allow the screen to be upgraded

**LCD Status Display**  
All the important parameters are easily visible on this LCD display

**External Ports**  
One advanced bi-directional parallel port, 9 pin fast serial ports with 16550 UART, keyboard, external monitor and PS/2 mouse ports

**486DX4-75 or 486DX4-100 Processors**  
These Intel processors are the fastest processors available and use low power consumption SL technology

**Advanced Ports**  
Ports for docking, and optional infra red and TV tuner modules

**Ample RAM up to 32Mb**  
Two memory module slots allow flexible memory upgrade to 32MB using 4, 8 or 16Mb modules

**PCMCIA 2.0 Slots**  
One type III or two type II slots suitable for advanced modems and network cards

**Fast Local Bus Graphics**  
Advanced 32-bit VESA local bus graphics card with 1Mb Video RAM and Windows\* Accelerator

**High Quality 84-Key Keyboard**  
with 12 function keys and embedded numeric keypad with ergonomic palmrest

**Light Weight**  
Only 6.2lb weight with dimensions of 8.8"x11.6"x1.9"

**Multimedia Ready**  
Twin speaker system built-in with microphone. Sound card module option available

**Large Removable Hard Drives**  
High capacity state-of-the-art 2.5" IDE drives with 340Mb, 540Mb, 810Mb or 1.2Gb capacity

**Removable 3.5" Floppy**  
The 1.44Mb floppy drive comes standard and is removable to reduce weight

**Long Life Battery**  
The latest NiMH rechargeable battery is removable. There is full advance power management support with suspend to RAM and suspend to disk

**Advanced Touchpad Mouse**  
The incredible touchpad is easier to use and more reliable than any trackball. This is the most advanced pointing device available for notebooks

**Pre-loaded Software**  
All systems are ready to use with MS DOS 6.22 and Windows 3.11

## 9.4" MONO

486 DX4-75 340Mb / 4Mb

£**1049**

486DX4-100 model.....£50 Extra  
RAM upgrade per 4Mb.....£140  
540Mb model.....£90  
810Mb model.....£260  
1.2Gb model.....£480  
Sound card.....£80

## 10.4" DUAL SCAN COLOUR

486 DX4-75 340Mb / 4Mb

£**1419**

486DX4-100 model.....£50 Extra  
RAM upgrade per 4Mb.....£140  
540Mb model.....£90  
810Mb model.....£260  
1.2Gb model.....£480  
Sound card.....£80

## 9.4" TFT COLOUR

486 DX4-100 540Mb / 8Mb

£**2249**

RAM upgrade per 4Mb.....£140  
810Mb model.....£170  
1.2Gb model.....£390  
Sound card module.....£80

All prices exclude delivery and VAT (17.5%). Delivery:- Systems £19, Lasers and large items £15, software and small items £10. Visa /Access/ American Express /Switch and Government orders welcome. Prices, specifications and offers are subject to change and subject to our conditions of sale copies of which are available on request. Mail order only. No collections please. Goods are normally despatched within 7 days. All orders will be fulfilled within 28 days unless otherwise specified. E&OE



**TIME DIRECT**

Granville House, Blackburn Road, Simonstone, Burnley, Lancashire BB12 7GT

01282 **77 00 66**

SALES LINES OPEN  
Monday - Friday 9.00am - 6.00pm

Networking/Volume enquires Telephone 01282 77 00 99

WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE

# Computers by Post

HUGE STOCKHOLDINGS  
MAIL ORDER LEADERS  
SINCE 1982

## TOSHIBA - The world leader in portable computing

### The T2110/350 - presenting the facts in black and white

The T2110/350 is the latest addition to the Toshiba range of portable PCs providing you with a powerful specification at a price you'll find difficult to resist.

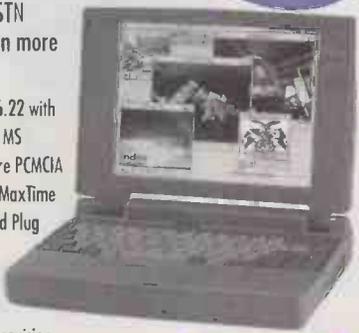
Power is provided by the Intel DX4/75MHz processor, with 4MB of RAM as standard (easily expandable to 28MB) and an upgradable 350MB hard disk. Its advanced dual scan 9.5" monochrome STN screen offers great mobile viewing clarity. Advanced Toshiba portable technology is now even more affordable and accessible.

**Features :**

- ✓ Processor: i486DX4(75MHz), 3.3v (includes numeric co-processor)
- ✓ RAM: 4MB expandable to 28MB
- ✓ Hard Disk: 350MB (upgradable)
- ✓ Graphics: VGA/SVGA, VESA Local Bus Support
- ✓ Display: dual scan STN mono, up to 64 grey scales, (640 x 480 pixels), 9.5" diagonal display
- ✓ Floppy Drive: Internal 3.5" 1.44MB
- ✓ PCMCIA Expansion: 1 x R2.0 III or 2 x R2.0 II
- ✓ Ports: ECP parallel; RS-232C serial (16550 UART); port replicator; SVGA monitor; PS/2 keyboard.
- ✓ Battery : Battery NiH<sub>2</sub> with up to 4 hours battery life

- ✓ Ops System : MS-DOS 6.22 with Toshiba enhancements, MS Windows 3.11, Cardware PCMCIA card support software, MaxTime Power Management and Plug & Play BIOS.
- ✓ Included : Mousepoint, password security and Kensington cable lock provision.
- ✓ Weight: 3.2Kg (7lbs)
- ✓ Warranty: 12 months international (return to Toshiba)

New models and low prices.



T2110/350MB MONO  
**£845**  
Item No. 79-28-5W

WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE

COMPUTERS BY POST OUR COMPANY

With 13 years solid trading experience behind us, CBP is now part of the £100m multi-national DSI (Data Systems International) Group which is currently the largest specialist mail order reseller of PCs and related products in the UK.

COMPUTERS BY POST THE DEAL

- CBP Huge stockholdings.
- CBP Price match any delivered price found in this issue of magazine.
- CBP Big name, BRAND leading, QUALITY products.
- CBP Payment may be made using cash, cheque, credit cards and BACS transfer.
- CBP Proforma invoices generated for official orders same day.
- CBP Easy ordering by fax, phone or post to our offices in Wembley.
- CBP Credit card orders are only charged to your card as the goods are shipped.
- CBP Collection service available from our warehouse in Southall, Middlesex.
- CBP Product suitability is your responsibility. Please check with the manufacturer(s) before ordering.
- CBP You may return any goods purchased within 30 days providing they are unopened and unused subject to prior authorisation. A restocking fee will be charged.
- CBP Technical Referral Service - direct to the manufacturers experts - for pre- and post-sales technical enquiries.
- CBP Delivery Charges  
All charges are per order (up to 25Kg), delivered to the UK mainland. PCs & Lasers £7.95 (EX.VAT) Other Products £5.95 (EX.VAT) Call for details of other options. Subject to availability despatch is normally effected within TWO days from receipt of cleared payment.
- CBP Please allow SEVEN working days for cheque clearance. All orders will be fulfilled within 28 days unless otherwise notified.
- CBP Invoices sent to you under separate cover.
- CBP All prices and manufacturer's specifications are subject to change without notice.
- CBP Goods are not offered on a trial basis.
- CBP Goods are offered for sale subject to our standard conditions of sale available on request.
- CBP Re-stocking fees may be charged.
- CBP E. & O.E.

### T2150 - The Ultimate Multimedia Notebook

**Features:**

- Processor: i486DX4 (75MHz), 3.3v (includes numeric coprocessor)
- ✓ RAM: CDS-4MB expandable to 28MB CDT-8MB expandable to 32MB
- ✓ Hard Disk: 260MB or 520MB
- ✓ Graphics: VGA/SVGA, VESA Local Bus Support
- ✓ Display: CDS - STN colour LCD (640 x 480 pixel), up to 256 colours, 10.4" diagonal size
- CDT - TFT colour LCD (640 x 480 pixel), up to 65, 536 colours, 10.4" diagonal size
- ✓ Floppy Drive: CDS - External 3 1/2" 1.44MB (only available as option with 260MB version)

- CDT - external 3.5" 1.44MB (incl.)
- ✓ PCMCIA expansion: 1 x R2.0 III or 2 x R2.0 II
- ✓ Battery: NiH<sub>2</sub> (up to 2 hours continuous use)
- ✓ Ops System: MS-DOS 6.2x with Toshiba enhancements, MS WFWG3.11, Cardware PCMCIA card support software, MaxTime Power Management and Plug & Play BIOS
- ✓ Included: Built-in microphone, Mousepoint, Password security and Kensington cable lock provision
- ✓ Weight: 3.35kg (7.3lbs)
- ✓ Warranty: 36 months international (return-to-base)

EVEN LOWER, LOW PRICES



T2150CDS/260MB **£1485** Item No. 77-28-5W  
T2150CDS/520MB **£1695** Item No. 77-28-6W  
T2150CDS/520MB **£2545** Item No. 77-28-7W

### Toshiba Accessories for the 2100/2150 Series - ready to go!

MEMORY EXPANSION	TOSHIBA PART NO.	ITEM NO.	PRICE
T2100/T2150 4MB	PA2026U	77-41-5W	£215
T2100/T2150 8MB	PA2027U	77-41-6W	£395
T2100/T2150 16MB	PA2028U	77-41-7W	£799
T2100/T2150 24MB	PA2029U	77-41-8W	£1599

2YR WARRANTY TFT **£129** Item No. 75-80-1W  
2YR WARRANTY MONO/DSTN **£80** Item No. 75-80-0W



BATTERIES	TOSHIBA PART NO.	ITEM NO.	PRICE
Battery pack (NiH <sub>2</sub> )	PA2437-UY	77-41-9W	£95
Battery charger	PA2422U-E	77-42-0W	£175

Connectivity & Multimedia	TOSHIBA PART NO.	ITEM NO.	PRICE
Adv. PCMCIA V32 Fax Modem	TPCV32PF-UK	71-81-4W	£185
Adv. PCMCIA V34 Fax Modem	TPCV34PF-UK	70-85-4W	£225
Port Replicator	PA270B-UY	77-42-1W	£145
Adv. PCMCIA Ethernet adaptor	PCE-10BC	75-61-1W	£213

DESCRIPTION	PROCESSOR	RAM	DISK	SCREEN	ITEM NO.	PRICE	DESCRIPTION	PROCESSOR	RAM	DISK	SCREEN	ITEM NO.	PRICE
T2110	486DX4/75	4MB	350MB	Mono	79-28-5W	£845	T2150CDT	486DX4/75	8MB	520MB	TFT COL	77-28-7W	£2545
T2110CS	486DX4/75	4MB	350MB	stn COL	78-39-0W	£1355	T4850CT	486DX4/75	8MB	810MB	TFT COL	76-56-9W	£2545
T2130CS	486DX4/75	4MB	520MB	stn COL	78-39-1W	£1599	T4900CT	Pentium/75	8MB	810MB	TFT COL	76-57-0W	£3055
T2130CT	486DX4/75	8MB	520MB	TFT COL	78-39-2W	£1945	Satellite Pro 400CS	Pentium/75	8MB	810MB	STN COL	78-40-3W	£2420
T2150CDS	486DX4/75	4MB	260MB	STN COL	77-28-5W	£1485	Satellite Pro 400CDT	Pentium/75	8MB	810MB	16.7 TFT	78-40-4W	£3139
T2150CDS	486DX4/75	4MB	520MB	STN COL	77-28-6W	£1695	Portégé	Pentium/90	8MB	720MB	16.7TFT	78-40-5W	£3015

Open Mon-Fri 9.00am - 5.30pm Sat 9.00am-1.00pm Payment terms: Cheque & Credit Card, Proformas, immediately available upon request BACS payment welcome. Computers by Post, (PCs) Alperton House, Bridgewater Rd. Wembley, Middx. HA0 1EH

WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE

**TELEPHONE ORDERS: (0181) 982 6380**  
**FACSIMILE ORDERS: (0181) 982 6367**  
Always quote the Product Item No. when you contact us.

**TOSHIBA PORTABLES**  
All prices exclude delivery and VAT at 17.5%



WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE\*

# Computers by Post

HUGE STOCKHOLDINGS  
MAIL ORDER LEADERS  
SINCE 1982

## COMPAQ

### COMPAQ 7100 SERIES

The new 7100 series represents the new Presario entry level - if you've resisted buying a computer so far, this range will make the wait worthwhile.

**Features:**

- ✓ Processor: up to Pentium 90 MHz
- ✓ RAM: 8MB expandable to 64MB
- ✓ Hard Disk: up to 840MB
- ✓ Graphics: SVGA, 32-bit PCI with 1MB of VRAM
- ✓ Display: 14" diagonal display size (separate from system unit)
- ✓ Floppy Drive: internal 3.5" 1.44MB
- ✓ CD ROM: quad, 5.25" format.
- ✓ Fax/Modem: 14,140bps with software (except 7106 model)
- ✓ Ops System: MS-DOS 6.2 with Presario enhancements, MS Windows v3.1
- ✓ Included: Novell Perfect Works for Windows, MS Money for Windows on 3 1/2" and Compton's Encyclopedia and King's Quest VII on CD
- ✓ Warranty: 36 months (return to manufacturer)



PRICES FROM  
**£1049**  
Item No. 78-94-3W

SPECIAL 52%  
PERMANENT FINANCE  
AVAILABLE AT LOW RATES

### COMPAQ PRESARIO CDS 524

Compaq Presario CDS 524 - It's an education in itself A great all-in-one style pc for all the family. Multimedia education, entertainment, communications and home working. It's powerful technology that is easy to use.

CALL FOR  
POWER PC  
BUNDLES AT  
GREAT  
PRICES

**Features:**

- ✓ Processor: 486DX2/66MHz (upgradeable)
- ✓ RAM: 8MB expandable to 64MB
- ✓ Hard Disk: 420MB
- ✓ Graphics: SVGA, local bus graphics with 512Kb of Video RAM
- ✓ Display: 14" diagonal display size
- ✓ Floppy Drive: internal 3.5" 1.44MB
- ✓ CD ROM: quad, 5.25" format.
- ✓ Expansion slots: 2 x ISA
- ✓ Vacant drive bays: 2 x 5.25"; 1 x 3.5"
- ✓ Ops System: MS-DOS 6.2 with Presario enhancements, MS Windows v3.1
- ✓ Included: MS Works for Windows; MS Encarta CD; DK The Ultimate Human Body; MS Money and MS Entertainment Pack
- ✓ Warranty: 36 months (return to manufacturer)

Presario CDS524  
**£1189**  
Item No. 77-68-1W



### COMPAQ PRESARIO

PRESARIO CDS (multimedia)	RAM/HD	Item No.	Price
522 DX2/66 14" CD/V22bis FAX, All-in-14/270MB	8MB/420MB	78-98-1W	£935
524DX2/66 14" CD/V22bis FAX, All-in-18/420MB	8MB/420MB	78-98-6W	£1189
528 DX2/66/14" CD/V22bis FAX, TV All-in-18/420MB	8MB/420MB	77-98-7W	£1399
7106 DX4/100 14" CD/No Fax, Desktop8/420MB	8MB/420MB	78-94-3W	£1049
7110 DX4/100 14" CD/V32bis FAX, Desktop8/540MB	8MB/420MB	78-94-4W	£1179
772 P/7514" CD/V32bis FAX, Desktop 8/535MB	8MB/420MB	78-98-8W	£1531
962 P/6014" CD/V32bis FAX, Desktop 8/535MB	8MB/420MB	77-99-1W	£1445
972 P/75 14" CD/V32bis FAX, Desktop 8/725MB	8MB/420MB	77-99-2W	£1616
7150 P/75 14" CD/V32bis FAX, Desktop 8/540MB	8MB/420MB	78-94-5W	£1349
7170 P/9014" CD/V32bis FAX, Desktop8/840MB	8MB/420MB	78-94-6W	£1429

### COMPAQ PORTABLES

LTE elite	RAM/HD	Item No.	Price
4/75CX M340/W DX4/75	8MB/340MB	75-02-0W	£2499
4/75CX M510/W DX4/75	8MB/510MB	75-02-1W	£2675
Contura 410	RAM/HD	Item No.	Price
410 DX2/509.5" mono STN	4MB/250MB	78-55-0W	*£845
410C DX2/509.5" COL STN	4MB/250MB	78-55-1W	*£1375
410CX DX2/508.4" COL tft	4MB/250MB	77-01-2W	£1695
* Now with MS Works			
Contura 420	RAM/HD	Item No.	Price
420C DX4/75COL. 9.5" Col STN	4MB/350MB	78-31-7W	£1535
420C DX4/75 9.5" COL STN	4MB/420MB	78-31-8W	£1695
420 cDX4/75 9.5" COL STN	4MB/720MB	78-31-9W	£2375

### COMPAQ PORTABLES

Conturo 430	RAM/HD	Item No.	Price
430c DX4/100 8.4" COL STN	4MB/420MB	78-32-0W	£2125
430cx DX/100 8.4" COL TFN	4MB/720MB	78-32-1W	£2725
LTE 5 Series	RAM/HD	Item No.	Price
5000 510	8MB/510MB	79-34-5W	£2525
5000 810	8MB/810MB	79-34-6W	£3045
5000 810	8MB/810MB	79-34-7W	£3195
5100 810	8MB/810MB	79-34-8W	£3545
5100 810	8MB/810MB	79-34-9W	£3775
5200 1350	8MB/1.35GB	79-35-0W	£4145

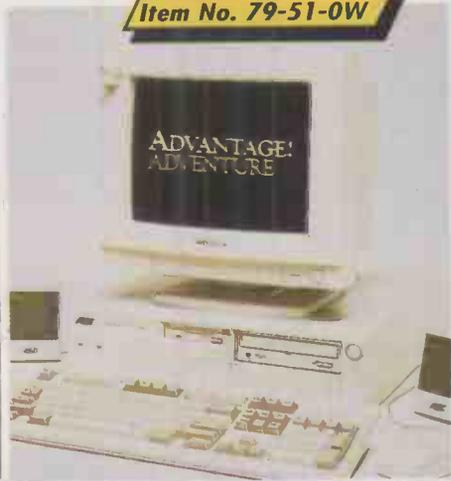
## New AST Advantage! range - The multimedia PC with something for each of the family.



A range of home computers which harness the power of many business PCs. AST Advantage! gives you a choice of well specified models suitable for home entertainment, running a small business, helping the kids with their homework and even patrolling the Information Superhighway-the Internet.

PRICES FROM  
**£1249**  
Item No. 79-51-0W

Features:	611	613E	614	812
IDE Hard Disk:	540MB	850MB	850MB	850MB
Form Factor:	Desktop	Desktop	Desktop	Minitower
Processor:	Cyrix 5X86/100	Cyrix 5X86/100	Intel Pentium/100MHz (upgradeable)	Intel Pentium/100MHz (upgradeable)
RAM:	8MB exp.up to 32MB	8MB exp.up to 32MB	8MB exp. to 128MB	8MB exp. to 128MB
Graphics:	32-bit Cirrus, 1 MB Video RAM	32-bit Cirrus, 1 MB Video RAM	64-bit ATI CT, 1 MB Video RAM	64-bit ATI CT, 1 MB Video RAM
Display:	14" SVGA diagonal display size			
Floppy Drive:	internal 3.5" 1.44MB			
CD ROM:	quad, IDE, 5.25" format with motorised tray.			
Audio:	10 Watt amplified speakers and lapel condensed microphone			
Data Fax & Modem:	16-bit Creative Labs Vibra S	16-bit Creative Labs Vibra S	16-bit Crystal Audio	16-bit Crystal Audio+3D Surround sound
Ops System:	MS - Windows 95			
Application Software:	AST Works II, MS Works 3, Intuit Quicken for Windows 4.0			
Comms Software:	Synco Multimedia Connect Lite, Compuserve (free thirty day trial)			
CD Rom Software:	MS Encarta 95, MS Golf, MS Cinemonia 95			
Warranty:	12 Months on site			



### THE ADVANTAGE! RANGE

ADVANTAGE	Processor	HD	Form Factor	Item No.	Price
611	5X86/100	8MB/540MB	Desktop	79-51-0W	£1249
613E	5X86/100	8MB/850MB	Desktop	79-51-2W	£1349
614	Pentium/100	8MB/850MB	Desktop	79-51-4W	£1799
812	Pentium/100	8MB/850MB	Mini-Tower	79-51-3W	£1999

Open Mon-Fri 9.00am - 5.30pm  
Sat 9.00am - 1.00pm

Payment terms: Cheque & Credit Card, Proformas, immediately available upon request BACS payment welcome.  
Computers by Post, (PCs) Alperton House, Bridgewater Rd. Wembley, Middx. HA0 1EH



TELEPHONE ORDERS: (0181) 982 6380  
FACSIMILE ORDERS: (0181) 982 6367  
Always quote the Product/Item No. when you contact us.

### COMPAQ/AST

All prices exclude delivery and VAT at 17.5%

"WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE"

# Computers by Post

HUGE STOCKHOLDING MAIL ORDER LEADER SINCE 1988

OTHER MEMBERS OF THE ECOSYS COST CUTTING, PLANET FRIENDLY PRINTER RANGE

**FS-400**  
**£359**  
Item No. 77-06-3W

**FS-1550**  
**£875**  
Item No. 76-25-8W

**FS-1600**  
**£1069**  
Item No. 76-25-9W

## The Kyocera FS-400 The advanced personal page printer that saves on print costs

A compact 4ppm personal page printer that offers full system printer capabilities and savings on print costs due to its cartridge-free design. Kyocera are the company which introduced low-cost printing, the FS-400 is a low cost printer that offers unrivalled potential for small businesses or organisations needing a low-volume, centralised printing resource. The only consumable needed is toner, cartridge waste is eliminated by a long life drum for a considerable reduction in page printing costs.



### STANDARD FEATURES:

- Output:** 4ppm
- Emulations:** HPLJIII, IBM X24E, Epson LQ-850
- RAM:** 1MB
- Resolution:** 300 x 300dpi/300 x virtual 1200 IRT
- Interfaces:** Centronics Parallel plus high speed option I/O port
- Fonts:** 79 bitmapped, 13 scalable
- Small footprint:**
- Dimensions:** 353W x 350D x 173Hmm



**Input Trays:** 1 x 100 sheet Universal  
**Output Trays:** 1 x 100 sheet face down



DRUM GUARANTEE  
3 YEARS OR 100,000 PAGES  
(WHICHEVER IS FIRST)

**Warranty:** 12 months (return to base)

### DOT MATRIX PRINTERS

EPSON	ITEM NO.	PRICE	ML395B 24 Pin	71-79-5W	£635
LX-300 9 pin	75-45-1W	£95	ML520 9 Pin	71-48-2W	£355
LX-300 Colour Kit	75-45-2W	£29	ML521 9 Pin	71-48-3W	£395
FX-870 9 Pin	71-03-6W	£245	ML591 24 Pin	71-02-0W	£499
FX-1170 9 Pin	71-01-8W	£299	<b>PANASONIC</b>		
LQ300 24 Pin	76-65-1W	£147	KX-P1150 9 Pin	72-97-4W	£89
LQ-570+ 24 Pin	71-61-0W	£212	KX-P3696 9 Pin	76-64-8W	£266
LQ-870 24 Pin	94-01-9W	£377	KX-P2023 24 Pin	73-14-5W	£108
LQ-1070+ 24 Pin	73-86-0W	£298	KX-P 2124 24Pin	76-14-3W	£199
LQ-1170 24 Pin	94-02-0W	£435	KX-P2135C 24 Pin	76-14-4W	£125
DFX-5000 9 Pin	71-50-8W	£1179	KX-P3626 24 Pin	76-64-9W	£252
DFX-8000 9 Pin	73-46-3W	£2019	<b>STAR</b>		
DLQ-3000 24 Pin	75-95-9W	£789	LC-90 9 Pin	76-35-1W	£79
<b>NEC</b>					
PinWriter P2Q 24 Pin	72-78-2W	£98	LC100 9 Pin Col	92-66-7W	£89
PinWriter P3Q 24 Pin	75-58-9W	£178	LC15 9 Pin	71-79-7W	£177
PinWriter P72 24 Pin	71-49-9W	£372	LC24-15 Mk II	72-78-3W	£230
<b>OKI</b>					
ML321 9 Pin	71-31-7W	£365	LC-240 24 Pin Mono	76-35-4W	£90
			LC-240 24 Pin Colour	76-35-5W	£103

See Warranty Key

### INKJET PRINTERS

CANON	ITEM NO.	PRICE	HP	ITEM NO.	PRICE
BJ-30 Black	77-67-3W	£139	HP	77-67-3W	£139
BJ-30 White	77-29-5W	£139	HP	77-29-5W	£139
BJ-200EX	77-23-4W	£158	HP	77-23-4W	£158
BJ230	91-52-5W	£236	HP	91-52-5W	£236
BJ300	71-39-3W	£344	HP	71-39-3W	£344
BJ330	71-39-4W	£389	HP	71-39-4W	£389
BJC-70 Black Colour	77-67-4W	£266	HP	77-67-4W	£266
BJC-70 White Colour	77-53-1W	£209	HP	77-53-1W	£209
BJC-4000 Colour	76-08-4W	£209	HP	76-08-4W	£209
BJC600 E Colour	77-51-0W	£326	HP	77-51-0W	£326
BJC800 Colour	94-80-5W	£1064	HP	94-80-5W	£1064
<b>EPSON</b>					
Stylus 820 Mono	79-01-9W	£212	HP	79-01-9W	£212
Stylus 820 Colour Kit	79-02-1W	£69	HP	79-02-1W	£69
Stylus Colour IIS	79-02-2W	£255	HP	79-02-2W	£255
Stylus Colour II	79-02-5W	£298	HP	79-02-5W	£298
Stylus Pro XL A3 Col	78-33-0W	£1329	HP	78-33-0W	£1329
IBM/LEXMARK			HP		
WinWriter 150C Col	79-07-0W	£258	HP	79-07-0W	£258
TEKTRONIX			HP		
Phosor 140 Colour	77-24-6W	£835	HP	77-24-6W	£835

HP OPPOSITE

CALL FOR LATEST MODELS

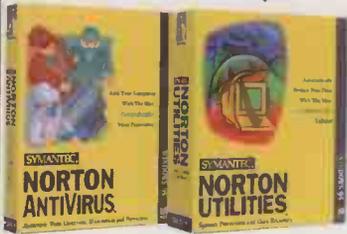
### LASER PRINTERS

Make/Model	ITEM NO.	PRICE
Brother HL-630 GDI, 6ppm	76-03-8W	£319
Brother HL-630I GDI, 6ppm	76-29-7W	£345
Brother HL-660 GDI	76-59-5W	£458
Brother HL-1260 GDI	76-59-6W	£895
Epson EPL-S200+ 6ppm	77-66-1W	£465
Kyocera FS-400	77-06-3W	£359
Kyocera FS-1550	76-25-8W	£875
Kyocera FS-1600	76-25-9W	£1069
NEC SuperScript Color 3000GDI Thermal	76-77-5W	£649
NEC SuperScript 610+, 6ppm	76-55-8W	£279
NEC SuperScript 660, 6ppm	76-56-5W	£385
OKI DL400ex, 4ppm	71-49-5W	£278
OKI DL810ex, 4ppm	77-69-1W	£665
Panasonic KX-P4430, 5ppm	94-78-0W	£484
Panasonic KX-P4440, 10ppm	74-08-4W	£699
Panasonic KX-P6100, 6ppm GDI	77-64-9W	£265
Panasonic KX-P6150, 6ppm GDI	78-24-1W	£305
Star WinType 4000 GDI 4ppm	75-47-8W	£288

### PRINTER MANUFACTURER'S WARRANTY DETAILS

† = Does not include On-Site Maintenance \* = 1 Year On-Site Maintenance \*\* = 2 Year On-Site Maintenance \*\*\* = 3 Year On-Site Maintenance (Please note: Panasonic on-site warranty is limited to the UK Mainland)

## SYMANTEC™



### Norton AntiVirus for Windows 95 at £54.00

Windows 95 specific virus protection detects, destroys and prevents more viruses than any other virus product.

Offers you the native protection for Windows 95 that your current Windows 3.1 version cannot. You'll hardly notice it's there. No loss in productivity! Item No. 34-63-3W

### Norton Utilities for Windows 95

The only continuous system protection and data recovery for Windows 95

Offers you the native protection for Windows 95 that your current Windows 3.1 version cannot. Prepares for the move to Windows 95, provides "automatic" protection, true 32-bit performance to make sure you maximise the full potential of Windows 95 as quickly as possible. See Norton Navigator feature-"Ease your way round Windows 95".

Norton Utilities for Win95 3.1  
**£84**

Item No. 34-65-3W

### COREL CD Office Companion

Corel CD Office Companion  
**£65**

The best CD to complete your office suite.

Maximise your productivity with just one CD which contains: \*CorelFLOW 2 for business graphics; \*Corel

Web Mosaic for Web browsing and CorelFAX for fax; \*Corel PLANNER for personal management; \*Corel GALLERY 2 for clipart and digital photos; \*Corel FONT MASTER™ for 500 TrueType fonts; \*Corel BOOKCASE™ for reference information and a collection of multimedia utilities.



### COREL DRAW 6 for Windows® 95

CorelDRAW 6 is the world's premier 32-bit Windows 95 graphics application offering fully-featured applications for illustration, photo-editing and bitmap creation, business and multimedia presentations and 3D rendering.



Draw 6  
**£265**

Item No. 34-58-2W

Upgrade CD from  
**£138**

Item No. 34-71-0W

### COREL Gallery 2CD

Corel Gallery 2 is the world's best clipart and more. With 15,000 clipart images plus a state-of-the-art Visual Multimedia File Manager, 500 royalty free photos, 500 fonts, 75 sound clips, and 10 video clips, Corel Gallery 2 is the ideal partner for all your word processing, desktop publishing, and graphics applications.



Corel Gallery 2 CD  
**£45**

Item No. 30-60-0W

Payment terms: Cheque & Credit Card, Proformas, immediately available upon request BACS payment welcome. Computers by Post, (PCs) Alperton House, Bridgewater Rd. Wembley, Middx. HA0 1EH



Open Mon-Fri 9.00am - 5.30pm  
Sat 9.00am-1.00pm

## PRINTERS/SOFTWARE

All prices exclude delivery and VAT at 17.5%

TELEPHONE ORDERS: (0181) 982 6380

FACSIMILE ORDERS: (0181) 982 6367

Always quote the Product Item No. when you contact us.

WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE



WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE

# Computers by Post

HUGE STOCKHOLDINGS  
MAIL ORDER LEADERS  
SINCE 1962



HEWLETT  
PACKARD

MUCH MORE FROM THE WORLD'S NO1 PRINTER MANUFACTURER

## HP LaserJet 5P



HP DeskJet 5P  
**£574**  
Item No. 77-07-8W

Designed for the office with low/medium volume requirements

**Features:**

- ✓ Up to 6 pages per minute
- ✓ 2MB RAM with memory enhancement (expandable to 50MB)
- ✓ 600dpi, with 300dpi compatibility mode; Economode
- ✓ Emulates enhanced HP PCL5 with optional Adobe PostScript™ Level 2 SIMM
- ✓ Fonts: 45 scalable typefaces (35 Intellifont and 10 TrueType)
- ✓ Universal 250 sheet A4 input cassette and one 100 sheet or 10 envelope multipurpose tray as standard (with flat paper path)
- ✓ HP JetDirect Option
- ✓ 12 months return to HP warranty (upgradable to 36 months home/office cover with HP SupportPack)

## HP LaserJet 4 Plus



HP LaserJet 4Plus  
**£972**  
Item No. 75-15-8W

The laser printer for medium to large volume requirements.

**Features:**

- ✓ up to 12ppm
- ✓ 2MB RAM (exp. to 34MB)
- ✓ Resolution: 600 x 600dpi.
- ✓ Emulates enhanced HP PCL5
- ✓ Fonts: 45 scaleable typefaces (35 Intellifont, 10 TrueType)
- ✓ 250 sheet A4 and 100 sheet/10 envelope input cassette and 250 sheet output tray
- ✓ 12 month return to HP Warranty

## HP LaserJet 5L



HP LaserJet 5L  
**£345**  
Item No. 78-45-4W

Brand new low cost, personal laser printer with instant-on fuser.

**Features:**

- ✓ up to 4ppm
- ✓ 1MB RAM (exp. to 9MB)
- ✓ Resolution: 600 x 600dpi.
- ✓ Emulates enhanced HP PCL5
- ✓ Fonts: 26 TrueType scaleable typefaces
- ✓ 100 sheet A4 input cassette and 100 sheet output tray (alternate flat paper path)
- ✓ 12 month return to HP Warranty

## HP DeskJet 600



HP DeskJet 600  
**£185**  
Item No. 79-02-7W

Designed to produce professional quality documents in the home or in the office.

**Features:**

- ✓ 80 column
- ✓ Monochrome with optional colour kit available
- ✓ Up to 4ppm in Econofast mode, 1ppm (Best mode) for black text
- ✓ Up to 1mpm in Econofast mode, 4mpm (Best mode) for colour graphics
- ✓ Resolution: 600 x 600 dpi mono; 300 x 300 colour; 300 x 600dpi on film or glossy.
- ✓ Emulates HP PCL3
- ✓ Fonts: 4 portrait & 4 landscape for DOS and 14 TrueType for Windows
- ✓ Built-in A4 100 sheet feeder (or 50 transparencies or 20 envelopes)
- ✓ 36 month return to HP Warranty (upgradable to 36 months home/office cover with HP SupportPack).

## HP DeskJet 660C



HP DeskJet 660C  
**£245**  
Item No. 77-07-3W

The versatile inkjet printer for the office.

**Features:**

- ✓ 80 column
- ✓ integrated monochrome and colour
- ✓ Up to 4ppm in Econofast mode, 1ppm (Best mode) for black text
- ✓ Up to 0.6mpm in Econofast mode, 3mpm (Best mode) for colour graphics
- ✓ Resolution: 600x600dpi mono (300x300dpi colour)
- ✓ Emulates HP PCL3+
- ✓ Fonts: 8 for DOS and 14 TrueType fonts for Windows
- ✓ Built-in 100 sheet A4 feeder (for 50 transparencies or 20 envelopes)
- ✓ 36 month return to HP warranty (upgradable to 36 months home/office cover with HP SupportPack)

## HP DeskJet 850C



HP DeskJet 850C  
**£330**  
Item No. 77-07-5W

Fast print quality for the professional user.

**Features:**

- ✓ 80 column
- ✓ Integrated monochrome and colour
- ✓ Up to 6ppm in Econofast mode, 4ppm (Best mode) for black text
- ✓ Up to 3ppm in Econofast mode, 1ppm (Best mode) for colour graphics
- ✓ Resolution: 600x600dpi mono 300x300dpi with C-RET colour
- ✓ Emulates HP PCL3+
- ✓ Fonts: 26 scaleable typefaces and 14 TrueType fonts for Windows
- ✓ 150 sheet multi purpose feeder
- ✓ 12 month return to HP warranty (upgradable to 36 months home/office cover with HP SupportPack)

SCANNERS	ITEM NO	PRICE
HP ScanJet 4S ISA	79-52-0W	£229
HP ScanJet 4C	79-46-2W	£629

INKJET PRINTERS	ITEM NO	PRICE
DeskJet 340	78-45-3W	£170
DeskJet 340 & Support	79-23-4W	***£207
DeskJet 340 & CSF	79-23-5W	£192
DeskJet 340 & CSF & Support	79-23-8W	***£228
DeskJet 600	79-02-7W	£185
DeskJet 600 & Support	79-24-3W	***£220
DeskJet 600 & Colour Kit	79-24-0W	£214
DeskJet 600 & Colour Kit & Support	79-24-2W	***£245
DeskJet 660C Col	77-07-3W	£245
DeskJet 660C Col & Support	77-08-2W	***£299
DeskJet 850C Col	77-07-5W	£330
DeskJet 850C Col & Support	77-08-4W	***£394
DeskJet 1200C Col	71-69-4W	£629
DeskJet 1200C & Support	76-09-3W	***£719
DeskJet 1200C/PS Col	71-75-0W	£1012
DeskJet 1600C Col	77-07-6W	£829
DeskJet 1600C & Support	77-08-5W	***£935
DeskJet 1600CM Col	77-07-7W	£1219
DeskJet 1600CM & Support	77-08-6W	***£1329
PaintJet XL300 Col	71-56-9W	£1585
HP DeskJet XL300 Col & Support	76-13-3W	***£1695

LASER PRINTERS	ITEM NO	PRICE
HP LaserJet 5L, 4ppm	78-45-4W	£345
HP LaserJet 5P, 6ppm	77-07-8W	£574
HP LaserJet 5P & Support	77-08-7W	***£699
HP LaserJet 5L & Support	79-24-4W	***£445
HP LaserJet 5MP, 6ppm	77-07-9W	£708
HP LaserJet 5MP & Support	77-08-8W	***£829
HP LaserJet 4 Plus, 12ppm	75-15-8W	£972
HP LaserJet 4 Plus & Support	75-15-9W	***£1135
HP LaserJet 4M Plus, 12ppm	75-10-6W	£1290
HP LaserJet 4M Plus & Support	76-46-3W	***£1439
HP LaserJet 4V 16ppm,	76-02-9W	£1365
HP LaserJet 4V & Support	76-13-1W	***£1565
HP LaserJet 4MV 16ppm,	76-03-0W	£1965
HP LaserJet 4MV & Support	76-46-4W	***£2185
HP LaserJet 4Si 16ppm	71-69-2W	£2085
HP LaserJet 4Si & Support	76-11-3W	***£2555
HP LaserJet 4Si/MX, 16ppm	71-75-6W	£2965
HP LaserJet 4Si/MX & Support	76-46-2W	***£3395
HP Color LaserJet A3	76-69-8W	£4195
HP Color LaserJet A3 & Support	77-05-7W	***£5395

## HP OfficeJet LX - if you can't decide between a new printer, fax or copier-get all three



HP OfficeJet LX  
**£475**  
Item No. 78-61-7W

Open Mon-Fri 9.00am - 5.30pm  
Sat 9.00am-1.00pm

Payment terms: Cheque & Credit Card, Proformas, immediately available upon request BACS payment welcome.  
Computers by Post, (PCs) Alperton House, Bridgewater Rd. Wembley, Middx. HA0 1EH



WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE

TELEPHONE ORDERS: (0181) 982 6380  
FACSIMILE ORDERS: (0181) 982 6367  
Always quote the Product Item No. when you contact us.

HEWLETT-PACKARD

All prices exclude delivery and VAT at 17.5%

"WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE"

# Computers by Post

THE STOCKHOLDERS MAIL ORDER LEADERS SINCE 1982

## Ready to unlock the potential of personal computing?

**Microsoft** provides you with the master keys!

All are 32-bit applications specifically designed to take full advantage of Windows 95 and help move you into the future of computing today!! Microsoft® Windows® 95 upgrade and native applications.



Win 95 Upgrade  
**£59**  
CD or 3 1/2"



Office for Win 95 CCP Upgrade  
prices from **£139**  
Item No.34-53-5W 3 1/2"



Microsoft Word for Windows 95  
prices from **£82**  
Item No.34-93-4W 3 1/2"



MS Excel for Windows 95  
prices from **£82**  
Item No.34-93-1W 3 1/2"



PowerPoint for Win 95 CCP 3 1/2"  
prices from **£84**  
Item No.34-93-3W 3 1/2"

### MS Office & Office Pro for Windows 95

### Microsoft Word for Windows 95

### MS Excel for Windows 95

### MS PowerPoint for Windows 95

Microsoft Windows 95 Products			Microsoft Windows 95 Products		
Item No	CD	Price	Item No	CD	Price
MS Excel Win 95	34-82-1W	£225	MS Office Pro Win 95 MLP Licence Upgrade	34-54-5W	£195
MS Excel Win 95 CCP	34-93-1W	£82	MS Office Pro Win 95 Competitive Upgrade*	34-54-6W	£245
Quicken V4.0 WIN	34-27-4W	£28	MS Office Pro Win 95 Full product	34-54-8W	£425
Quicken V4 Deluxe Home pack WIN 3 1/2"	34-27-6W	£45	MS Office Pro Win 95 MLP Licence	34-55-0W	£375
Quickbooks V3.0	34-31-1W	£84	MS Plus! for Windows 95	34-44-5W	£28
Quicken V4 Deluxe Business Pack WIN 3 1/2"	34-27-5W	£45	MS Powerpoint V7 WIN 95	34-74-9W	£238
Quicktax Returns 1995	34-27-7W	£25	MS Powerpoint V7 CCP WIN 95	34-93-3W	£82
Sage Sterling ACCOUNTANT PLUS V3.0 WIN 3 1/2"	34-33-5W	£273	MS Publisher v.3.0 WIN95	34-69-0W	£63
Sage Sterling +2 PAYROLL WIN 3 1/2"	33-52-0W	£129			
Sage Sterling V3.0 Fin. Cont. WIN 3 1/2"	34-33-4W	£353			

#### ACCOUNTS - BUSINESS

MS Money V3.0	33-27-8W	£25
Quicken V4.0 WIN	34-27-4W	£28
Quicken V4 Deluxe Home pack WIN 3 1/2"	34-27-6W	£45
Quickbooks V3.0	34-31-1W	£84
Quicken V4 Deluxe Business Pack WIN 3 1/2"	34-27-5W	£45
Quicktax Returns 1995	34-27-7W	£25
Sage Sterling ACCOUNTANT PLUS V3.0 WIN 3 1/2"	34-33-5W	£273
Sage Sterling +2 PAYROLL WIN 3 1/2"	33-52-0W	£129
Sage Sterling V3.0 Fin. Cont. WIN 3 1/2"	34-33-4W	£353

#### CAD/3D DESIGN

Autocad LT V2.0 WIN	34-48-3W	£365
Autosketch for Windows V2	33-26-8W	£79
FloorPlan Plus 3D V2.0 WIN 3 1/2"	33-62-8W	£45
FloorPlan Plus 3D +Estimator WIN 3 1/2"	33-63-4W	£75
FloorPlan Plus 3D +3D Design WIN 3 1/2"	33-63-3W	£89

#### COMMUNICATIONS/INTERNET

Delrina Comms Suite V2.1 WIN 3 1/2"	32-74-3W	£75
PC Anywhere 5 DOS	33-34-3W	£89
PC Anywhere for Windows V2.0	33-93-3W	£89
Procomm Plus EC V2.0 DOS	30-41-2W	£54
Procomm Plus V2.1 Win 3 1/2"	33-95-8W	£57
Reachout VS Modem Host & Viewer 3 1/2"	34-77-0W	£79
WinFax Pro V4.0	33-38-9W	£54

#### DATABASES

ACT 2.0 WIN 3 1/2"	33-44-1W	£122
Lotus Approach 3.0 WIN	33-60-1W	£82
MS Access V2.0	33-35-9W	£224
MS Access V2.0 CCP Upgrade	33-36-5W	£83
MS Access V2.0 Distribution Kit 3 1/2"	33-52-9W	£225
MS Faxpro V2.6 Standard WIN	33-48-8W	£70
MS Faxpro V2.6 PRO WIN	33-48-9W	£276
MS Visual FoxPro STD for Win 3 1/2"	34-92-6W	£75
MS Visual FoxPro PRO for Win 3 1/2"	34-92-7W	£299
Paradox V5 for Windows 3 1/2"	32-38-8W	£219
Visual dBase 5.5 Win 3 1/2"	34-94-6W	£192

#### DTP

MS Publisher For Windows V2.0	31-07-0W	£62
Aldus Pagemaker 5.0 For Windows	32-21-6W	£375
Aldus Pagemaker Classic WIN 3 1/2"	33-44-2W	£55
Corel Office Companion CD	34-58-4W	£65
Corel Gallery 2 CD	30-60-0W	£45

Corel Photopoint 5 Plus CD	33-83-5W	£45
Corel Ventura 5 WIN CD	33-78-8W	£195
Corel Ventura U/G V4.2 TO VS CD	33-82-8W	£65
QuarkExpress V3.31 WIN	33-50-6W	£559

#### GRAPHICS

Corel-Draw V3.0 3 1/2"	30-28-9W	£62
Corel-Draw V3.0 CD	30-21-0W	£42
Corel-Draw U/G V3 TO VS CD	33-82-4W	£195
Corel-Draw V4.0 3 1/2"	32-35-9W	£105
Corel-Draw V4.0 CD	33-02-9W	£85
Corel-Draw U/G V4 TO VS CD	33-82-2W	£118
Corel-Draw V5.0 3 1/2"	33-53-2W	£355
Corel-Draw V5.0 CD	33-63-7W	£278
Corel-Draw 6 Win95 CD <b>SEE FEATURE</b>	34-58-2W	£265
Corel-Draw 6 Win95 U/G from 5 CD	34-71-0W	£138
Corel-Draw 6 Win95 U/G from 3/4 CD	34-58-3W	£235
Corel Flow 2.0 WIN 3 1/2"	33-54-5W	£45
Freelance R2.01 WIN	33-64-1W	£268
Harvard Graphics V3.0 WIN	33-60-2W	£195
MS Powerpoint WIN V4.0	33-20-5W	£227
MS Application Trade In voucher	33-27-7W	£119

#### INTEGRATED

MS Works V3.0 DOS 3 1/2"	30-82-7W	£83
MS Works V3.0 WIN 3 1/2"	31-89-1W	£82
MS Works V3.0 WIN 1MLP	33-08-7W	£73
MS Works V3.0 WIN CCP Upgrade 3 1/2"	31-99-0W	£39

For Internet Software see Communications section

#### LANGUAGES

Borland C++ V4.5 DOS/WIN CD	30-09-5W	£212
Borland Turbo C++ 4.5 Win CD	34-46-8W	£55
Delphi V1.0 WIN CD	34-26-5W	£155
MS Visual Basic V3.0 WIN	32-35-5W	£79
MS Visual Basic V3.0 PRO WIN	32-35-7W	£189
MS Visual C++ v1.52 STD WIN CD	34-56-0W	£59
MS Visual C++ 2.0 PRO WIN CD	33-83-8W	£249

#### OCR/IMAGE PROCESSING

OmniPage V5.0 WIN	30-14-5W	£249
OmniPage PRO 5 WIN	33-33-8W	£325

#### OPERATING SYSTEMS

IBM OS/2 Warp V3.0 3 1/2"	32-48-1W	£47
IBM OS/2 Warp V3.0 CD	31-65-8W	£44

IBM OS/2 Warp V3.0 with Stacker 4 OS/233-83-7W	£85
IBM OS/2 Warp V3.0 with WIN 4 OS/2 3 1/2"	£85
IBM OS/2 Warp V3.0 Connect 3 1/2"	£79
IBM OS/2 Warp V3.0 Connect CD	£110
MS DOS 6.22 Upgrade	£39
MS Windows 3.1	£64
MS Windows 3.1 CCP Upgrade	£39

#### PERSONAL INFO MANAGEMENT

Starfish Sidekick 2.0 WIN 3 1/2"	34-52-6W	£29
Lotus Organizer V2.1 Win 3 1/2"	34-72-8W	£82

#### PROJECT MANAGEMENT

ABC Flowcharter V4.0 Win	34-31-0W	£219
Corel Flow 2.0 Win 3 1/2"	33-54-5W	£45
On-Target	32-75-6W	£65
MS Project V4.0 Windows	33-36-2W	£284
MS Project V4.0 Windows 1 MLP	33-36-3W	£243
MS Project V4.0 Windows CCP Upgrade	33-36-6W	£85

#### ROUTE FINDERS

MS Autoroute 4 Win 3 1/2"	34-55-9W	£29
MS Autoroute Express WinCD	34-55-8W	£39
MS Autoroute Plus V1.0 Win	33-31-4W	£272

#### SECURITY/ANTI VIRUS

Dr Salomans Anti-Virus DOS (1/2, LY)	32-73-0W	£59
Dr Salomans Anti-Virus OS/2 (1/2, LY)	34-31-2W	£89
Dr Salomans Anti-Virus Win (1/2, LY)	30-65-7W	£71
Norton Anti-Virus V3.0 Win/DOS	31-83-8W	£95
Norton Anti-Virus Win 95 3 1/2"	34-63-3W	£54
Norton Anti-Virus T/Up Win95 3 1/2"	34-63-4W	£29
Norton Disklack V3.0 Win/DOS	34-32-4W	£62

#### SPREADSHEETS

Lotus 123 R5.0 Win	33-59-3W	£219
Lotus 123 R5.01 Win 1 LLP	33-58-7W	£194
MS Excel Win V5.0	31-88-6W	£222
MS Excel Win V5.0 1 MLP	31-88-7W	£198
MS Excel Win V5.0 CCP UPGRADE	33-23-2W	£85
Quattro Pro 6.0 Win	33-92-0W	£152

#### SUITE PRODUCTS

Lotus SmartSuite R3.1 3 1/2"	34-13-6W	£299
Lotus SmartSuite R3.1 CD	34-11-6W	£299
Lotus SmartSuite R3.1 1 LLP	34-13-7W	£289
Lotus SmartSuite R3.1 Upgrade/Trade Up 3 1/2"	34-40-8W	£147

Lotus SmartSuite R3.1 Upgrade/Trade Up CD	34-33-7W	£147
MS Office V4.2 Win 3 1/2"	33-09-1W	£324
MS Office V4.2 Win CD	33-64-8W	£324
MS Office V4.2 1 Win MLP	33-12-3W	£294
MS Office V4.2 Win 3 1/2" CCP Upgrade	33-23-0W	£159
MS Office V4.2 Win Trade in Voucher	33-27-5W	£222
MS Office Pro V4.3 Win 3 1/2"	33-44-3W	£424
MS Office Pro V4.3 Win CD	33-64-9W	£424
MS Office Pro V4.3 Win 1MLP	33-44-4W	£358
MS Office Pro V4.3 Win CCP Upgrade 3 1/2"	33-44-6W	£245
MS Office Pro V4.3 Win Trade in Voucher	33-27-6W	£262
Novell Perfect Office 3.0 Std 3 1/2"	33-94-3W	£349
Novell Perfect Office Sid U/G 3 1/2"	30-11-4W	£119
Novell Perfect Office Trade Up 3 1/2"	30-11-5W	£139
Novell Perfect Office Pro U/G 3 1/2"	30-11-6W	£179
Novell Perfect Office 3.0 Pro T/Up 3 1/2"	30-12-0W	£199

(SEE INTEGRATED SECTION FOR WORKS)

#### UTILITIES

Check It Road Tech 3 1/2"	34-31-6W	£49
Check It Road Set Up Advisor WIN 3 1/2"	34-31-7W	£22.50
Laplinsk Pro 5 DOS	32-20-9W	£59
Laplinsk for Windows 3 1/2"	33-75-6W	£89
Quarterdeck Cleansweep	34-09-3W	£29.50
Stacker V4.0 WIN/DOS	34-92-4W	£59
WIN Checkit WIN 3 1/2"	33-28-7W	£62
XTree Gold V3.0	31-72-5W	£82
XTree V4.0 Windows	33-90-1W	£65

#### WORDPROCESSING

Avery LabelPro 2 Win 3 1/2"	33-79-2W	£25
Lotus WordPro 96 Win 3 1/2"	35-11-2W	£82
MS Word for WIN V6.0	31-77-1W	£224
MS Word for WIN V6.0 CCP Upgrade	33-23-3W	£85
MS Word for WIN V6.0 1 MLP	31-77-2W	£198
WordPerfect V5.2 + WIN	33-78-0W	£219
WordPerfect 6.1 WIN 3 1/2"	33-79-9W	£165
WordPerfect 6 WIN U/G Voucher	30-12-1W	£62
WordPerfect Comp. T/UP Voucher	30-12-7W	£79
WordPerfect SIX WIN 1 Add Lic.	33-78-3W	£129
WordPerfect SIX WIN 5 Add Lic.	33-78-4W	£589

Payment terms: Cheque & Credit Card, Proformas, immediately available upon request BACS payment welcome. Computers by Post, (PCs) Alpertons House, Bridgewater Rd. Wembley, Middx. HA0 1EH

## SOFTWARE/WINDOWS 95

All prices exclude delivery and VAT at 17.5%

TELEPHONE ORDERS: (0181) 982 6380

FACSIMILE ORDERS: (0181) 982 6367

Always quote the Product Item No. when you contact us.

WE WILL MATCH ANY DELIVERED PRICE ADVERTISED IN THIS MAGAZINE



Save a bundle,  
and me a trip down  
the chimney!



# MAKE IT A MULTIMEDIA CHRISTMAS!

## **B** BYTE CHRISTMAS BUNDLE

### GET A GREAT VALUE MULTIMEDIA PC

**AST**  
COMPUTER

### AST Advantage Adventure 6066D

- 486DX2 66MHz Processor
- 8Mb RAM • 540Mb Hard Drive
- Quad Speed CD-ROM Drive
- 16-Bit SoundBlaster Card
- 16 Bit Graphics (1Mb VRAM)
- 14" SVGA Colour Monitor
- Stereo Speakers & Microphone
- 3.5" 1.44Mb Floppy Disk Drive
- 2 Free ISA Expansion Slots
- 102-key Keyboard
- AST mouse • MS DOS 6.22
- MS Windows 3.1 (with FREE upgrade to Windows 95)
- AST Works! • MS Works
- MS Encarta 95 CD
- MS Golf CD • Intuit Quicken
- MS Cinemania 95 CD
- Pentium™ OverDrive Upgrade Support
- 12 Months On-Site Parts and Labour Warranty



**FREE  
UPGRADE TO  
WINDOWS 95**

### PLUS This new offer from HP...

**SPECIAL OFFERS FROM  
HP DESKJET 600 & 660C PRINTERS  
AND DISNEY'S THE LION KING  
PRINT STUDIO.**



- Brings your favourite Disney Lion King characters to life
- Colourful image printing on any type of paper
- Easy for all the family to have fun
- Special Christmas promotion

Package contents:  
HP DeskJet 600 printer. Colour Kit (to upgrade the printer to colour)  
and Disney's The Lion King Print Studio.  
HP DeskJet 660C colour printer and Disney's The Lion King  
Print Studio.

AS SEEN  
ON TV

©Disney



HEWLETT  
PACKARD



### PLUS 6 Great CDs for Kids

Worth  
over  
£29!



Our House



Dream Team  
Basic Spelling



Cinderella  
Fairy Tale



Putt-Putt's  
Fun Pack



Lenny's Music  
Toons



Sing-along  
Kids

### ALL for only

# £1099

Plus VAT

**FIRST 150 ORDERS RECEIVE  
10 EXTRA CD-ROMs FREE**

Including Reunion, Dune II, Fighter Wing, Wayne's World,  
The Internet for Everybody, Lemmings, Grandmaster chess and more!

Byte Direct



**CALL NOW  
0121 766  
5559**

#### OPENING HOURS

MON-FRI 8.30am - 6.30pm  
SATURDAY 10.00am - 3.00pm  
SUNDAY CLOSED

Byte Direct  
James House,  
Warwick Road,  
Birmingham B11 2LE  
Fax: 0121 773 0119



**Byte SUPPORT YOU & YOUR SYSTEM**

CALL NOW 0121 766 5559 LOW PRICES AND EXCLUSIVE BYTE OFFERS



# IBM DESKTOP PCs

**CALL FOR DETAILS ON THE NEW POWER SERIES 800**



**NEW Lower Price**

## IBM PC 330 P75

Powerful desktop PC systems from IBM

IBM PC 330 P75 8Mb RAM 540Mb PCI  
**£1089**

Featuring plug and play technology, a range of processor options up to Pentium™ 75MHz and enhanced IDE disk controllers, the PC300 offers unbeatable value for money. It's innovative design makes for a system which is easy to manage, maintain and upgrade.

- i486 or Pentium™ processors
- RAM Expandable to 128Mb
- Hard Disk from 540 MB
- SelectaBus technology
- PCMCIA support
- Plug and Play capable
- Enhanced security features
- IBM 3 Year Warranty

### IBM APTIVA (with monitor)

Aptiva 910 DX/2 66 4/540 Desktop	£759
Aptiva 914 DX/2 66 8/540 MM Desktop	£999
Aptiva 921 DX/4 100 8/540 MM Desktop	£1069
Aptiva 931 P75 8/540 MM Tower	£1229
Aptiva 941 P100 8/850 MM Tower	£1679

PC 330 P75 8/540 PCI	£1089
PC 330 P75 16/540 PCI	£1299
PC 330 P90 16/540 PCI	£1439

Different configurations available

### IBM PC 730 RANGE (CPU only)

### IBM PC 330 RANGE (CPU only)

PC 330 DX/2 66 8/540 VESA	£839
PC 330 DX/4 100 8/540 VESA	£1089
PC 330 DX/4 100 8/540 PCI	£1149

PC 730 P75 8/540 PCI	£1259
PC 730 P90 8/540 PCI	£1399
PC 730 P100 16/540 PCI	£1769
PC 730 P100 16/1Gb 5x5	£1899
PC 730 P133 16/1Gb 5x5	£2229

Call for prices on the whole IBM range



### Massive Stocks Mean Fast Delivery

At Byte Direct we always aim to offer the best service. Thanks to a £30 million stock holding and over 60,000 square feet of warehouse space we offer a fast next-day service on all Byte exclusive items and regular stock lines.

ORDER BEFORE 3PM - get **NEXT-DAY** delivery from just **£10** plus VAT

# COMPAQ DESKTOP PCs

## COMPAQ Prolinea P75

Lowest EVER Prolinea Prices!



- 486 DX2/66MHz to 133MHz Pentium Processors
- 8Mb or 16Mb RAM Upgradable
- Hard Disks from 200Mb to 720Mb
- PCI graphics
- Plug & Play Compatible
- 102 key Keyboard and Mouse
- MS DOS 6.2, Windows for Workgroups 3.11
- 3 year Warranty (1st year on site)



Prolinea P75 8Mb 270Mb HD  
**£1029**

### FULL RANGE OF COMPAQ SERVERS AVAILABLE

#### PROLINEA RANGE

Prolinea 4/66 8Mb from	£809
Prolinea 4/100 8Mb from	£879
Prolinea P75 8Mb from	£1029
Prolinea P90 8Mb from	£1189
Prolinea P100 8Mb from	£1329
Prolinea P120 16Mb from	£1829
Prolinea P133 16Mb from	£2029

#### DESKPRO RANGE

Deskpro 4/66 8Mb from	£899
Deskpro 4/100 8Mb from	£979
Deskpro P75 8Mb from	£1179
Deskpro P90 8Mb from	£1329
Deskpro P100 8Mb from	£1479
Deskpro P120 16Mb from	£2019
Deskpro P133 16Mb from	£2299

#### MONITOR OPTIONS

Compaq 14" SVGA	£205
Compaq 1024 SVGA	£249
Compaq 151 FS SVGA	£309
Compaq 171 FS SVGA	£599



# AST DESKTOP PCs

## AST Bravo MS P90

Everything you need to survive a day in the office!

The new AST Bravo MS range of PCs has been designed to be the perfect survival kit for the modern office. It provides a multitude of useful, time saving features plus a specification that boasts all the latest technology like high-speed PCI graphics and plug and play compatibility. Each system includes two levels of password protection and AST's Walk-n-Lock where the screen blanks out after a preset period and can only be reactivated by typing the correct password.

**NEW LOWER PRICES ON ALL AST MODELS!**

AST BRAVO MS P90 8Mb FR  
**£1079**

#### MONITOR OPTIONS

AST 14" 4L SVGA	£219
AST 15" 5L SVGA	£299
Ast 17" 7L SVGA	£529

#### AST BRAVO LC RANGE

LC 4/66D 4/270	£499
LC 4/66D 8/540	£729
LC 4/100T 8/270	£799
LC 4/100T 8/540	£899

#### AST BRAVO MS RANGE

MS 4/66D 8Mb from	£869
MS P75D 8Mb from	£889
MS P90D 8Mb from	£1079
MS P90D 16Mb from	£1999
MS P90D 16Mb / 1Gb	£1829

Protect your investment - Ask about our ByteCare extended warranties

**Byte SAVE YOU MONEY Byte DELIVER FAST!**

All prices plus VAT and delivery



# COMPAQ DESKTOP PCs

## COMPAQ Presario 7110

Great value multimedia PCs for your home

These powerful desktop multimedia systems offer you everything you and your family could need. Unpack it, plug in, switch on and get started right away! A fantastic range of pre-loaded software is included (see insert box) all in the price. There's a quad speed CD-ROM drive and advanced graphics capability to really bring the latest multimedia games and reference material to life.

- 486DX4/100 MHz Upgradable
- 8Mb RAM Expandable
- Hard Disk 540 MB
- 14" SVGA Colour Monitor
- Quad Speed CD-ROM Drive
- CD Stereo Sound System
- 14.4 Fax / Modem
- Software & CDs included
- Fax and access to the Internet
- Compaq 3 Year Warranty

PRESARIO 7110 DX4 100 8/420 CD  
**£1125**



## Presario 7170



The affordable multimedia powerhouse

- Intel Pentium/90 MHz Processor Upgradable
- 8Mb RAM Expandable
- 14" SVGA Colour Display
- Software & CDs included
- Quad Speed CD-ROM Drive
- CD Stereo Sound System
- Fax and access to the Internet
- 3 Year Compaq Warranty
- Hard Disk 840 MB
- 14.4 Fax / Modem
- Software & CDs included



PRESARIO 7170 P90 8/840 CD  
**£1395**

Software & CDs on models include:

MS Windows 95, Novell Perfect Works, MS Money 3.0, Maxis SimCity, Sierra Lode Runner, CompuServe WinCim & Delrina MaxFax (modem models), Compton's Interactive Encyclopedia CD, King's Quest VII CD, Compaq-exclusive ease-of-use software

### PRESARIO RANGE

Presario 7106 8/420 CD	<b>£1025</b>
Presario 7150 8/540 CD Modem	<b>£1295</b>



CALL FOR DETAILS OF NEW 5500 & 9500 MODELS!



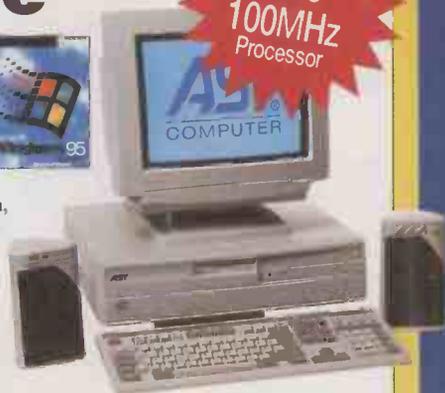
# AST DESKTOP PCs

## AST Advantage 613e

The complete multimedia PC bundle

A complete bundle for home or office. The Advantage 613e has everything you need to run the latest business software and enjoy the world of multimedia.

- Cyrix 5x86 100MHz
- 8Mb RAM Exp. to 32Mb
- 850 MB Hard Disk
- 14" SVGA Colour Monitor
- Quad Speed CD-ROM Drive
- 32 Bit Graphics 1Mb VRAM
- Creative Vibra 16 Bit Sound
- 14.4bps Fax / Modem
- 10 Watt Speakers
- Plug & Play Compatible
- 1 Year Warranty
- Microsoft Windows 95, Microsoft Works, Quicken, Encarta CD-ROM, Syncro, AST Works, Microsoft Golf



Cyrix 5x86 100MHz Processor

AST ADVANTAGE 613E  
**£1149**

### Advantage 612

Available without 14.4 Fax / Modem and with 540Mb Hard Drive

**£1049**

### Advantage 614

A Pentium™ powered PCI bus powerhouse!

- Intel Pentium™ 100MHz processor
- 8Mb RAM
- 850 MB Hard Disk
- 14" SVGA Colour Monitor
- Quad Speed CD-ROM Drive
- ATI 64 Bit Graphics
- Crystal Audio 16 Bit Sound
- 14.4bps Fax / Modem
- 10 Watt Speakers
- Plug & Play Compatible
- Software bundle as 613e

AST ADVANTAGE 614

**£1499**

Available as above in Mini-Tower case with 15" display & 850Mb Hard Disk as Advantage 615 **£1699**



### Exclusive AST Advantage Deal

Byte Direct have exclusive mail order rights to sell AST Advantage in the UK. We can offer you the latest Windows 95 plug 'n' play machines, full Windows 95 software suite and extensive support services.



CALL NOW

**0121 766 5559**

### OPENING HOURS

MON-FRI	8.30am - 6.30pm
SATURDAY	10.00am - 3.00pm
SUNDAY	CLOSED

Byte Direct  
James House,  
Warwick Road,  
Birmingham B11 2LE  
Fax: 0121 773 0119



**Byte SUPPORT YOU & YOUR SYSTEM**

All prices plus VAT and delivery

Byte Direct

CALL NOW 0121 766 5559 LOW PRICES AND EXCLUSIVE BYTE OFFERS



# T.I. NOTEBOOKS

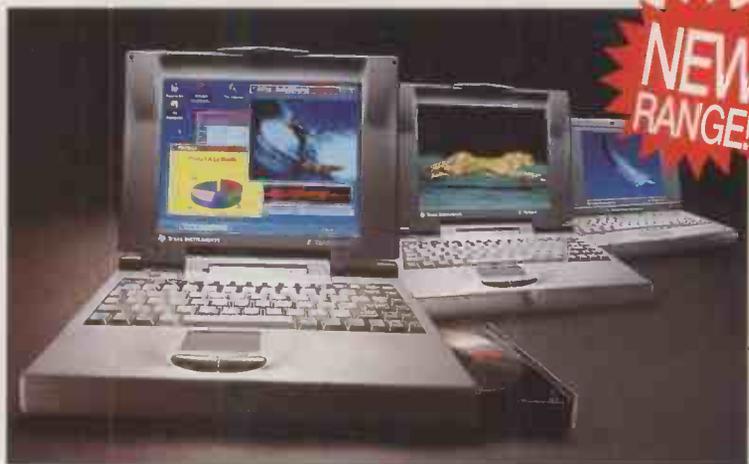
## The NEW Extensa range from T.I.

Everything you ever needed in a notebook - only lighter!



### Direct Buying With Confidence

When you call Byte Direct you'll talk to trained, experienced sales people. Each one has passed through our Byte Academy training scheme and is there to help make buying direct as enjoyable, productive and painless as possible.



**NEW RANGE!**

The new T.I. Extensa range are the answer to all your portable computing needs. With a range of processors up to 90MHz Pentium™, big, crisp colour displays and built-in CD-ROM drive options, your Extensa is as powerful as most desktops. A full size keyboard and innovative trackpad make for comfortable working in even the most cramped conditions. And with the 450 series weighing in at just 5 lbs it is truly portable.

#### EXTENSA 450 DS

- Intel 75MHz DX4 Processor
- 4Mb RAM Exp. to 32Mb
- 340Mb Hard Disk Drive
- Internal 3.5" 1.44Mb FDD
- 10.4" VGA STN Colour Display
- PCMCIA 2.0 Type II Slot
- Serial Infrared Port
- 84 key Keyboard

- Built-in Touchpad
- Primary NiMH Battery
- Weighs 5lbs, 2.2Kg
- Windows 95
- 1 Year Warranty

EXTENSA 450 DUAL SCAN  
**£1299**

#### T.I. EXTENSA RANGE

Extensa 450 Dual Scan 4/340Mb	£1299
Extensa 450 TFT 8/340Mb	£1699
Extensa 550 Dual Scan 8/520Mb	£1899
Extensa 550 TFT 8/520Mb	£2299
Extensa 550 CD Dual Scan 8/520Mb	£2299
Extensa 550 CD TFT 8/520Mb	£2699

CALL FOR PRICES ON THE FULL RANGE OF EXTENSA OPTIONS

## T.I. TravelMate 5000M

- Intel 75MHz Pentium™ Processor
- 8Mb RAM Upgradable to 32Mb
- PCI Bus architecture
- 500Mb Hard Disk Drive
- 3.5" 1.44Mb Floppy Disk Drive
- 10.4" VGA STN Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- 2Mb VRAM
- 16Bit Sound Card
- 84 key Keyboard
- MS DOS 6.22, MS Windows 3.11
- 2 x Lithium ION Battery Packs
- Weighs 2.9Kg
- 1 Year Warranty



#### T.I. TRAVELMATE 5000

5000M 10.5" Dual Scan Model 500 P75	£2349
5000M 10.4" TFT Model 772 P75	£2799

#### NEW! T.I. TRAVELMATE 5100M

5100M 10.4" TFT Model P90 with 1.2Gb Hard Disk	£3309
--	-------

TRAVELMATE 5000M DS 8/500  
**£2349**

#### TRAVELMATE OPTIONS

4Mb RAM for 4000M	£155
8Mb RAM for 5000M	£349

#### T.I. 4000M BUNDLE

- Intel DX4 75MHz Processor
- 4Mb RAM
- 525 Mb Removable Hard Disk Drive
- TFT Active Matrix Screen
- CD Docking Station
- Microsoft Windows 95

T.I. 4000M BUNDLE  
**£2149**



T.I. 4000M DX4/100 8/525

£2499



# IBM, COMPAQ & AST NOTEBOOKS

## Ascentia 950N P75



ASCENTIA 950N P75 DS M800  
**£2429**

#### AST RANGE

Ascentia 800N M200	£999
Ascentia 800N M340	£1099
Ascentia 810N M510	£1529
Ascentia 910N CS 10 M510	£1829
Ascentia 910N CT 10 M510	£2299
Ascentia 910N CT 10 M700	£2499
Ascentia 950N Pentium 75MHz DS M800	£2429
Ascentia 950N Pentium 75MHz TFT M800	£3229

## COMPAQ

#### NEW! COMPAQ 5000 RANGE

LTE 5000 M510 CSTN P75 8/510Mb	£2589
LTE 5000 M810 CSTN P75 8/810Mb	£3099
LTE 5000 M810 CTFT P75 8/810Mb	£3269
LTE 5100 M810 CTFT P90 8/810Mb	£3599
LTE 5100 M810 CD CTFT 8/810Mb	£3849
LTE 5200 M1350 CTFT P120 8/1.35Gb	£4199

The NEW Compaq LTE 5000 family offers powerful Pentium™ processors, PCI Bus graphics and a unique modular design.

#### COMPAQ CONTURA RANGE

PRICES START FROM £1469

#### COMPAQ LTE RANGE

PRICES START FROM £2669



IBM THINKPAD  
POWER SERIES 820 & 850 PLEASE CALL FOR PRICES AND OPTIONS

#### IBM THINKPAD

Thinkpad 370 TC1 340Mb	£2289
Thinkpad 370 TC2 340Mb	£2499
<b>IBM THINKPAD 701 (BUTTERFLY)</b>	
Dual Scan Colour models from	£1869
TFT Colour models from	£2199

#### IBM 755 SERIES

Thinkpad 755 CE TFT models from	£3599
Thinkpad 755 CD TFT models from	£4169
Thinkpad 755 DV TFT models from	£5129
Thinkpad 755 CX TFT models from	£3899
Thinkpad 755 CV TFT models from	£4699

All prices plus VAT and delivery

Byte SAVE YOU MONEY

Byte DELIVER FAST!



# TOSHIBA NOTEBOOKS

## NOW THE UK'S NO.1 FOR THE WORLD'S NO.1 PORTABLE COMPUTER

### TOSHIBA Satellite Pro 400CDT

The first modular notebook from Toshiba

The satellite Pro is configurable with a variety of different options. It has swappable, internal quad speed CD-ROM and floppy drives and runs up to four PCMCIA expansion slots via its CardStation. One touch 'docking' and a spectacular TFT display make this a powerful desktop replacement machine.

SATELLITE PRO 400CDT 810  
**£3099**

- Intel 75MHz Pentium™ Processor
- 8Mb RAM Upgradable to 40Mb
- 810Mib Hard Disk Drive
- Swappable 4X CD-ROM Drive
- Swappable 3.5" 1.44Mb FDD
- 10.4" VGA TFT Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- Port Replicator Interface
- 84 key Keyboard
- MS DOS 6.22, MS Windows 3.11
- Up to 4.0 Hours Battery Life
- Weighs 3.1Kg • 3 Year Warranty



### TOSHIBA 2110CS

The No.1 selling range

The new T2110CS extends the high performance already available in this range. Top-end DX4/75MHz processing and a large dual scan colour screen combine to produce unbeatable value.

TOSHIBA 2110CS 4/350DS  
**£1359**

- Intel 75MHz 486DX4 Processor
- 4Mb RAM Upgradable to 28Mb
- 350Mib Hard Disk Drive
- 3.5" 1.44Mb Floppy Disk Drive
- 10.4" VGA STN Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- MS DOS 6.22, MS Windows 3.11
- Up to 4.0 Hours Battery Life
- 84 key Keyboard
- Weighs 3.1Kg
- 1 Year Warranty



TOSHIBA 2110 MONO  
**£849**

• STOP PRESS Toshiba 2110 Mono 350Mib



### Portégé 610CT



- Intel 90MHz Pentium™ Processor
- 8Mb RAM Upgradable to 40Mb
- 720Mib Hard Disk Drive
- External 3.5" 1.44Mb FDD
- 9.5" VGA TFT Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- Port Replicator Interface
- 84 key Keyboard
- MS DOS 6.22, MS Windows 3.11
- Up to 4.5 Hours Battery Life
- Weighs 2.2Kg • 3 Year Warranty

### 2150 CDT



- Intel 75MHz DX4 Processor
- 8Mb RAM Upgradable to 32Mb
- 520Mib Hard Disk Drive
- External 3.5" 1.44Mb FDD
- 10.4" VGA TFT Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- Port Replicator Interface
- 84 key Keyboard
- MS DOS 6.22, MS Windows 3.11
- Up to 3 Hours Battery Life
- Weighs 3.2Kg • 3 Year Warranty

### 4900 CT



- Intel 75MHz Pentium™ Processor
- 8Mb RAM Upgradable to 40Mb
- 810Mib Hard Disk Drive
- Internal 3.5" 1.44Mb FDD
- 10.4" VGA TFT Colour Display
- PCMCIA Rel. 2.0 Type II/III Slots
- Port Replicator Interface
- 84 key Keyboard
- MS DOS 6.22, MS Windows 3.11
- Up to 3 Hours Battery Life
- Weighs 3.1Kg • 3 Year Warranty



Toshiba are No.1 and Byte are No.1 for Toshiba!

IT'S OFFICIAL - SCH are Toshiba's largest reseller in the UK.

Before you buy the No.1 rated notebooks, make sure your dealer can do Toshiba justice. Byte Direct offer you very competitive pricing, but more importantly a host of experienced and Toshiba trained sales people, engineers and support staff. Choose Toshiba and we're right behind you all the way.

TOSHIBA PORTÉGE 610CT  
**£2999**

TOSHIBA 2150 CDT  
**£2529**

TOSHIBA 4900 CT  
**£3029**

#### TOSHIBA NOTEBOOKS

Toshiba 2130CS 8/520 **£1599**  
Toshiba 2130CT 8/520 **£1949**

Toshiba 2150 CDS 4/260 **£1499**  
Toshiba 2150CS 4/520 **£1689**  
Toshiba Satellite Pro CS 400 **£2419**

### FREE Windows 95 Video with EVERY Order!

TO OUR CUSTOMERS Byte Direct has always been renowned as the best in the industry, offering the best deals, latest products and most importantly the best service. To prove it, this month we are giving each customer who spends over £200, a high quality instructional video for Windows 95. It could be the most valuable present you'll receive all year! Order soon though, as stocks are limited.



## Byte SUPPORT YOU & YOUR SYSTEM

# Byte Direct



CALL NOW  
**0121 766 5559**

#### OPENING HOURS

MON-FRI 8.30am - 6.30pm  
SATURDAY 10.00am - 3.00pm  
SUNDAY CLOSED

Byte Direct  
James House,  
Warwick Road,  
Birmingham B11 2LE  
Fax: 0121 773 0119



All prices plus VAT and delivery

CALL NOW 0121 766 5559 LOW PRICES AND EXCLUSIVE BYTE OFFERS



# CANON PRINTERS

## Canon BJC 4000 Canon BJ 30

- 360 x 360dpi colour printing
- Fast-dry, water-resistant non-fade inks
- Unique no-banding controls
- Online black ink
- Built-in 100 sheet feeder
- Prints on plain paper & OHPs
- Quiet operation
- 1 Year manufacturers warranty

**NEW**

CANON BJC 4000

**£225**

- High quality 360x 360dpi printing
- 'Smoothing' gives up to 720x360dpi
- Built-in sheet-feeder
- 20 TrueType & 8 scalable fonts

**NEW**

CANON BJ 30

**£143**

## Byte Care

ByteCare Maintenance

At Byte, we believe service is paramount. With this in mind we are proud to announce that our new service scheme is supported by the UK's best hardware engineers. ByteCare offer personal or business maintenance contracts from as little as £99. We can also offer contracts on printers and portables.

### CANON BN120C PRINTBOOK

CANON BN120C PRINTBOOK M524

**£2449**

- Built-in 360dpi Bubble Jet Printer
- Intel 486 DX4 100MHz
- 8Mb RAM
- 524Mb HD
- 9.5" Dual Scan VGA Colour Screen
- Built-in FDD
- Weight 4kg

Printbook BN 120C M810 **£2739**

### CANON BJC 70

- 360 x 360dpi resolution
- Full colour printing
- Online black ink
- Built-in 30 sheet feeder
- Weighs 1.4kg



CANON BJC 70

**£225**

### CANON BJC 600E

- 360dpi colour printing
- Higher colour print speeds
- 4colour cartridge system
- Added smoothing gives mono resolution of 720x360dpi
- Prints on plain, coated and glossy papers & transparencies
- 1 Year manufacturers warranty

CANON BJC 600E

**£325**

### CANON BJ 200EX

- High quality 360dpi
- 3ppm print speed
- A3 to A4 reduction
- Added smoothing gives resolution of 720 x 360dpi
- Very quiet performance at only 42dB(A)

CANON BJ 200EX

**£159**



## PRINTERS

### Stylus colour 2s

EPSON STYLUS COLOUR 2S

**£265**

**NEW**

- Up to 720 dpi Graphics Resolution
- A speedy 2000 CPS LQ Printing
- 100 - sheet A4 paper feeder
- Bi - directional Parallel Interface

#### EPSON PRINTERS

Epson 820	<b>£215</b>
Epson Stylus 2	<b>£309</b>
Epson LQ 1170	<b>£459</b>
Epson Stylus Colour	<b>£299</b>

### Lexmark WinWriter 150C

LEXMARK WINWRITER 150C

**£269**

**FREE CORELDRAW VERSION 4**

- Thermal inkjet colour printing
- 2 - 4 mins colour print speed, 3ppm in draft black
- 600 x 300dpi resolution
- Fast parallel interface
- 150 sheet input tray
- Windows 95 compatible

#### LEXMARK PRINTERS

Lexmark Optra Model R	<b>£999</b>
Lexmark Optra Model L	<b>£1429</b>
Lexmark Optra Model RX	<b>£1529</b>
Lexmark WinWriter 400	<b>£539</b>
Lexmark WinWriter 600	<b>£699</b>

### OKI OL600EX

**NEW**

OKI OL600EX

**£299**

- 300 x 300dpi Resolution (MicroRes 600 produces 600 x 600 dpi dot addressability in PCL & GDI modes)
- 6 Page Per Minute Speed
- Fast RISC Processor for Faster Graphics Processing
- Standard 100 Sheet feeder in Base (250 Sheet Tray & Envelope Feeder Optional)
- 2Mb memory standard
- 35 Intellifont scalable fonts and 10 Truetype fonts resident

#### OKI PRINTERS

OKI 610EX	<b>£399</b>
OKI ML 521	<b>£349</b>
OKI ML 385	<b>£319</b>



## CONSUMABLES

### Maxell Byte Disks

10 HD PRE-FORMATTED HD DISKS

**£5**

#### CONSUMABLES

Toner for LJ2 Series	<b>£49</b>
Toner for IIP	<b>£53</b>
Toner for LJ4	<b>£69</b>
Toner for LJ4L	<b>£45</b>
Toner for LJ IIsi	<b>£89</b>
1000 Sheets Ink Jet paper mono	<b>£15</b>
500 Sheets Ink Jet paper colour	<b>£28</b>
High capacity black cart. for Deskjet	<b>£20</b>



## MONITORS

### Samsung 15GLE

SAMSUNG 15GLE

**£239**

SAMSUNG 14"	<b>£159</b>
SAMSUNG 17GLE	<b>£479</b>
SONY 15SF	<b>£315</b>
SONY 17SF	<b>£599</b>

All prices plus VAT and delivery



# HP PRINTERS

## The HP DeskJet 600 & 600C Printers and Disney's The Lion King Print Studio Offer

For the perfect present this Christmas

© Disney



AS SEEN ON TV



- Bring your favourite Disney Lion King characters to life
- Colourful image printing on any type of paper
- Easy for all the family to have fun
- A great way to play and be creative
- Two printers to choose from
- Special Christmas promotional price

PACKAGE CONTENTS: HP DeskJet printer, Colour Kit (to upgrade the printer to colour) and Disney's The Lion King Print Studio, HP DeskJet 600C colour printer and Disney's The Lion King Print Studio.

### DESKJET 660

- 600dpi (300 x 300dpi Colour) Printing
- 4ppm Print Speed
- 2 Button Control Panel
- Built in A4 Sheet Feeder
- Suitable for Printing on Paper, Postcards or Envelopes

HP DESKJET 660

**£269**

### DESKJET 600

- 600dpi (600 x 300dpi Colour) Printing
- 4ppm Print Speed
- HP ColorSmart technology
- Built in Sheet Feeder
- Suitable for Printing on Paper, Postcards or Envelopes

HP DESKJET 600

**£219**

## LaserJet 5L



- 600 x 600dpi with Res. Enhance.
- 4ppm Print Speed
- 25MHz RISC • Network flexibility
- 1MB Memory Exp. to 66MB
- HP Explorer Software

HP LASERJET 5L

**£365**

## HP DeskJet 320

Exclusive Byte offer!

Plus Sheet Feeder

HP DESKJET 320

**£169**

- 600x300dpi resolution.
- 3ppm Print Speed
- HP PCL 3 With Extensions
- 48 Kb Memory
- 84 Bitmapped Fonts
- 14 Typefaces



FREE COLOUR KIT WITH BUNDLE WORTH OVER £30

## HP DeskJet 850C

Fast, high-resolution colour printing for the desktop

- 600 dpi (600x 300dpi Colour) Printing
- 6ppm Print Speed
- 2 Button Control Panel
- Supports PC and Macintosh
- Built in Sheet Feeder
- Suitable for Printing on Paper, Postcards or Envelopes
- 3 Year Hewlett Packard Warranty

HP DESKJET 850C

**£349**



## OfficeJet LX

Printer:

- 3ppm Print Speed
- 600 x 300dpi with Resolution Enhancement
- Network flexibility

Fax: • 9600bps transfer speed • Send resolution: 203x98dpi (std.) and 203x196dpi (fine) • 32 Halftone levels Full function photocopier as well!



HP OFFICEJET LX

**£499**

FULL RANGE OF HP PRINTERS AVAILABLE!

## HP LaserJet 4+



- 600dpi with Res. Enhancement
- 12ppm Print Speed
- 25MHz RISC
- Network flexibility
- 2MB Exp. to 66MB

NEW LOW PRICE!

HP LASERJET 4+

**£1019**

## HP LaserJet 5P



- 600dpi with Res. Enhancement
- 6ppm Print Speed
- 20MHz RISC
- 2MB Memory

HP LASERJET 5P

**£599**

- HP DeskJet 600 **£199**
- HP DeskJet 660C **£239**
- HP DeskJet 1200C **£659**
- HP DeskJet 1600C **£879**
- HP LaserJet 4M+ **£1349**



Buy mail order with absolute confidence

We are one of the only mail order computer resellers to hold the MOPS (Mail Order Protection Scheme) accreditation. We believe buying mail order should be a risk-free experience. And at Byte Direct we'll do everything to ensure that mail order means low prices, convenience and fun!

CALL NOW  
**0121 766 5559**

### OPENING HOURS

MON-FRI 8.30am - 6.30pm  
SATURDAY 10.00am - 3.00pm  
SUNDAY CLOSED

Byte Direct  
James House,  
Warwick Road,  
Birmingham B11 2LE  
Fax: 0121 773 0119



All prices plus VAT and delivery

Byte SUPPORT YOU & YOUR SYSTEM

Byte Direct

CALL NOW 0121 766 5559 LOW PRICES AND EXCLUSIVE BYTE OFFERS



# MULTIMEDIA

CREATIVE  
CREATIVE LABS

## Discovery 4X Pack

Work, learn and play with Creative Labs and Byte

CREATIVE LABS DISCOVERY 4X PACK

**£199**

### DISCOVERY PACK INCLUDES

- Creative Labs Quad Speed CD-ROM Drive
- SoundBlaster 16 - ASP 16 Bit Sound Card
- Pair of Stereo Speakers and Microphone
- Grolier's Encyclopedia
- How to Computers
- Space Hulk
- Hong Kong Mah-Jong
- Yeager's Air Combat
- Wing Commander Academy
- Ultima 7 • Populous 2
- Seven Cities of Gold and much more!

NEW



Creative Labs Home Pack with Quad Speed CD-ROM **£289**

## Byte onSite

On-site installation and training

You can now get your PC installed at your business or home. We offer on-site installation and training for multimedia, internet access, business applications and more - Call the sales team for details and prices.

## Value Pack 2X

### CREATIVE LABS VALUE PACK 2X INCLUDES

- Creative Labs Dual Speed CD-ROM Drive
- SoundBlaster 16 Bit Sound Card
- Pair of Stereo Speakers and Theme Park Software

CREATIVE LABS VALUE PACK  
**£99<sup>99</sup>**

Byte EXCLUSIVE



## UPGRADES

### Diamond Stealth Video Cards



DIAMOND STEALTH 64 1MB VLB

**£99**

### DIAMOND STEALTH VIDEO CARDS

Stealth 64 2Mb VLB	£139
Stealth 64 1Mb PCI	£99
Stealth 64 2Mb PCI	£139

### Hard Drives



Maxtor

MAXTOR 540MB HARD DRIVE

**£129**

- Access times as low as 10ms (12ms Maxtor 540)
- 3 Year manufacturers warranty

WESTERN DIGITAL 850MB HARD DRIVE

**£169**

- The cost effective way to increase storage capacity
- Windows 95 ready

### BARE HARD DRIVES

Maxtor 850Mb	£169
Maxtor 1.2Gb	£229
Western Digital 1.2Gb	£229

### Hypertec Memory Upgrades



HYPERTEC 32BIT MODULE 4MB

**£119**

Hypertec is a leading designer and manufacturer of memory products. Founded in 1984 Hypertec is known worldwide for quality and reliability. ByteDirect stock the full range of hypertec products and can offer you 30 pin, 72 pin, PCMCIA and proprietary memory modules. Please call us with your particular memory requirements.

PLEASE CALL FOR PRICES ON YOUR PARTICULAR MEMORY REQUIREMENTS

### HYPERTEC MEMORY UPGRADES

32 Bit Modules 4Mb	£119
32 Bit Modules 8Mb	£249
32 Bit Modules 16Mb	£429
36 Bit Modules 4Mb	£135
36 Bit Modules 8Mb	£259
36 Bit Modules 16Mb	£475

### Intel OverDrive Processor Upgrades



- For most 16, 20, 25, 33MHz Intel 486 SX or DX CPU-based systems
- Features "speed tripling / doubling" technology
- 16K / 8K on-chip cache memory
- On-chip maths co-processor
- The most powerful PC upgrades available
- Easy to install

INTEL DX/2 66MHZ OVERDRIVE

**£89**



INTEL 63MHZ PENTIUM OVERDRIVE

**£169**



### INTEL OVERDRIVE UPGRADES

Intel DX/2 50MHz with socket	£79
Intel DX/2 50MHz without socket	£79
Intel DX/2 66MHz with socket	£89
Intel DX/2 66MHz without socket	£89
Intel DX/4 75MHz with socket	£99
Intel DX/4 75MHz without socket	£99
Intel DX/4 100MHz with socket	£129
Intel DX/4 100MHz without socket	£129
Intel P24T Pentium Upgrade 63MHz,	£169
Intel P24T Pentium Upgrade 83MHz	£189

### BYTE DIRECT TERMS & CONDITIONS

All prices exclude VAT and delivery, prices on application. All registered trademarks acknowledged. All prices subject to change without notice and subject to availability, please call before ordering. Goods not offered on a trial basis. All orders accepted subject to Byte standard terms and conditions of sale, a copy of which is available on request. Subject to availability despatch is normally within 2 days of cleared payment. Please allow 7 days for cheque clearance. All orders will be fulfilled within 28 days unless otherwise stated. Packaging on BYTE BUNDLE OFFERS may differ to that shown. Pack shots are shown for illustration only. Minimum order value for mail order is £50. E & O.E.

Byte SAVE YOU MONEY

Byte DELIVER FAST!

All prices plus VAT and delivery



# MODEMS



## Sportster Modems

New low prices on the best-selling Sportsters

- Sportster Modems feature:
- V21, V22, V22bis, V32, V32bis
  - V34 (Sportster 28.8 only)
  - MNP2-4, V42, V42bis, MNP5
  - Free comms & fax software
  - Full US Robotics 2 year warranty

USR 14.400 EXT MODEM

**£109**

USR 28.800 EXT MODEM

**£155**



### WorldPort 28.8

- PCMCIA 2.0 Fax / modem
- V21, V22, V22bis, V32, V32bis, V34
- MNP2-4, V42, V42bis, MNP5
- HST Cellular compatible



WORLDPORT 28.8 PCMCIA

**£179**

### Internet Solution

- Complete software and hardware kit
- True V.34 worldwide compatibility
- Includes popular fax and comms. software
- Automatically selects fastest possible line speed



MOTOROLA INTERNET SOLUTION

**£169**

### Reveal 28.8 Int.

- 28.8bps Internal Fax / Modem
- Includes data compression and error correction
- Free subscription to CompuServe / Net Launcher
- Includes FaxWorks • BAPT approved



REVEAL 28.8 INTERNAL

**£139**

### Hayes Accura 14.4

- Full error correction and data compression
- Up to 14,400 (V17) fax inc. Group 3 fax
- Includes Hayes Smartcom LE Windows software
- AutoFax detects between fax and data calls



HAYES ACCURA 14.4

**£129**

#### US ROBOTICS

USR 14.400 Int Modem	£109
USR 14.400 Ext Modem	£109
USR 28.800 Int Modem	£155
USR 28.800 Ext Modem	£155

#### MOTOROLA

Motorola Pro External	£149
-----------------------	------

#### REVEAL

Reveal 14.400 Int	£69
Reveal 14.400 Ext	£79
Reveal 28.800 Ext	£149

#### HAYES

Hayes Accura 28.800 Ext	£179
-------------------------	------



# MULTIMEDIA

## Byte onSite

On-site installation and training

You can now get your PC installed at your business or home. We offer on-site installation and training for multimedia, internet access, business applications and more - Call the sales team for details and prices.

## Discovery 4X Pack

Work, learn and play with Creative Labs and Byte

#### DISCOVERY PACK INCLUDES

- Creative Labs Quad Speed CD-ROM Drive
- SoundBlaster 16 - ASP 16 Bit Sound Card
- Pair of Stereo Speakers and Microphone
- Grolier's Encyclopedia

- How to Computers
- Space Hulk
- Hong Kong Mah-Jong
- Yeager's Air Combat
- Wing Commander Academy
- Ultima 7 • Populous 2
- Seven Cities of Gold and much more!



CREATIVE LABS DISCOVERY 4X PACK

**£199**

Creative Labs Home Pack with Quad Speed CD-ROM... **£289**



## Value Pack 2X

#### CREATIVE LABS VALUE PACK 2X INCLUDES

- Creative Labs Dual Speed CD-ROM Drive
- SoundBlaster 16 Bit Sound Card
- Pair of Stereo Speakers and Theme Park Software

CREATIVE LABS VALUE PACK

**£99<sup>99</sup>**



Worldwide Support - 24 hours a day, 365 days a year

The ByteCall software support contract offers you freephone, round-the-clock expert software support on over 170 programs from as little as £1.50 per week.

# Byte Direct



CALL NOW  
**0121 766 5559**

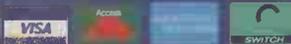
#### OPENING HOURS

MON-FRI	8.30am - 6.30pm
SATURDAY	10.00am - 3.00pm
SUNDAY	CLOSED

Byte Direct  
James House,  
Warwick Road,  
Birmingham B11 2LE  
Fax: 0121 773 0119

All prices plus VAT and delivery

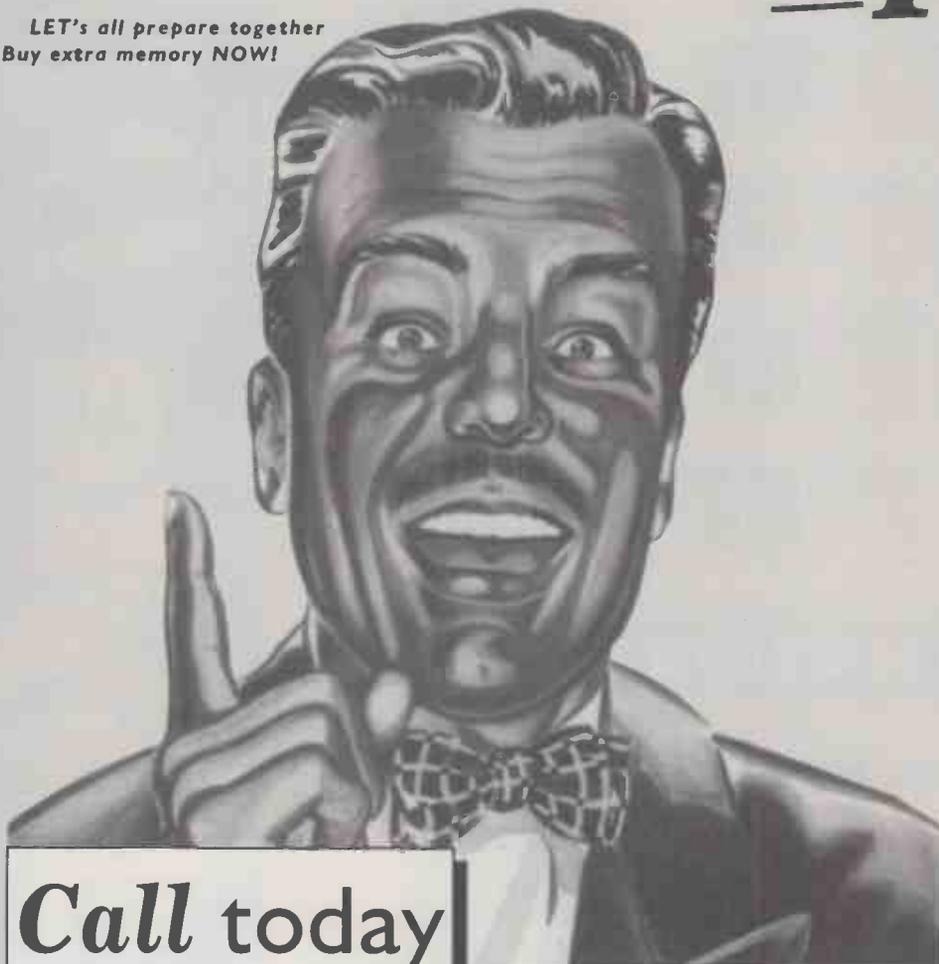
**Byte SUPPORT YOU & YOUR SYSTEM**



# Memory MAYHEM, Co

## we've a Speciali

LET's all prepare together  
Buy extra memory NOW!



**Call today**

Our memory  
Specialists  
are on hand

to offer expert advice, answer questions and help you get the power, **PERFORMANCE** And speed you want from your pc. So *whatever your PC needs*, we can help you choose the right upgrade at the *right price*.....

Act **FAST**....to keep up with  
**TODAYS TECHNOLOGY**

### - MORE DESKTOP MEMORY-

.....16MB.....	£474.00
Celebris Pentium.....4MB.....	£142.00
.....8MB.....	£270.00
.....16MB.....	£585.00

#### DELL

Optiplex.....8MB.....	£270.00
560/ME, 566/ME.....16MB.....	£570.00
590/ME.....16MB.....	£570.00

#### IBM

Aptiva Range.....4MB Upg...	£149.00
.....8MB Upg...	£269.00
.....16MB Upg...	£479.00
PSI Pro, Willow Series....4MB Upg...	£149.00
VALUEPoint.....4MB Upg...	£149.00

#### Mitac

386/486 Range.....2MB Upg...	£ 65.00
.....4MB Upg...	£132.00
.....8MB Upg...	£229.00

#### Packard Bell

Legend 200, 316, 386.....2MB Upg...	£ 72.00
416, 486.....4MB Upg...	£144.00
.....8MB Upg...	£279.00
.....16MB Upg...	£459.00

#### Tandon

SL286, PAC, 286N.....2MB Upg...	£ 79.00
SL386, 386N, 386SX.....4MB Upg...	£129.00
486.....8MB Upg...	£299.00

#### Time

All models.....2MB.....	£ 65.00
.....4MB.....	£129.00
.....8MB.....	£225.00

#### Viglen

Genie II, Elite.....2MB.....	£ 64.00
4SX25, 4DX33.....4MB.....	£129.00
4DX50, 4DX2-50/66.....8MB.....	£279.00

#### VTECH/LASER

All Models.....4MB.....	£135.00
.....16MB.....	£535.80

### - DESKTOP MEMORY-

<b>Amstrad</b>	(Exc VAT)
1286, 2286, 3286.....2MB Upg....	£ 62.00
1386, 2386, 7386.....4MB Upg....	£132.00
7486, 5286, Mega PC.....8MB Upg....	£229.00

#### AST

Premmia 4/33, 4/33S.....4MB Upg....	£189.00
4/50D, 4/66D, MTE 4/33.....8MB Upg....	£299.00
MTE 4/66D, P/60, SE4/33.16MB Upg....	£589.00
SE4/66D.....16MB Upg....	£589.00

#### Elonex

286M, 286C, 386.....2MB Upg....	£ 65.00
.....4MB Upg....	£199.00
486, SX/16/M/V/B.....8MB Upg....	£249.00

#### Compaq

New Prolinea Family.....4MB.....	£129.00
.....8MB.....	£258.00
.....16MB.....	£450.00
Presario 500/700/900.....4MB.....	£129.00
Family.....8MB.....	£258.00
.....16MB.....	£450.00

#### Digital

Venturis 486.....4MB.....	£129.00
.....8MB.....	£215.00

### - PORTABLE MEMORY-

#### AST

Ascentia 900n.....4MB.....	£169.00
4/50, 4/75.....8MB.....	£299.00
.....16MB.....	£559.00

#### Compaq

Contura 400 Family.....4MB.....	£170.00
.....8MB.....	£359.00
.....16MB.....	£668.00

#### IBM

Thinkpad 750/755.....4MB C/Card	£179.00
.....8MB C/Card	£339.00

#### NEC

Versa V/50C, V/50D.....4MB C/Card	£175.00
20, 20C, 25, 25C, 25CP.....8MB C/Card	£339.00
25P, 33, 33C.....12MB C/Card	£469.00
.....16MB C/Card	£559.00

#### Toshiba

T1900, T1910.....4MB.....	£165.00
T4600, T1950.....8MB.....	£289.00
T4850, T4800, T4900.....16MB.....	£639.00
T2100, T2130.....4MB.....	£175.00
T2150, T2110.....8MB.....	£324.00
.....16MB.....	£675.00

*Remember one thing, remember to*

Telephone Lines manned during the hours of 8am-7pm Monday to Friday

# Component CALAMITIES

## Who CAN Help!

★ Component headaches? talk to us ★

### - PRINTER MEMORY -

<b>Hewlett Packard</b>	(Exc VAT)
Laserjet 4+/4M+/5P/5MP..4MB.....	£149.00
.....8MB.....	£259.00
Laserjet 4/4M/4SI/4SIMX..4MB.....	£149.00
.....8MB.....	£259.00
LASERJET 4L.....1MB Upg....	£ 79.00
Deskjet 1200C/1200C PS...2MB Upg....	£ 95.00
.....4MB Upg....	£149.00
.....8MB Upg....	£259.00

### - SIMMS -

<b>30 PIN SIMMS</b>	1-10pcs	+10pcs
1 x 9 (1Mb) 3 chip 70ns.....	£ 26.00	£ 24.00
1 x 9 (1Mb) 9 chip 70ns.....	£ 29.00	£ 27.00
4 x 9 (4Mb) 3 chip 70ns.....	£ 90.00	£ 87.00
4 x 9 (4Mb) 9 chip 70ns.....	£ Call	£ Call

<b>72 PIN SIMMS</b>	
<b>32Bit</b>	
1 x 32 (4Mb)70ns.....	£ 90.00.....£ 85.00
2 x 32 (8Mb)70ns.....	£199.00.....£195.00
4 x 32 (16Mb)70ns.....	£345.00.....£330.00

<b>36Bit</b>	
1 x 36 (4Mb)70ns.....	£ 99.00.....£ 95.00
2 x 36 (8Mb)70ns.....	£205.00.....£200.00
4 x 36 (16Mb)70ns.....	£359.00.....£350.00

Memory prices..... are subject to market fluctuations

This is JUST A SELECTION of memory and components please call

OUR TELEPHONE OPERATORS

for more variety and the BEST PRICES.

All prices are exclusive of VAT and carriage



THIS is a reduced specimen Olivetti tape drives the hit of the day but in Limited Supply

### - MOTHERBOARDS -

- MP5-TRI • Intel Pentium 75/90/100/120 MHZ processor** (Exc VAT)
- Intel Triton Chip Set
  - Flash Bios supports plug and play
  - 256K External Cache fitted
  - EDO RAM supported, max 128MB
  - 2 Fast PCI IDE Int. mode 4 supported
  - 4 ISA, 4 PCI Slots,
  - 1 EPP and 2 serial ports .....£149.00
  - With 512k Cache fitted.....£189.00
- 486 PCI, UMC 8880 chip set** (Exc VAT)
- Supports Intel DX2/4 processors plus, P24D-66 and P24T
  - Also supports processors from Cyrix, UMC, AMD, IBM & SGS
  - 256K External Cache
  - Maximum 256MB Memory
  - On-board Fast PCI IDE supports mode 3 & 4
  - 4 ISA, 4 PCI Slots
  - On board I/O.....£95.00

### - SYSTEM CASES -

- Desktop + 200w power supply** (Exc VAT)
- Dimensions 16" w x 15.5" d x 6.25" h
  - Motherboard size: baby AT & all in one compatible
  - Drive bays 2 internal hdd bays
  - 3 x 5.25" bays (screwless slide rail fittings)
  - Up to eight expansion slots (verticle)
  - Single screw case removal .....£59.00
- Midi tower + 200w power supply**
- Dimensions 6.7w x 15.5" d x 15.9" h
  - Motherboard size: baby AT & all in one compatible
  - Drive bays 2 internal hdd bays
  - 3 x 5.25" & 1 x 3.5" drive bays front accessible up to eight expansion slots (horizontal)
  - Single screw case removal.....£59.00

### - VGA CARDS -

- ST32 • S3-Trio 32 Chip Set** (Exc VAT)
- PCI 32 bit graphics processor
  - Resolution Support max 1280 X 1024 X 256 colours.....£60.00
- ST64 • S3-Trio 64 Chip Set** (Exc VAT)
- PCI 64 bit graphics processor
  - Resolution Support max 1280 X 1024 X 256 colours.....£78.00
- ST 64 1MB Upg.....£38.00**

### - HARD DRIVES -

- Seagate IDE**
- 545 Mb IDE.....(ST3660A).....£109.00
  - 854 Mb IDE.....(ST5850A).....£155.00
  - 1083 Mb IDE.....(ST31220A).....£195.00
- SCSI**
- 1Gb SCSI.....(ST31230N).....£299.00
  - 2.1Gb SCSI.....(ST332430N).....£639.00
  - 4.2Gb SCSI.....(ST15230N).....£819.00

### - FLOPPY DRIVES -

3.5" 1.44MB.....	(Exc VAT) £23.00
5.25" Frame.....	£ 3.95
5.25" 1.2MB.....	£37.00

### - TAPE DRIVES -

<b>Olivetti STU 26-081</b>	(Exc VAT)
80MB Tape Drive	
includes fixing brackets.....	£29.00

### - MULTI MEDIA -

<b>Panasonic 562B</b>	(Exc VAT)
Internal CD ROM.....	£55.00
<b>Goldstar Quad speed IDE</b>	
internal CD ROM.....	£120.00
<b>NEC 6 XE External</b>	
six speed CD ROM.....	£375.00
<b>MULTI-MEDIA KIT</b>	
Inc Panasonic CD-ROM, 16 Bit	(Exc VAT)
Soundcard & Speakers.....	£129.00

### - INTEL PROCESSORS -

486 DX2/50 OverDrive chip.....	(Exc VAT) £ 79.00
486 DX2/66 OverDrive chip.....	£ 98.00
486 DX4/75 OverDrive chip.....	£109.00
486 DX4/100 OverDrive chip.....	£143.00
<b>Pentium overdrive chip</b>	
63MHZ(SVOLTS).....	£172.00
<b>PENTIUM PROCESSOR</b>	(Exc VAT)
Intel P75.....	£139.00
Intel P90.....	£211.00
Intel P100.....	£290.00
Intel P120.....	£432.00
Intel P133.....	£538.00
<b>486 PROCESSORS</b>	
Intel DX4/75.....	£ 85.00
Intel DX4/100.....	£115.00

TRADE Enquiries Welcome PLEASE Call



dial this number 0990 26 27 28

Quote Ref No PW 12

9am-5.30 pm Saturdays. Facsimile orders can be sent to 0990 42 43 44



# PENTIUM 90 MHz HIGHEST SPEC LOWEST PRICE

with  
Windows  
95

**SAME  
DAY  
DESPATCH!**

**PRICE  
PLEDGE**  
We will beat  
anyone on price  
when quoting  
like for like



Pentium is a registered trademark of Intel Corporation

**PENTIUM 75/DX4 100  
OPTIONS CALL NOW!**

- P90 Pentium® Processor Based
- 1GB FAST IDE HDD Mode 4 with 256K Cache
- 16MB (FAST) EDO RAM Upgradeable

● 15" SVGA Colour Monitor

● Fast 64 bit PCI with 2Mb Windows Acc-card

● Multimedia Kit with Quad Speed  
Multisession CD ROM Drive & 16 bit  
Stereo Soundcard with Speakers

● PCI Enhanced IDE Controller

● 3.5" 1.44MB FDD

● 6 Spare PCI/ISA slots

● Plug 'n' Play

● Windows 95 Full Version

● 102 Key Keyboard

● 2 x Serial Ports

● 1 x Parallel Port ● 1 x Game Port

● High Quality Steel Desktop case



THIS SOFTWARE AVAILABLE CALL!



includes  
Windows  
95

**PENTIUM 100  
SPECIAL OFFERS  
CALL!!!**

# £1399

## WHY SPEND MORE AND GET LESS?

Tiny Computers Ltd is one of the leading computer companies in the U.K. Our range of P.C's have been installed to tens of thousands of satisfied customers, including many councils, universities, colleges and blue chip companies, who are now realising the incredible value, performance and quality of these machines. They are fully upgradeable and are IBM compatible\*.

\*IBM is the registered trademark of International Business Machines



**SAME DAY  
DESPATCH**

**EDUCATION/GOVERNMENT  
DEPT TRADE & DEALER  
DISCOUNTS**

**IBM COMPATIBLE  
PRICES REVIEWED DAILY!  
CALL NOW FOR OTHER  
OPTIONS!**

**CALL THE HOTLINE NOW!**

**01293-821333**

Prices exclude VAT & Delivery FAX: 01293-822514

**GUARANTEED LOWEST  
PRICES IN UK**

NORMAL NEXT DAY DELIVERY

## SHOWROOMS

**LONDON SHOWROOM**  
THE SONIC FOTO CENTER  
256 TOTTENHAM COURT ROAD  
LONDON W1A 9AD  
TEL: 0171-636 7613  
OPEN MON-SAT 9.30am-6.30pm

**GLASGOW SHOWROOM**  
220 ARGYLE STREET  
GLASGOW G2 7HA  
TEL: 0141-204 2300  
OPEN MON-SAT 9.00am-5.30pm

**NEWCASTLE SHOWROOM**  
7 HIGH FRIARS ELDON SQUARE  
NEWCASTLE NE1 7JB  
TEL: 0191-261 5252  
OPEN MON-SAT 9.00am-5.30pm

**MANCHESTER SHOWROOM**  
VOYAGERS WALK (Opp. SPOILS)  
ARNDAL CENTRE  
MANCHESTER M4 3AT  
TEL: 0161-835 1611  
OPEN MON-SAT 9.00am-6.00pm

**NOTTINGHAM SHOWROOM**  
UNIT 57, UPPER MALL (next to Boots)  
THE VICTORIA CENTRE  
NOTTINGHAM NG1 3QJ  
TEL: 0115-941 9461  
OPEN MON-SAT 9.00am-6.00pm

**BRISTOL SHOWROOM**  
UNION GALLERY (next to Boots)  
THE GALLERIES SHOPPING CENTRE  
BROADMEAD BRISTOL BS1 3XD  
TEL: 01179-300099  
OPEN MON-SAT 9.00am-5.30pm

**TINY COMPUTERS LTD**  
REDHILL BUSINESS PARK, BONEHURST ROAD,  
SALFORDS SURREY RH1 5YB  
TEL: 01293-821333  
OPEN MON-FRI 9.30am-5.00pm

NO SURCHARGE ON CREDIT CARDS

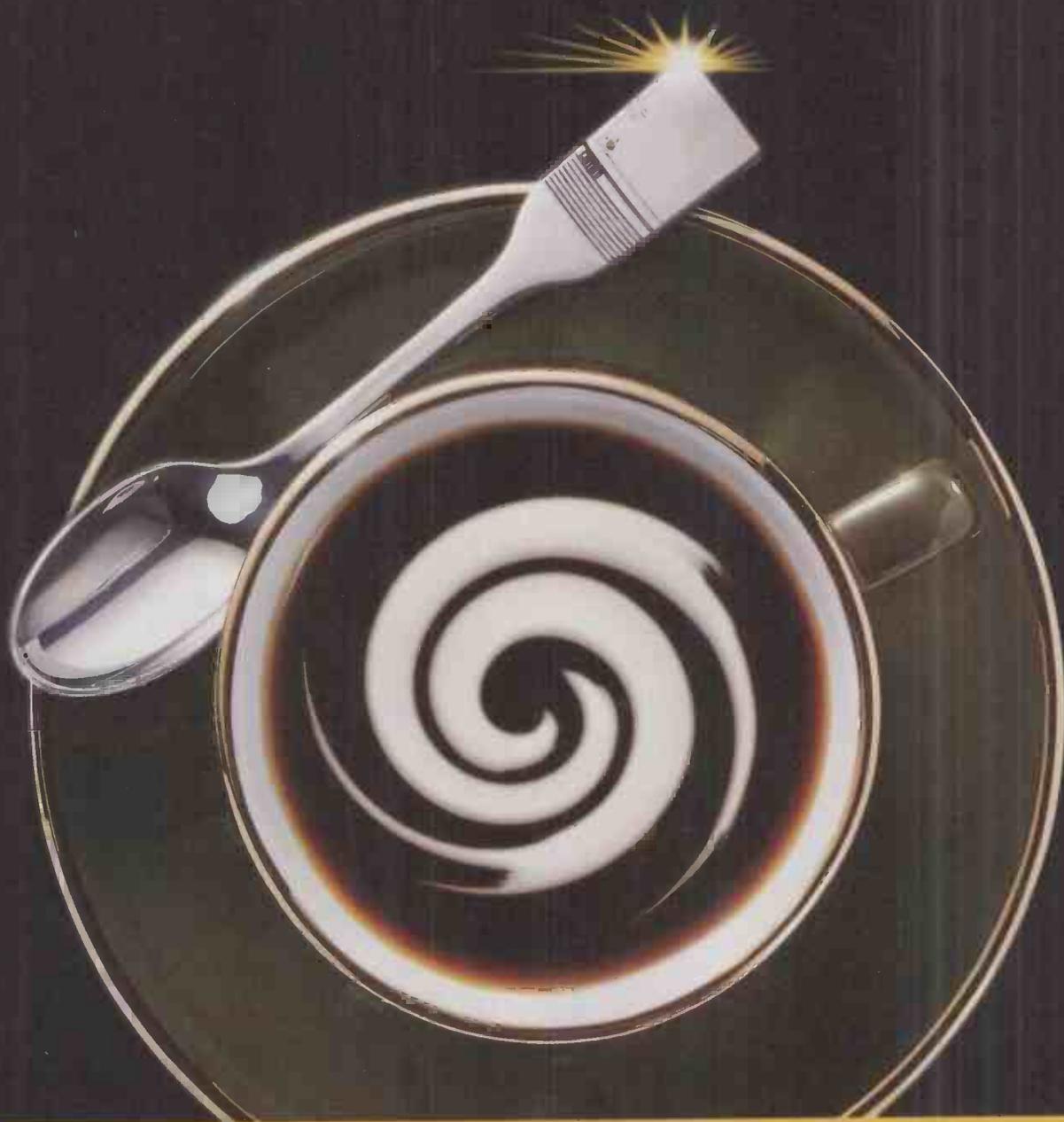


All trademarks acknowledged.

All prices and manufacturers specifications are subject to change without prior notice. Please check availability before ordering. Goods are offered for sale subject to our standard conditions of sale available on request. E&OE.

**TINY**  
direct to you!

TINY COMPUTERS LTD, REDHILL BUSINESS PARK, BONEHURST ROAD, SALFORDS, SURREY RH1 5YB



**CARRERA. SILVER SERVICE.**

Dedicated to Excellence.

## CARRERA POWER PLATFORM

"Leading edge performance with upgradability"

### 486DX2/66E Workstation

• Intel 486 DX2/66 Chip • 3 VLB Expansion Slots • 256K Cache  
• 4Mb RAM • 425Mb Hard Disk • Super VGA Video • Enhanced  
Keyboard • Mouse • 14" Energy Star Monitor • Choice of MS DOS  
6.22 & Windows 3.11 or Windows 95 • Mouse Mat • PC Check . . . **£599**

### 486DX2/66P Power Platform

As 486DX2/66E Workstation with EIDE Super fast hard disk,  
1Mb high speed 32 bit enhanced colour video, MS Works. . . . **£679**

### 486DX4/100P Power Platform

As 486DX2/66P Power Platform with Intel 100MHz DX4 Chip,  
850Mb Hard Disk. . . . **£759**

### 486 Multi-media Specification\*

Dual Speed EIDE CD, Creative Labs SB 16, Speakers, MS Encarta '95,  
Fingers for Windows

486DX2/66EM Multi-media As DX2/66E Plus † . . . **£739**

486DX2/66PM Multi-media As DX2/66P Plus † . . . **£799**

486DX4/100PM Multi-media As DX4/100P Plus † . . . **£899**

### 486 Internet Ready Upgrade

14.4K BABT approved Fax Modem, Connection and  
Subscription to the Internet (28.8 option available) . . . . from **£175**

FROM **£599\*\***  
OR £5.44 PER WEEK

**MULTI-MEDIA**  
FROM **£739\*\***  
OR £6.71 PER WEEK

## CARRERA PANTHER

"The ultimate machine based on the Intel Pentium Processor"

### Panther P75A Best Buy

• Intel 75MHz Pentium Chip • Intel Triton Chipset • 4 PCI Expansion Slots • 256K High Speed Cache  
• 8Mb RAM (EDO option available) • Diamond Stealth DRAM PCI Graphics • Dual PCI Mode 4 EIDE Interfaces • 425Mb EIDE Hard  
Disk (Dual 16550 serial ports, enhanced parallel port) • Enhanced Keyboard • Mouse • 14" Energy Star Monitor  
• Choice of MS DOS 6.22 & Windows 3.11 or Windows 95 • MS Works • Mouse Mat • PC Check . . . . . **£939**

### Panther P90A

As P75 Best Buy with Intel Pentium 90MHz Chip and 620Mb Hard Disk . . . . . **£1049**

### Panther P120A

As P75 Best Buy with Intel Pentium 120MHz Chip, 850Mb Hard Disk and 15" Monitor . . . . . **£1229**

### Panther P133A

As P75 Best Buy with Intel Pentium 133MHz Chip, 1.1Gb Hard Disk, 16Mb RAM and 15" Monitor . . . . . **£1549**

### Panther Advanced Multi-media Specification

Quad Speed EIDE CD, Creative Labs SB16, Speakers, MS Encarta '95, Fingers for Windows (AWE32V available)

Panther P75AM Multi-media As P75A Plus Multi-Media Specification. . . . . **£1119**

Panther P90AM Multi-media As P90A Plus Multi-Media Specification . . . . . **£1229**

Panther P120AM Multi-media As P120A Plus Multi-Media Specification . . . . . **£1399**

Panther P133AM Multi-media As P133A Plus Multi-Media Specification . . . . . **£1729**

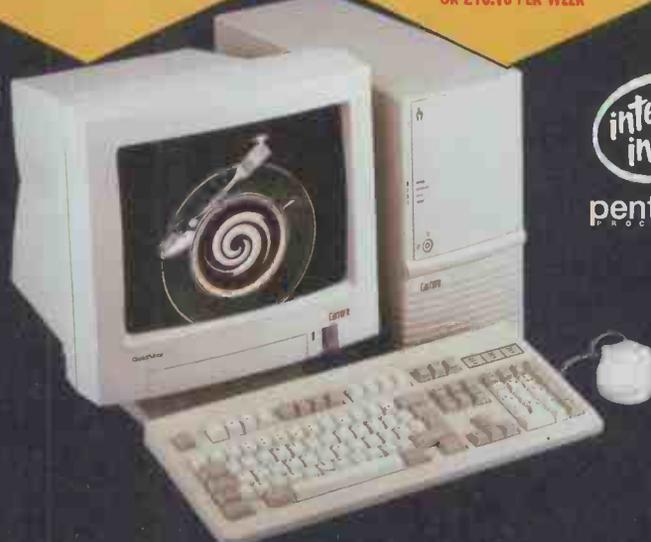
## FOR P100, P150 & P166 PLEASE CALL

### Panther Internet Ready Upgrade

28.8K BABT approved Fax Modem, Connection and Subscription to the Internet . . . . . from **£219**

FROM **£939\*\***  
OR £8.52 PER WEEK

**MULTI-MEDIA**  
FROM **£1119\*\***  
OR £10.16 PER WEEK



# EXPERIENCE THE DIFFERENCE

Total Quality Service. That's what makes us different. Whereas some companies implement a service programme as an afterthought, Carrera has always put the customer first.

Our greatest investment is in personal service and customer care. This commitment to your complete satisfaction is the hallmark of our company - which is why our greatest source of new clients is by referral from our existing customers.

Another reason why Carrera is one of the fastest growing companies in the industry is that we have focused on areas which lower the cost of ownership - so you get more for your money.

Indeed, you'll find we produce an outstanding range of personal computers. Reliability is built in because we insist on using brand name components.

Excellence is the only standard. That's why Carrera's outright performance and value for money have been greatly acclaimed by the independent press on so many occasions.

Whether you visit our central London showroom or call us direct on the telephone, our experienced sales team will take time to help you select the correct system configuration and peripherals to meet your needs. You can choose from any of the systems above; alternatively, we will customise a system especially for you at no extra charge. We cater for your specific requirements.



"In our Bench Mark tests, the Carrera 120 gained the accolade of being the fastest PC we've ever tested. This fast, well specified system looks worth every penny"  
JULY 1995 - CARRERA PANTHER P120



"A great first time PC... the Carrera system has the best specification... the Carrera is clearly the fastest system... top marks to Carrera."  
FEBRUARY 1995 - CARRERA 486 DX2/66



"Elegant looking machine that turned in a good performance... Excels on the value front. It's three year warranty and low price tag make it a winner."  
MAY 1995 - CARRERA PANTHER P75



"The system is one of the fastest we've seen under DOS and close to the fastest ever under Windows."  
OCTOBER 1994 - CARRERA PANTHER P90



All equipment includes one year manufacturers parts warranty, three year return to base labour warranty and lifetime telephone support. Prices exclude VAT. Prices and specifications may change without notice, please call to confirm latest prices (especially if there are sudden Dollar exchange rate fluctuations). We accept most major credit cards (subject to surcharge). Account enquiries welcome. The Bull logo is a trademark of Bull Worldwide Information Systems. The Intel inside logo and Pentium processor are trademarks of Intel Corporation. Microsoft, Windows and DOS are all trademarks of Microsoft Corporation. All other trademarks are recognised. Please note that the packaging shown here may change at our discretion, MS Works V3 pre-installed, disks and manuals available at extra cost. \*Subject to manufacturers expected announcement. \*\*The weekly payments are shown for comparison. A deposit of at least 10% is required, the monthly payment will be reduced by this percentage. Repayments are based upon 3 years and do not include VAT. \*\*\*For standard system, or by arrangement. Carrera has a full credit licence. Minimum finance including VAT must be at least £750.

## CARRERA SERVERS

"For The True 'Out-of-Box' Experience"

### Panther P100A Windows NT Server

- Socket 7 (75-150MHz\*) • Intel 100MHz Pentium Chip • Intel Triton Chipset • 256K High Speed Cache • 16Mb RAM • Diamond Stealth DRAM PCI Graphics • Dual PCI Mode 4 EIDE Interfaces • 1.2Gb EIDE HDD • 14" Energy Star Monitor • Quad Speed EIDE CD • 2/4 Gb EIDE Tape • UTP/BNC Network Connection • Full Tower Case • MS Windows NT 3.5 Server • Enhanced Keyboard • Mouse

£2799

### Panther P100A Netware Server

As NT Server + Netware 4.1 (5 User) & Cheyenne Arcserve (5 User)

£2850

### Panther P133A Windows NT Server

- Socket 7 (75-150MHz\*) • Intel 133MHz Pentium Chip • Intel Triton Chipset • 256K High Speed Cache • 32Mb RAM • Diamond Stealth DRAM PCI Graphics • Fast SCSI II PCI Host Adapter • 4Gb SCSI II HDD • 14" Energy Star Monitor • Quad Speed SCSI CD • 2/4 Gb SCSI DAT • UTP/BNC Network Connection • Full Tower Case • MS Windows NT 3.5 Server • Enhanced Keyboard • Mouse

£4250

### Panther P133A Netware Server

As P133A NT Server + Netware 4.1 (25 User) & Cheyenne Arcserve (25 User)

£5850

Installation & Consultancy  
Available - Please Call



Furthermore, no one can deliver what you need more promptly than Carrera because a complete range of options are held in stock. Once specified, your equipment undergoes an overnight soak-test and despatch is guaranteed within 48 hours or delivery is FREE.

In addition to this, a 3 year labour and 1 year parts warranty ensure total peace of mind. We can even tailor a support contract to suit your individual requirements with our service partner, Bull Totalcare. FREE lifetime telephone support and a unique Systems User guide also prove invaluable to both new and experienced users. There is also a 14 day money back guarantee providing you with additional confidence and reassurance.

And of course, whether you buy one system or a turnkey network installation, we will be there to help and advise you as your needs evolve. At Carrera, we are always at your service. Call now and experience the difference for yourself.

**Bull**



"Carrera has built itself a reputation for good value, good quality computers.... A powerful system which is also good value for money with the inclusion of Multi-Media"

AUGUST 1995 - CARRERA PANTHER P75



"The Carrera is the fastest in the group... A fast machine with enough expansion potential offering value for money."

JULY 1995 - CARRERA PANTHER P120

## CARRERA POWER NOTEBOOKS

"Complete User-Upgradability - The Future Has Arrived"

### 486DX2/66 Power Notebook VLB

- Intel 486 DX2/66 Upgradable Chip • 4Mb RAM • 250Mb Removable Hard Disk • Monochrome Display • PCMCIA Type III (2xType II) • On-board 16 Bit Sound • CD Interface • Trackpoint • Carry Case • Intelligent Charger • Choice of MS DOS 6.22 & Windows 3.11 or Windows 95 • MS Works

£999

### 486DX4/75 Power Notebook VLB

As 486DX2/66 Power Notebook VLB with Intel 486 DX4/75 Upgradable Chip, 330Mb Removable Hard Disk and Dual Scan Colour Display

£1425

### 486DX4/100 Power Notebook VLB

As 486DX2/66 Power Notebook VLB with Intel 486 DX4/100 Upgradable Chip, 520Mb Removable Hard Disk and TFT Colour Display

£2149

### Multi-Media Options

PCMCIA CD, MS Encarta 95, Fingers for Windows & Deluxe Speakers

£299

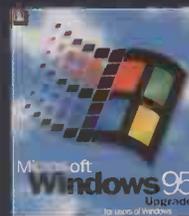
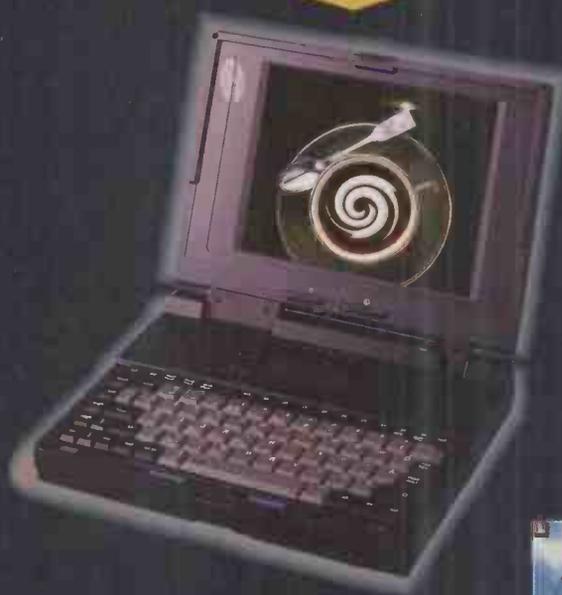
### Notebook Internet Ready Upgrade

14.4K BAPT approved Fax Modem, Connection and Subscription to the Internet from

£249

All Options are interchangeable including Screen, Disk, RAM & processor - Please Call

FROM **£999\*\***  
+VAT  
OR £9.32 PER WEEK



Choice of Windows 95 or WFW 3.11  
at no extra cost - Please Call

**Carrera**  
TECHNOLOGY  
CHANGE UP TO CARRERA  
CALL 0171 830 0486

Visitors welcome 9.00-18.00 Mon-Fri & 10.00-17.00 Sat. Showroom at: Carrera Technology Limited, Carrera House, 209-212 Tottenham Court Road, London W1P 9AF  
TEL 0171 830 0486 or FAX 0171 830 0286 or EMAIL [carrera\\_sales@easynet.co.uk](mailto:carrera_sales@easynet.co.uk)

GUARANTEED 48 HOUR DESPATCH OR FREE DELIVERY

# CARRERA-THE CONNECTIVITY SPECIALISTS

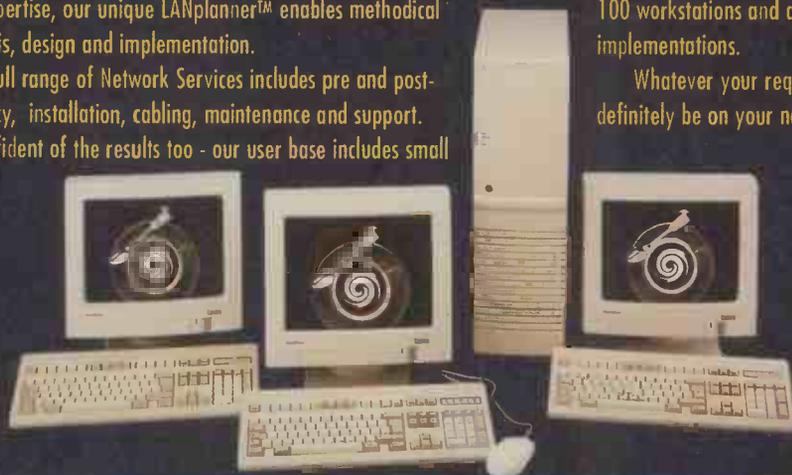
Novell™, Microsoft NT™ or Windows for Workgroups™. For complete network design, implementation, cabling and full support, look no further than Carrera. Or simply choose from one of our off-the-peg solutions.

Network requirements may be similar, but rarely are they identical. However, by combining your business knowledge with Carrera's connectivity expertise, our unique LANplanner™ enables methodical network analysis, design and implementation.

Carrera's full range of Network Services includes pre and post-sales consultancy, installation, cabling, maintenance and support. You can be confident of the results too - our user base includes small

workgroup environments with a handful of users, corporate networks with more than 100 workstations and also multi-site WAN implementations.

Whatever your requirements, we should definitely be on your network!



## Sample configurations, please call with your requirements

### Panther Workgroups Network

Suitable for general office environments with requirements for light-to-medium wordprocessing, spreadsheet, database and electronic mail. Modularly expandable, the network easily allows additional software applications, peripherals and users to be added. Flexibility and ease-of-maintenance are key; the hard disks, printer and tape streamer can be shared for the most cost effective solution.

#### 1 x Carrera Panther P75 Non-Dedicated Server with:

Intel Pentium 75MHz Chip, 1Gb Enhanced IDE Disk, 8Mb RAM, spec as per Panther, 350Mb Tape Streamer

#### 3 x Carrera 486DX2/66 Power Platform with:

Intel 486DX2/66 Chip 420Mb Disk, 8Mb RAM, spec as per Power Platform.

#### 1 x OKI 400ex Laser Printer

Windows for Workgroups, Ethernet adapters & MS Works included on all systems

All cables, connection and installation in mainland UK are included - subject to site survey. Carrera network documentation will be provided.

**£4,495 +VAT**  
OR **£163.30 PER MONTH**

### Panther Departmental Network: Novell™ or Windows NT™

All office activities can be accommodated, including heavy wordprocessing, spreadsheet, database, accounts and mail (although the included application software allows light to medium spreadsheet, wordprocessing, database and mail). Security, speed and upgrade potential make this network a great platform.

#### 1 x Carrera Panther P75 Dedicated Server with:

Intel Pentium 75MHz Chip, 2Gb SCSI Disk, 16Mb, spec as per Panther, 2Gb DAT Drive, Novell 3.12 or Windows NT (10 User), 600VA UPS.

#### 9 x Carrera 486DX2/66 Power Platform with:

Intel 486DX2/66 Chip 420Mb Disk, 8Mb RAM, spec as per Power Platform.

#### 1 x HP4 Plus (12ppm 600dpi) Laser Printer:

Ethernet adapters and MS Works included on all systems.

All UTP cables (and hub), connection and installation in mainland UK are included - subject to site survey. Carrera network documentation will be provided.

**£13,450 +VAT**  
OR **£479.08 PER MONTH**

## Call to discuss your network requirements. 0171 830 0486



Carrera is one of the UK's fastest growing brands. We take pride in our quality build and our performance track record. Our aim is to bring to the market a superb range of reliable tailor made PC's, backed-up by a comprehensive customer service which is second to none. Whether it be a Multi-Media PC for home, an integrated systems solution or a fixed term rental agreement, you'll find any one of our experienced sales team is able to give valuable

first hand advice. You'll also find the same degree of customer care and expertise should you need to call on our post-sales technical support. Carrera - Nobody tries harder. Experience the difference - Call now!



**Bull**



Bull Totalcare Service Option  
On-Site Maintenance Cover 1st Year  
Charge Only £25

**Carrera**  
TECHNOLOGY  
CHANGE UP TO CARRERA

**CALL 0171 830 0486**

Head Office: Carrera Technology Limited, 15-19 Alfred Place, London WC1E 7EB

EMAIL [carrera\\_sales@easynet.co.uk](mailto:carrera_sales@easynet.co.uk)

**ENQUIRIES 0171 830 0486 OR FAX 0171 830 0286 NOW!**

**CORPORATE**  
DIRECT SALES LINE  
**0181-308 0888**

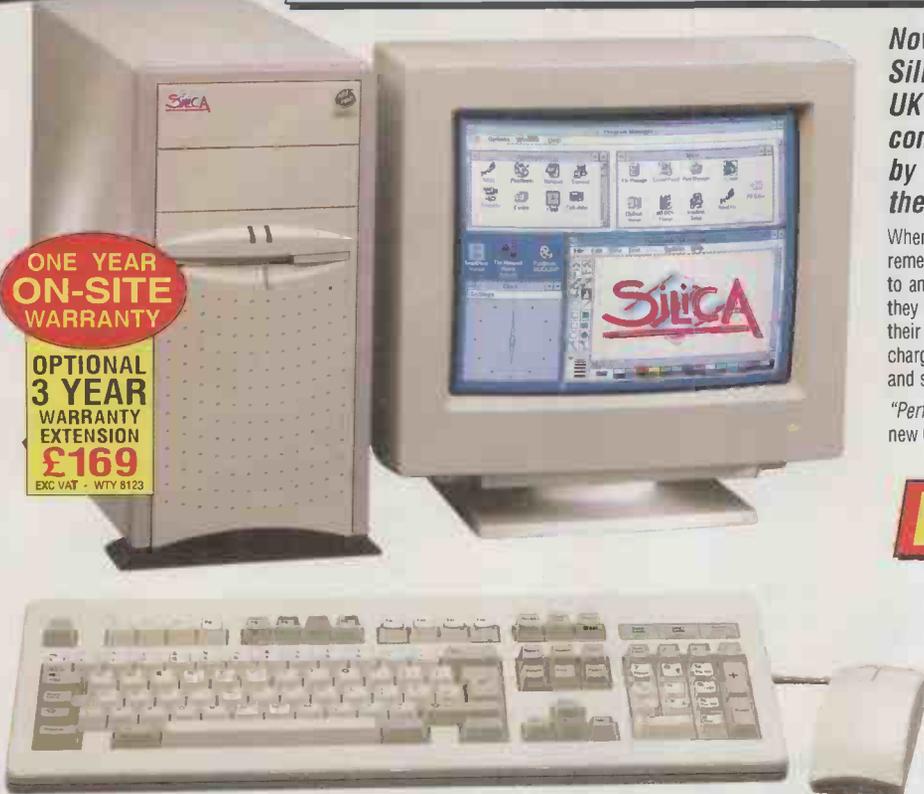
# BUY NOW - PAY LATER

In addition to our standard finance terms below we have a "Buy Now - Pay Later" option on selected systems. Call 0181-309 1111 for written details



**ONE YEAR ON-SITE WARRANTY**

**OPTIONAL 3 YEAR WARRANTY EXTENSION £169**  
EXC VAT - WTY 8123



Now you can buy a Silica PC from one of the UK's longest established computer suppliers, either by mail order or from one of the 21\* friendly Silica stores nationwide.

When you compare our prices and service with other PC advertisers, remember to check the small print. Do they offer free next day delivery to anywhere in mainland UK? Do they have the goods in stock, or are they waiting for your order before they build or buy your PC? And will their PC have a mouse, manuals and other basic items, or will these be charged as extras? Check 'Multimedia' too - does it include a sound card and speakers, or just a CD-ROM Drive - and is that dual or quad speed?

"Performance without the price" - New 586 Class machine using the new Cyrix M1sc processor. Call for further details.

\*The Silica PC is not stocked by our Harrods store.

## PENTIUM™ 75

PROCESSOR BASED SYSTEM

- Intel Pentium™ 75MHz Processor
- 14" .28mm S-VGA Colour Monitor
- 8Mb RAM Expandable to 128Mb
- 635Mb Hard Drive
- DOS 6.22 + Windows 3.11 Pre-installed

**£999**  
\*VAT = £1173.83, OPC 1425

**FREE DELIVERY**  
OF PC'S TO ANYWHERE IN THE UK MAINLAND

**OVERNIGHT COURIER**  
NEXT DAY DELIVERY IS OUR AIM

**36 MONTHS TO PAY 19.9% APR**

**IMMEDIATE DESPATCH**  
STOCK IS NORMALLY AVAILABLE - NOT 'MADE TO ORDER'

**MAIL ORDER LINES OPEN UNTIL 7PM**  
MON-FRI: 9AM-7PM SAT: 9AM-5.30PM

### SYSTEM SPECIFICATIONS

#### PROCESSOR

- 4 models: DX4 100, Intel Pentium™ 75MHz, 90MHz, 120MHz & Cyrix M1sc
- Type 5 ZIF socket on all Pentium™ processor based models
- P24T upgradeable - DX4 100 model

#### MEMORY

- 4Mb and 8Mb RAM
- Accepts 72-pin SIMMS - single or double sided
- 256K external write-back cache Pentium™ systems upgrade to 1Mb - DX4 100 & Cyrix M1sc to 512K

#### DRIVES

- 635Mb or 850Mb lightning fast hard drive
- 3.5" 1.44Mb floppy disk drive
- PCI EIDE hard and floppy drive controller
- Customisable settings for 4 drives
- 1 x 3.5" and 2 x 5.25" storage bays

#### DISPLAY

- 14" .28mm NI S-VGA colour monitor
- Low radiation MPRII compliant
- EPA energy star compliant
- 15" monitor upgrade available (extra £69+VAT)
- 1Mb Trio 32 PCI card
- 2Mb upgrade £50+VAT

#### ARCHITECTURE

- Mini-tower case
- 102-key UK keyboard and Microsoft mouse
- Plug and play PCI motherboard
- SIS chipset - energy star compliant (75, 90 models)
- Integrated motherboard with flash BIOS
- 2 x PCI, 1 x PCI (ISA) and 3 x ISA slots
- EPP & ECP capable printer ports
- Fast 16550 compatible UART driven ports
- Powerful 230w switchable PSU with whisper quiet fan
- Power saving mode
- CPU cooling fan

#### SOFTWARE

- Windows 95 or DOS Windows 3.11
- PC Utility Software
- Tutorial Software
- All software includes disks and manuals where appropriate
- Pre-configured, optimised and ready to run
- Multimedia Options

#### WARRANTY

- 1 year on-site maintenance
- Next working day response
- Technical support hotline



**Windows 95**  
On Selected Models

	PROCESSOR 486DX4 100MHz OPC 1408 + MON 1514	PROCESSOR M1sc 100MHz OPC 1421 + MON 1514	PROCESSOR PENTIUM™ 75MHz OPC 1425 + MON 1514	PROCESSOR PENTIUM™ 75MHz OPC 1427 + MON 1514	PROCESSOR PENTIUM™ 90MHz OPC 1449 + MON 1514	PROCESSOR PENTIUM™ 120MHz OPC 1480 + MON 1514
MEMORY (RAM)	4Mb	8Mb	8Mb	8Mb	8Mb	8Mb
MAX (RAM)	64Mb	128Mb	128Mb	128Mb	128Mb	128Mb
HARD DISK DRIVE	635Mb	635Mb	635Mb	850Mb	850Mb	850Mb
14" .28MM MONITOR	MON 1514 S-VGA COLOUR NON-INTERLACED	S-VGA COLOUR NON-INTERLACED	S-VGA COLOUR NON-INTERLACED	S-VGA COLOUR NON-INTERLACED	S-VGA COLOUR NON-INTERLACED	S-VGA COLOUR NON-INTERLACED
15" MONITOR UPGRADE	Add £69+VAT	Add £69+VAT	Add £69+VAT	Add £69+VAT	Add £69+VAT	Add £69+VAT
PCI 1Mb VIDEO/ACCELERATOR	✓	✓	✓	✓	✓	✓
3.5" 1.4Mb FLOPPY DRIVE	✓	✓	✓	✓	✓	✓
ZIF SOCKET	-	-	Type 5	Type 5	Type 5	Type 5
PCI ENHANCED IDE	✓	✓	✓	✓	✓	✓
WRITE BACK CACHE	256K	256K	256K	256K	256K	256K
ENERGY STAR COMPLIANT	✓	✓	✓	✓	✓	✓
DOS 6.22 & WINDOWS 3.11	✓	✓	✓	-	-	-
WINDOWS 95	-	✓	✓	✓	✓	✓
1 Yr ON-SITE WARRANTY	✓	✓	✓	✓	✓	✓
MULTIMEDIA OPTION	SEE BELOW	SEE BELOW	SEE BELOW	SEE BELOW	SEE BELOW	SEE BELOW
<b>CASH PRICE</b>	<b>£799</b> +VAT = £938.83	<b>£999</b> +VAT = £1173.83	<b>£999</b> +VAT = £1173.83	<b>£1099</b> +VAT = £1291.33	<b>£1199</b> +VAT = £1408.83	<b>£1499</b> +VAT = £1761.33
<b>CREDIT TERMS</b>	<b>£29</b> INC VAT PER MONTH	<b>£39</b> INC VAT PER MONTH	<b>£39</b> INC VAT PER MONTH	<b>£43</b> INC VAT PER MONTH	<b>£49</b> INC VAT PER MONTH	<b>£59</b> INC VAT PER MONTH
<b>36 MONTHS TO PAY</b>	SEE EXAMPLE BELOW	SEE EXAMPLE BELOW	SEE EXAMPLE BELOW	SEE EXAMPLE BELOW	SEE EXAMPLE BELOW	SEE EXAMPLE BELOW

### UPGRADES

- 15" S-VGA NI Monitor Upgrade £69+VAT
- 3 Year On-site Why Upgrade £169+VAT
- 4Mb RAM Upg (to 8Mb) £118.30+VAT
- 8Mb RAM Upg (to 16Mb) £236.60+VAT

### MULTIMEDIA OPTION

ON ALL MODELS EXCEPT OPC1418 & OPC 1435  
PROFESSIONALLY INSTALLED & TESTED BY TRAINED ENGINEERS  
QUAD SPEED SOUND CARD  
CD-ROM DRIVE  
16-BIT STEREO



\*OPC 1418 & OPC 1435 MULTIMEDIA OPTION INCLUDES:  
DUAL SPEED CD-ROM DRIVE  
16-BIT SOUND CARD, SPEAKERS & HUTCHINSON 95 MULTIMEDIA ENCYCLOPEDIA (LIMITED TO 50 TITLES SUPPLIED)

### WITH MULTIMEDIA OPTION FITTED SEE LEFT

	OPC 1418 + MON 1514	OPC 1423 + MON 1514	OPC 1435 + MON 1514	OPC 1437 + MON 1514	OPC 1459 + MON 1514	OPC 1485 + MON 1514
<b>CASH PRICE</b>	<b>£899</b> +VAT = £1056.33	<b>£1199</b> +VAT = £1408.83	<b>£1099</b> +VAT = £1291.33	<b>£1299</b> +VAT = £1526.33	<b>£1399</b> +VAT = £1643.83	<b>£1699</b> +VAT = £1996.33
<b>CREDIT TERMS</b>	<b>£35</b> INC VAT PER MONTH	<b>£49</b> INC VAT PER MONTH	<b>£42</b> INC VAT PER MONTH	<b>£49</b> INC VAT PER MONTH	<b>£55</b> INC VAT PER MONTH	<b>£65</b> INC VAT PER MONTH
<b>36 MONTHS TO PAY</b>	SEE EXAMPLE BELOW					

Finance Example 12 MONTHS:

Finance Example 36 MONTHS:

CASH Purchase: £999+VAT = £1173.83 inc VAT.

CREDIT Purchase: £99.97 Deposit and 36 Monthly Payments of £39.

CASH PRICE: £1173.83 inc VAT.

CREDIT PRICE: £1503.97 inc VAT.

**\*APR 19.9%**

FINANCE IS SUBJECT TO STATUS. OTHER PAYMENT PERIODS AVAILABLE. WRITTEN DETAILS ARE AVAILABLE ON REQUEST.

**FREE UK DELIVERY**  
ON ORDERS OVER £40+VAT



All prices exclude VAT  
All prices include VAT  
All prices include VAT

MAIL ORDER HOTLINE:  
**0181-309 1111**  
22 STORES NATIONWIDE



2414  
1  
03105

Admin Charge of £2.50 + VAT PER CHECKS UNDER £40 + VAT

E&OE Prices & specifications may change  
Return the coupon on pg 5 for the latest details

CREDIT FACILITIES AVAILABLE Subject to status

# IBM Aptiva PCs

# IBM Aptiva

## APTIVA RANGE

	MULTIMEDIA				MULTIMEDIA			
	DESKTOP 910	DESKTOP 914	DESKTOP 921	DESKTOP 930	DESKTOP 941	TOWER 931	TOWER 932	TOWER 951
	486DX2 66MHz	486DX2 66MHz	486DX4 100MHz	PENTIUM 75	PENTIUM 100	PENTIUM 75	PENTIUM 75	PENTIUM 120
HARD DISK DRIVE	540Mb	540Mb	540Mb	540Mb	850Mb	540Mb	540Mb	1Gb
3 1/2" FLOPPY DRIVE	✓	✓	✓	✓	✓	✓	✓	✓
MEMORY (RAM)	4Mb	8Mb						
S-VGA MONITOR	14"	14"	14"	14"	15"	14" DIGITAL	15"	15"
MONITOR DOT PITCH	.28MM	.28MM	.28MM	.28MM	.28MM	.28MM	.28MM	.28MM
CD-ROM DRIVE	-	QUAD	QUAD	-	QUAD	QUAD	QUAD	QUAD
16-BIT WAVETABLE S/CARD	-	✓	✓	-	✓	✓	✓	✓
SPEAKERS	-	4 Watt	4 Watt	-	30 Watt	30 Watt	30 Watt	30 Watt
VIDEO RAM	512k	1Mb						
FAX/MODEM	-	-	-	-	-	-	28.8	-
OS/2 WARP	-	✓	✓	✓	✓	✓	✓	✓
LOTUS SMARTSUITE	-	✓	✓	-	✓	✓	✓	✓
IBM HELPWARE	✓	✓	✓	✓	✓	✓	✓	✓
MULTIMEDIA FEATURES	-	✓	✓	✓	✓	✓	✓	✓
QUEST/PRINTER OPTION	-	✓	✓	✓	✓	✓	✓	✓
ON-SITE WARRANTY	1 YEAR	1 YEAR	1 YEAR	1 YEAR	1 YEAR	1 YEAR	1 YEAR	1 YEAR
<b>SILICA</b> EXC VAT	<b>£850.21</b>	<b>£1020.43</b>	<b>£1105.53</b>	<b>£1148.09</b>	<b>£1786.38</b>	<b>£1318.30</b>	<b>£1531.06</b>	<b>£1956.60</b>
CREDIT TERMS - 36 MONTHLY REPAYMENTS - 19.9% APR								
CASH PRICE INC VAT	£999	£1199	£1299	£1349	£2099	£1549	£1799	£2299
DEPOSIT	£200.49	£225.14	£159.93	£275.14	£249.80	£249.80	£174.45	£323.75
36 M'THS - APR 19.9%	£29	£39	£45	£39	£69	£49	£59	£79
TOTAL CREDIT PRICE	£1244.49	£1629.14	£1779.93	£1679.14	£2783.10	£2013.80	£2298.45	£3167.75

\*Pentium is a trademark of the Intel Corporation

### SPECIFICATIONS INCLUDE:

- 14" S-VGA Colour Monitor
- Quad Speed CD-ROM Drive (Multimedia Models)
- IBM Helpware Support
- Full Range
- Pentium Overdrive Upgradeable
- 1 Year On-Site Warranty

### SOFTWARE INCLUDES:

- Rapid Resume Manager
- MS-Windows 3.1
- PC DOS 6.3
- Custom Tools
- Learning Library
- MS-Works for Windows 3
- Lotus SmartSuite (multimedia models only)
- Index
- Scheduler
- Personal Desktop
- Aptivaware
- First Steps

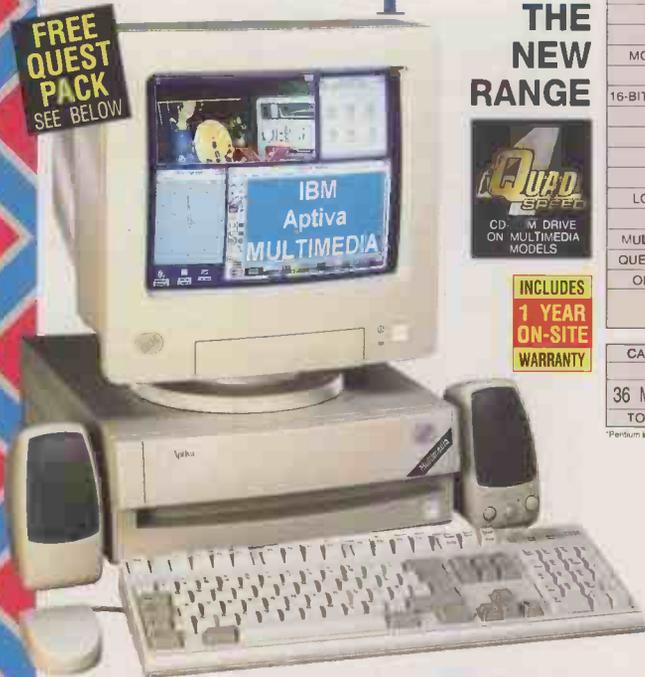
Written quotations available on request - Offers subject to status

FREE QUEST PACK SEE BELOW

THE NEW RANGE



INCLUDES 1 YEAR ON-SITE WARRANTY



## SILICA OFFER

# Quest

SOFTWARE PACK  
11 TITLES ON  
10 CD-ROM DISKS



WITH IBM & COMPAQ MULTIMEDIA PC SYSTEMS FROM SILICA

## COMPAQ PRESARIO MULTIMEDIA PCs

# COMPAQ

## Presario

NEW RANGE

	ENTRY		MAINSTREAM				PREMIUM		
	524	7106	7110	7150	7170	5520	9520	9538	
	INTEGRATED	DESKTOP	DESKTOP	DESKTOP	DESKTOP	INTEGRATED	TOWER	TOWER	
	486DX2 66MHz	486DX4 100MHz	486DX4 100MHz	PENTIUM 75MHz	PENTIUM 90MHz	PENTIUM 75MHz	PENTIUM 75MHz	PENTIUM 90MHz	
HARD DISK DRIVE	420Mb	420Mb	540Mb	540Mb	840Mb	630Mb	630Mb	1Gb	
3.5" FLOPPY DRIVE	✓	✓	✓	✓	✓	✓	✓	✓	
MEMORY (RAM)	8Mb	8Mb	8Mb	8Mb	8Mb	8Mb	8Mb	8Mb	
MAXIMUM RAM	64Mb	128Mb	128Mb	128Mb	128Mb	72Mb	136Mb	136Mb	
MONITOR .28mm DP MPRII	14" INTEGRATED	14"	14"	14"	14"	14" INTEGRATED	14"	15"	
BUILT-IN SPEAKERS	-	-	-	-	-	-	✓	✓	
GRAPHICS	32-BIT PCI	32-BIT PCI	32-BIT PCI	32-BIT PCI	32-BIT PCI	64-BIT PCI	64-BIT PCI	64-BIT PCI	
BUS TYPE	VESA	PCI	PCI	PCI	PCI	PCI	PCI	PCI	
EXPN SLOTS	2	4	4	4	4	5	5	5	
PCI SLOTS	-	2 (1 SHRD ISA)	2 (1 SHRD ISA)	2 (1 SHRD ISA)	2 (1 SHRD ISA)	2 (1 SHRD ISA)	2 (1 SHRD ISA)	2 (1 SHRD ISA)	
TOTAL DRIVE BAYS	3	4	4	4	4	5	5	5	
PLUG & PLAY COMPLIANT	✓	✓	✓	✓	✓	✓	✓	✓	
HOME COMMUNICATIONS FAX / MODEM	2,400 Modem 9,600 Fax	NO COMMS	14,400 Modem 9,600 Fax	14,400 Modem 9,600 Fax	14,400 Modem 9,600 Fax	19,200 Modem 14,400 Fax	19,200 Modem 14,400 Fax	19,200 Modem 14,400 Fax	
SOFTWARE - SEE BELOW	✓	✓	✓	✓	✓	✓	✓	✓	
CD-ROM DRIVE	Quad Speed	Quad Speed	Quad Speed	Quad Speed	Quad Speed	Quad Speed	Quad Speed	Quad Speed	
SOUND CARD	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit	
<b>SILICA</b> EXC VAT	<b>£1062.96</b>	<b>£1062.97</b>	<b>£1190.63</b>	<b>£1360.95</b>	<b>£1445.95</b>	<b>£1531.06</b>	<b>£1616.17</b>	<b>£1956.60</b>	
CREDIT TERMS - 36 MONTHLY REPAYMENTS - 19.9% APR									
CASH PRICE INC VAT	£1249	£1249	£1399	£1599	£1699	£1799	£1899	£2299	
DEPOSIT	£92.54	£92.54	£159.93	£167.19	£184.59	£174.45	£191.84	£323.75	
36 M'THS - APR 19.9%	£42	£42	£45	£52	£55	£59	£62	£79	
TOTAL CREDIT PRICE	£1604.54	£1604.54	£1779.93	£2039.19	£2164.59	£2298.45	£2423.84	£3167.75	

FREE QUEST PACK SEE ABOVE

3 YEAR WITH 1 YEAR ON-SITE WARRANTY



### ENTRY MODEL INCLUDES

- DOS 6.22
- Windows 3.11
- Works for Windows
- Tabworks
- MS Entertainment IV
- MS Money
- Encarta '95
- Ultimate Human Body

### MAINSTREAM MODELS INCLUDE

- DOS 6.22 & Windows 3.11
- Novell Perfect Works
- MS Money, Simcity
- Lode Runner
- Kings Quest 7
- Comptons Encyclopedia
- Tabworks, Kids Corner
- Delrina Fax & CompuServe
- Presario Plaza

### PREMIUM MODELS INCLUDE

- DOS 6.22 & Windows 95
- Works
- Simtown
- Quicken
- Encarta
- CompuServe
- Media Pilot
- The Way Things Work (DK)
- Eye Witness Nature (DK)
- Global German & French
- Iona Thinking Things (only 9520)

Written quotations available on request - Offers subject to status

242F  
2



MAIL ORDER HOTLINE:  
**0181-309 1111**  
22 STORES NATIONWIDE

CREDIT FACILITIES AVAILABLE Subject to status

All prices exclude VAT



E&OE Prices & specifications may change Return the coupon on page 5 for latest details.



FREE UK DELIVERY ON ORDERS OVER £40. VAT



ADMIN CHARGE OF £2.50 + VAT FEE ORDERS UNDER £40 + VAT

# MULTIMEDIA PERIPHERALS & VIDEO CARDS

## CD-ROM DRIVES AND PACKS

### AZTECH

Six Speed IDE CD-ROM ... £148.94  
900K Data Transfer Rate, 256K Buffer,  
225ms Average Access Time - CDR 1141

### QUAD SPEED STANDALONE DRIVE

CDA468-011



- 600K Data Transfer Rate
- 350ms Average Access
- 256K Buffer
- CD-Play Button on Front Panel
- Kodak PhotoCD/CDi compatible for MPEG with RealMagic

**£118.30**  
EXC VAT CDR 1121

Home/Office M'edia Kit ... £254.47  
Quad Speed IDE CD-ROM Drive  
16-Bit Sound Card (Soundblaster compatible)  
Stereo Amplified Speakers  
11 Multimedia Applications - CDR 1191

### Panasonic PD SYSTEM

READ/WRITE OPTICAL DRIVE



- Quad speed CD-ROM Drive with 600K Data Transfer and 195ms access
  - 650mb re-writable optical disk drive with removable cartridges
  - Photo & Video CD Compatible
- Optical 650mb Cartridges only £38.30 ref: DIS 1500

That's just **6p** per Mb

### CD-ROM & OPTICAL 650mb DRIVE

ALL-IN-ONE **£499**  
EXC VAT CDR 4300

## SPEAKERS

### SCREENBEAT 3

FROM  
SPECTRAVIDEO

- Stereo Speakers
  - Monitor Mountable
  - Magnetically Shielded
  - Powered by 4 x AA Batteries
- OR PSU (Not Supplied)

**£12.76**  
EXC VAT SPK 7260

SpectraVideo ScreenBeat 5 ... £11.06  
Built-in Base Boost, Volume Control,  
Power On/Off - SPK 7267

SpectraVideo ScreenBeat Pro 50 ... £33.19  
Built-in Base Reflex Amplifier,  
Volume Control, Power On/Off - SPK 7275

ZYFI 2 Multimedia System ... £25.52  
3" Full Range Cone, Integral Amplifier,  
10 Watt RMS power output - SPK 9363

ZYFI 2 Pro Multimedia System ... £46.80  
4" Woofer & 2.5" Tweeter, Integral Amplifier,  
36 Watt RMS power output - SPK 9374

Reveal Active Speakers 20W ... £34.00  
Quality external speakers with built-in amplifier -  
SPK 6720

Reveal Active Speakers 80W ... £42.51  
Powerful external shaped speakers - high quality  
output - built-in amplifier - SPK 6788

### NEC

### ENCARTA QUARTET PACK 2

WITH NEC CDR 272 QUAD SPEED DRIVE



- Quad Speed CD-ROM Drive
- 600K Sustained Data Transfer Rate
- 250ms Average Access Time
- 128K Cache
- MPC1 & MPC2 Compliant
- Software: Encarta '95, Elite, Lemmings, Civilization

**£135**  
EXC VAT CDR 3570

### QUAD SPEED QUEST PACK

WITH NEC CDR 272 QUAD SPEED DRIVE



- Quad Speed IDE Drive
- 600K Data Transfer Rate
- 250ms Average Access Time
- 128K Cache
- MPC1 & MPC2 Compliant
- 11 Software Titles on 10 CDs

Software Titles:  
• Anecdote • Animator  
• Compton's Interactive Encyclopedia  
• Day Of The Tentacle • Graphics Works • Humans 1 & 2  
• Indiana Jones & Fate of Atlantis • Return To Zork • Sneak Peeks  
• Ultima Underworld & Wing Commander II

**£185**  
EXC VAT CDR 4505

### Panasonic

562B Dual Speed Standalone ... £58.72  
300K Data Transfer Rate, 64K Buffer,  
320ms - CDR 4120

562B Dual Speed External ... £126.81  
300K Data Transfer Rate, 64K Buffer,  
320ms. External case & interface - CDR 4113

### DUAL SPEED ENCARTA PACK

WITH PANASONIC 562B DUAL SPEED DRIVE



- Dual Speed CD-ROM Drive
- 300K Data Transfer Rate
- Drivers Disk
- Data & Audio Cables
- Instruction/User Manuals
- 4 Software Titles: Encarta '95, Lemmings, Civilization, Elite Frontier

**£75.74**  
EXC VAT CDR 4106

### PANASONIC QUADPRO DRIVES

QUAD SPEED  
CD-ROM DRIVES



- 600K Data Transfer Rate
- 195ms Average Access
- Complies with MPC3
- Includes Driver Software and Cables

IDE Option includes Power IDE17M  
SCSI Option Includes CoreSCSI17M

IDE OPTION **£135.32**  
EXC VAT CDR 4214

SCSI OPTION **£143.83**  
EXC VAT CDR 4204

## MPEG/VIDEO

Video Galaxy Gamma ... £143.83  
TV Tuner & capture card with optional  
addons (featured below) - VID 0905

VG Gamma Teletext Upg. ... £29.74  
Teletext upgrade for the VG GAMMA - VID 0901

VG Gamma MPEG Upg. ... £126.81  
MPEG1 decoding allows the playback  
of decompressed video for Gamma - VID 0903

Oscar MPEG Playback ... £143.83  
Plays back full-screen, full motion video  
at 25 frames per second (PAL) - VID 0910

RealMagic Lite MPEG Card ... £199.00  
Full motion video playback card -  
Req. sound card for sound output - VID 1020

RealMagic MPEG Card ... £259.00  
Built-in soundcard with orchestrated  
soundtracks running simultaneously  
with full motion video images - VID 1024

RealMagic Rave ... £254.47  
64-bit Windows accelerator + MPEG  
in one card - VID 1042

MiroVideo DC1 Card ... £509.79  
Allows you to capture, compress  
and output graphics - VID 6994

## 16-BIT SOUND CARDS

### ORCHID NUSOUND PNP



- 3D Spatializer Sound
- Hardware Wavetable Synth
- 64x Over Sampling
- IDE Adaptor & Panasonic CD-ROM Interfaces
- Plug & Play
- MPU-401 & General MIDI I/face

**£126.81**  
EXC VAT SOU 4000

Aztech Pro 16 II ... £50.21  
OPL3, 20 Voice, 16-bit Stereo and  
4 CD Interfaces - SOU 1053

Aztech Nova 16 Extra FP ... £58.72  
OPL3, 20 Voice, 16-bit Stereo and  
4 CD Interfaces - SOU 1074

Aztech WaveRider 32+ ... £84.26  
Wavetable Synthesis, 4 CD Interfaces,  
48KHz Sample Rate - SOU 1082

Sound Galaxy Wave Tide ... £49.00  
Wavetable add-on board for Stella & PRO16 -  
SOU 1092

Orchid GameWave 32 Plus ... £75.74  
16-Bit Stereo, 2 Sound Standards,  
2Mb Wavetable ROM - SOU 4006

Orchid SoundWave 32 ... £92.77  
16-Bit Stereo, 3 Sound Standards,  
Stereo Speakers & Microphone - SOU 4011

Orchid SoundWave 32 Pro ... £143.83  
16-Bit Stereo, 3 Sound Standards,  
Stereo Speakers & Microphone - SOU 4017

Orchid SoundWave 32 Pro SCSI ... £157.45  
16-Bit Stereo, 3 Sound Standards,  
Stereo Speakers & Microphone - SOU 4019

Orchid SoundDrive 16EZ ... £55.32  
OPL3, 16-Bit Stereo, 3 Sound Standards,  
5 Channel Stereo Audio Mixer - SOU 4021

Orchid SoundDrive 16EZ SCSI ... £67.23  
OPL3, 16-Bit Stereo, 3 Sound Standards,  
5 Channel Stereo Audio Mixer - SOU 4025

Orchid WaveBooster FX ... £101.28  
4Mb FX version contains some  
very special effects - SOU 4031

Orchid WaveBooster ... £84.26  
4Mb FX version adds more incredible  
sounds. Includes Cubase Lite - SOU 4034

Orchid WaveBooster ... £63.83  
2Mb FX version adds more incredible  
sounds. Includes Cubase Lite - SOU 4037

Reveal Tuner Card ... £29.74  
Stereo FM tuner card - SOU 9019

## MODEMS 14,400 & 28,800

Zoom 14.4XE External ... £99.00  
14.4K fax/data modem, V32bis & V42bis  
BABT approved - MOD 9315

Zoom V34IE Internal ... £149.00  
28.8K fax/data modem, V34  
BABT approved - MOD 9388

Zoom V34XE External ... £169.00  
28.8K fax/data modem, V34  
BABT approved - MOD 9394

Sportster 14,400 ... £115.00  
Data/Fax, auto dial/answer, V42bis &  
MNPS data compression  
Internal MOD 8664 External MOD 8714

Sportster 28,800 ... £169.00  
Fastest approved modem in the UK Data/Fax,  
Autodial/answer, V42bis and MNPS data  
compression - MOD 8808  
Internal MOD 8808 External MOD 88814

Philips 14,400 Internal ... £99.00  
Fax/data modem, V42bis and MNPS  
compression - BT approved - MOD 7705

### ZOOM 14,400 MODEM

- Internal modem and fax card
- BABT approved and fully compatible
- Includes Winfax Lite for DOS & Windows
- 5 year warranty

**£89**  
EXC VAT MOD 9300

Philips 14,400 External ... £109.00  
Fax/data modem, V42bis and MNPS  
compression - BT approved - MOD 7716

Philips 28,800 Internal ... £169.00  
Fax/data modem, V42bis and MNPS  
compression - BT approved - MOD 7743

Philips 28,800 Internal ... £179.00  
Fax/data modem, V42bis and MNPS  
compression - BT approved - MOD 7757

## VIDEO ACCELERATOR CARDS

### FAHRENHEIT PRO VIDEO 64



- 2Mb VRAM PCI
- 64-bit VRAM Based Accel.
- 16.7 Million Colours, 1600x1200 Resolution, Cirrus S3 Vision 964 Processor
- Resolutions up to 1600x1200
- Up to 120Hz Refresh Rates
- S3 Vision 968 Processor

**£211.91**  
EXC VAT PDC 1156

### ORCHID

Fahrenheit 64 1Mb DRAM ... £101.28  
16.7 Million Colours, 1280x1024 Resolution,  
Cirrus S3 Vision 864 Processor  
VLB Version PDC 1110 PCI Version PDC 1115

Fahrenheit 64 2Mb DRAM ... £143.83  
2Mb version of the above card offering more  
colours at higher resolutions  
VLB Version PDC 1112 PCI Version PDC 1117

Fahrenheit Pro 64 2Mb VRAM ... £228.94  
16.7 Million Colours, 1600x1200 Resolution,  
Cirrus S3 Vision 964 Processor  
VLB Version PDC 1121 PCI Version PDC 1126

Fahrenheit Pro 64 4Mb VRAM ... £322.55  
4Mb version of the above card offering more  
colours at higher resolutions  
VLB Version PDC 1123 PCI Version PDC 1128

Fahrenheit Pro Video 64 2Mb VRAM ... £211.91  
As featured left with VLB Bus - PDC 1142

Fahrenheit Pro Video 64 4Mb VRAM ... £339.57  
As featured left with 4Mb RAM  
VLB Version PDC 1144 PCI Version PDC 1158

Kelvin 64 ISA 1Mb DRAM ... £92.77  
16.7 Million Colours, 1280x1024 Resolution,  
Cirrus Logic 5434 Processor  
ISA Version PDC 1201 VLB Version PDC 1212  
PCI Version PDC 1221

Kelvin 64 ISA 2Mb DRAM ... £126.81  
2Mb version of the above card offering more  
colours at higher resolutions  
ISA Version PDC 1205 VLB Version PDC 1217  
PCI Version PDC 1224

Kelvin EZ 1Mb DRAM ... £55.32  
16.7 Million Colours, 1600x1200 Resolution,  
Cirrus Logic 5430 Processor  
VLB Version PDC 1232 PCI Version PDC 1236

Philips TV Card ... £169.36  
Full screen Windows VGA TV card with 9 screen  
display menu - VID 0872

## VIRTUAL REALITY HEADSET



### i-glasses!

For all standard PCs with a VGA output

i-glasses take the VGA & sound signals from a standard PC and converts them in to a composite signal for a startling up close virtual reality experience. The headset includes Interactive head tracking capabilities giving 3 degrees of freedom - look up, down & sideways. Works with all existing PC games & a new generation of games on their way.

**£765.11**  
EXC VAT VID 1600

**FREE UK DELIVERY**  
ON ORDERS OVER £40. VAT



All prices exclude VAT



£60E Prices & specifications may change  
Return the coupon on page 5 for latest details

MAIL ORDER HOTLINE:  
**0181-309 1111**  
22 STORES NATIONWIDE

CREDIT FACILITIES AVAILABLE Subject to status



243F  
**3**  
02105

# PRINTERS

## CANON

### A4 MONO BUBBLEJET

BJ200EX



- 3 Pages/Minute - 204cps & 248cps (for NLO & draft) 10cpi
- 80 Column - A4
- Resolution: 360x360dpi
- 720x360dpi with Smoothing Function
- 8 Built-in and 20 Scalable Fonts Supplied on Disk
- IBM, Canon & Epson LQ510 Emulations
- Parallel Interface
- 62K Input Buffer

£169.<sup>36</sup>

BJ-30 Mono B/Jet ..... £160.85  
Portable A4, 277cps, 360 x 720dpi, parallel interface, Inc A/S/F - PRI 1630

BJC-70 Colour B/Jet ..... £245.96  
Portable A4, 173cps, 360 x 720dpi (mono), parallel interface, inc A/S/F - PRI 1645

BJC-600e Colour B/Jet ..... £365.11  
80 column, 240cps, 360 x 360dpi, parallel interface - PRI 1767

BJC-4000 Colour B/Jet ..... £254.47  
80 column, 248cps, 360 x 360dpi, parallel interface - PRI 1734

### A4 COLOUR BUBBLEJET

BJC4000



- 4 Pages/Minute - 248cps High Speed & 173cps High Quality 10cpi
- 80 Column - A4
- 5 Typefaces
- Resolution: 360x360dpi
- 720x360dpi with Smoothing Function
- LQ2550, X23E & Canon Enhanced
- Parallel Interface
- 64K Input Buffer
- Auto & Manual Feeder

£254.<sup>47</sup>

## HEWLETT PACKARD

### A4 MONO INKJET

DeskJet 540



- 3 Pages Per Minute in Econofast Mode
- Res: 600x300dpi Black Printing 300x300dpi Colour Printing (Optional)
- Smooth Crisp Characters
- 256 Levels of Greyscales
- 6 Built-in Fonts
- Parallel Interface
- 14 TrueType Scalable Fonts
- 3 Year Warranty - Return to Hewlett Packard

£254.<sup>47</sup>

DeskJet 320 Inkjet ..... £228.94

A4, 3ppm, 600 x 300dpi, parallel interface inc sheet feeder - PRI 5143

DeskJet 660c Col Inkjet ..... £359.00

A4, 4ppm, 600 x 600dpi, parallel interface - PRI 5391

DeskJet 850c Col Inkjet ..... £449.00

A4, 6ppm, 600 x 600dpi, parallel interface - PRI 5394

LaserJet 5L Laser ..... £424.68

A4, 4ppm, 600 x 600dpi with RET, parallel interface - LAS 4115

LaserJet 4PLUS Laser ..... £1,062.98

A4, 12ppm, 600 x 600dpi, parallel interface - LAS 4144

## NEC

### 6PPM WINDOWS LASER PRINTER

SUPERSCRIPT 610 PLUS

The NEC SuperScript™ 610Plus is a personal laser printer that has been specially designed for use with the MS-Windows™ operating system. Using NEC developed technology in a simple, compact design, it is the first laser printer to be driven by your PC's processor rather than its own.



- 6 Pages Per Minute
- Res: 300x300dpi
- Virtual 600x600dpi with Sharp Edge Technology
- Windows GDI Emulation - 100% DOS Compatible

- 50 Page Hopper
- Power Saving Mode
- Toner Unit Supplied
- 1 Year On-site Warranty

£299

EXC VAT LAS 4615

SuperScript 660 Laser ..... £399.00

80 column, 6ppm, 600 x 600dpi/virtual 1200dpi GDI & PCL, parallel interface - LAS 4620

Pinwriter P2Q 24-Pin ..... £101.28

80 column, 192cps, 360 x 360dpi, parallel interface - PRI 6002

## CITIZEN

### A4 COLOUR INKJET

ProJet IIC



- 180cps Draft & 120cps NLO @ 12cpi
- 50 Nozzle Print Head
- 50K Printer Buffer
- Parallel Interface
- 3 Built-in Fonts
- Graphics Res: 300x300dpi
- Auto Sheet Feeder
- Inc Free Starter Pack

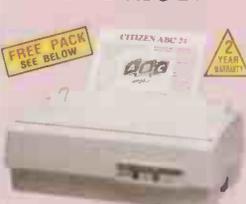
£237.<sup>45</sup>

EXC VAT PRI 2097

Swift 200 Mono 24-Pin ..... £143.83  
80 column, 216cps, 360 x 360dpi, parallel interface - PRI 2490

Swift 200 Colour 24-Pin ..... £152.34  
80 column, 218cps, 360 x 360dpi, parallel interface - PRI 2495

### A4 COLOUR 24-PIN ABC 24



- 24-Pin Print Quality
- 192cps Draft & 64cps LQ @ 12cpi
- Works with any PC or Amiga
- 5 Built-in Fonts
- Parallel Interface (Optional Serial)
- Citizen Easystart Software
- Includes Colour & B/W Ribbons
- Res: 360x360dpi
- Built-in Automatic Sheet Feeder
- 2 Year Warranty

£126.<sup>81</sup>

EXC VAT PRI 2422

Notebook II Col Thermal ..... £211.91

Portable A4, 105cps, 360 x 360dpi, parallel interface - PRI 2104 Includes FREE CABLE

PN60 "PDA" Mono ..... £254.47

Portable A4, 157cps, 360 x 360dpi, parallel interface - PRI 2041 Includes FREE CABLE

## LEXMARK

### A4 COLOUR INKJET

ExecJet IIC



- Latest Technology Thermal Inkjet
- >3 Pages/Min - 300cps Black Only 2.7 Pages/Min - Colour Printing
- 21K Printer Buffer
- 12 Resident Scalable Fonts 2 Bitmap Fonts
- Parallel Interface (Optional Serial)
- IBM X24E & Deskjet 500 Emulations
- Res: 600x300dpi Black Only 300x300dpi Colour
- Built-in Automatic Sheet Feeder
- 3 Year Return for Replacement Warranty

£211.<sup>91</sup>

EXC VAT PRI 5676

### A4 COLOUR INKJET

WinWriter 150C



- Includes Coral Draw 4 (OEM)
- 3 ppm Black Draft Speed
- 600 x 300dpi
- High Speed Parallel Interface

£297.<sup>02</sup>

EXC VAT PRI 5685

### COLOUR THERMAL, DYE/SUB

SUPERSCRIPT COLOUR 3000

- High-end Professional Colour Printer
- 300x300dpi Resolution
- Near Continuous Tone for Photographic Quality
- 1 Page Per Minute Full Colour Output
- Up to 16.7 Million Colours

£699

EXC VAT PRI 5702

## SEIKOSHA

SpeedJet 360 ..... £211.91

80 column, 80cps, 300 x 300dpi, parallel interface, 6 resident fonts 128K Printer Buffer - PRI 8066

SP-1900AI Plus 9-Pin ..... £97.87

80 column, 192cps, 144 x 72dpi, parallel interface - PRI 8195 Includes FREE CABLE

SP-2400 Mono 9-Pin ..... £139.00

80 column, 200cps, 360 x 720dpi, parallel interface - PRI 8204 Includes FREE CABLE

SL-96 Colour 24-Pin ..... £126.81

80 column, 240cps, 360 x 360dpi, parallel interface, 42K Printer Buffer, Epson LQ870 Emulation - PRI 8311

### A4 COLOUR INKJET PRINTER

SpeedJet 360

- 51 Nozzle Head
- 80 Column Width
- 80cps Draft @ 10cpi
- Parallel Interface
- Resolution: 300x300dpi
- 6 Resident Fonts
- 128K Printer Buffer
- Parallel Interface
- Built-in Cut Sheet Feeder

£211.<sup>91</sup>

EXC VAT PRI 8066



### FREE STARTER PACK NORMAL RRP: £29 WITH THE CITIZEN ABC 24 & SWIFT 200C

- 200 Sheets of Continuous Paper
- 1.8M Parallel Cable
- Windows 3.1 Enhanced Driver
- 50 Address Labels
- 50 Disk Labels

## RIBBONS, CARTRIDGES AND TONER

Canon BCJ600 Black Ink - RIB 1634	£8.47
Canon BCJ600 Cyan Ink - RIB 1645	£7.62
Canon BCJ600 Magenta Ink - RIB 1656	£7.62
Canon BCJ600 Yellow Ink - RIB 1667	£7.62
Canon BC-10 Black Cart & Print Head - RIB 1400	£27.66
Canon BC110BK Black Ink Tank - RIB 1423	£11.87
Canon BC111C Colour Ink Tank - RIB 1445	£14.43
Canon BC111BK Black Ink Tank - RIB 1434	£11.87
Canon BC11 Col Cart & Print Head - RIB 1411	£33.19

Canon BJ-200 Black Ink - RIB 1622	£18.68
Canon BJC4000 Black Ink - RIB 1555	£6.80
Canon BJC4000 Colour Ink - RIB 1566	£14.46
Canon BJC4000 Black Ink Hi Speed - RIB 1532	£25.49
Citizen 120D/Swift 9/90 Black Fabric - RIB 2520	£2.48
Citizen ABC/Swift 200 Black Ribbon - RIB 2924	£3.57
Citizen Swift 200/240 Black Film - RIB 3827	£6.00
Citizen Swift 200/90/ABC Colour Rib - RIB 3936	£10.64
Citizen Notebook II Spot Colour Rib - RIB 3427	£4.00

Citizen Notebook II Full Colour Rib - RIB 3416	£5.00
HP Deskjet 500C Black Ink - RIB 1121	£21.23
HP 310/320 Black Ink - RIB 1120	£16.13
HP Deskjet 500 3 Colour Ink - RIB 1132	£23.79
HP 850 Black Ink - RIB 1134	£23.83
Lexmark ExecJet IIC Black Ink - RIB 1806	£22.94
Lexmark ExecJet IIC Colour Ink - RIB 1837	£29.74
NEC 610 & 660 Toner Cartridge - LAA 3002	£89.00
NEC P2Q Black Fabric Ribbon - RIB 6003	£4.95

NEC 3000 Black Ribbon - RIB 6301	£24.68
NEC 3000 4 Colour Thermal - RIB 6314	£35.74
NEC 3000 3 Colour Dye-Sub - RIB 6323	£37.45
Ricoh Dyevel Toner Cart + LP1200 - LAA 5218	£84.26
Ricoh OPC Cart (Drum) LP1200 - LAA 5225	£106.38
Ricoh Universal Feeder LP1200 - LAA 5238	£95.00
Ricoh 2Mb RAM Module LP1200 - LAA 5262	£95.00
S/Jet 200/HC/360 Colour Inkjet - RIB 1167	£25.49
S/Jet 200/Project II Head & Cart - RIB 1182	£17.87

S/Jet 200/Project II Black Ink x 2 - RIB 1193	£5.69
Seikosh SP Range Black Fabric - RIB 8018	£4.65
SP Range Multistrike Blk Carbon - RIB 8025	£7.35
Seikosh SL-90/92/95/96 Blk Carbon - RIB 8282	£7.65
SL-90/92/95/96 Black Fabric - RIB 8291	£5.47
SL-95/96 4 Colour Fabric - RIB 8298	£9.57

If you don't see what you require call one of our sales team on 0181 309 1111

244E

4

03105



MAIL ORDER HOTLINE:  
**0181-309 1111**  
22 STORES NATIONWIDE

CREDIT FACILITIES AVAILABLE Subject to status

All prices exclude VAT



EX.OE Prices & specifications may change Return the coupon on page 5 for latest details



FREE UK DELIVERY

ON ORDERS OVER £40+VAT

ADMIN CHARGE OF £2.50 + VAT FOR ORDERS UNDER £40 + VAT



# ACCESSORIES & PERIPHERALS

## HARD DRIVES



- Seagate 210Mb 2.5" IDE ..... £105.00  
ST9240AG, 17ms - HAR 3110
- Seagate 545Mb 3.5" IDE ..... £118.00  
ST36601A, Mode 3, 14ms - HAR 2966
- Seagate 850Mb 3.5" EIDE ..... £155.00  
ST5850A, Mode 4, 14ms - HAR 2980
- Seagate 1.08Gb 3.5" EIDE ..... £195.00  
ST31220A, Mode 4, 12ms - HAR 2990
- Seagate 1.08Gb 3.5" IDE ..... £195.00  
ST51080A, Mode 4, 12ms - HAR 2990

## Panasonic PD SYSTEM READ/WRITE OPTICAL DRIVE

- Quad speed CD-ROM Drive
- 650Mb re-writable optical drive

### ALL-IN-ONE

**NEW £499**  
EXC VAT CDR 4300

- Panasonic PD System with SCSI Int. £549.00  
As above plus Adaptec 1520A SCSI controller/interface - CDR 4310
- Panasonic Optical Disk for PD ..... £38.30  
650Mb re-writable optical disk for the PD system - DIS 1500

## I/O CARDS

- CMD6210 VL BUS ..... £29.79  
Enhanced IDE controller mode 3/4/5 with 2 serial 1 parallel - PMU 0621
- CMD6400 PCI BUS ..... £29.79  
Enhanced IDE controller mode 3 & 4 (No serial or parallel ports) - PMU 0640

## FLOPPY DISKS

- Kao box 10 3.5" 2S/HD ..... £4.21  
10 quality 2mb 3.5" disks with labels - DIS 3386
- 50 Unbranded 3.5" 2S/DD ..... £14.04  
50 quality 1mb 3.5" disks - DIS 4200
- 50 Unbranded 3.5" 2S/HD ..... £19.15  
50 quality 1mb 3.5" disks - DIS 4450
- Kao box 10 5.25" DS/HD ..... £9.32  
10 quality 1.2mb 5.25" disks with labels - DIS 5715
- Verbatim box 10 3.5" DS/HD ..... £5.06  
10 quality 1.44mb 3.5" formatted disks with labels - DIS 6110
- Verbatim 10 3.5" DS/HD Microsoft Pk. £4.26  
10 quality 1.44mb 3.5" formatted disks and 1 Windows 95 demo disk - DIS 6124
- Verbatim box 10 3.5" DS/HD ..... £5.06  
10 quality 1.44mb 3.5" coloured disks - DIS 6136
- DC-2120 Formatted Tape ..... £8.51  
For TAP3600 Colorado 250Mb Drive - DIS 8100
- Verbatim DC-2120 120Mb Twin Formatted Tape - DIS 8112 ..... £16.98
- DC-2120XL 340Mb Tape ..... £17.02  
340Mb pre-formatted tape - DIS 8130
- QIC-3010-MC Tape ..... £17.28  
Tape for 340Mb tape drive - DIS 8145

## TAPESTREAMERS

- Colorado Jumbo TapeStreamer ..... £89.00  
Internal 340Mb Tape drive, fits into 5.25" slot - TAP 3620
- Colorado Tracker TapeStreamer ..... £180.00  
External 340Mb Tape drive, (reads & writes 250Kb tapes), plugs into parallel port - TAP 3640
- DE-2120XL Formatted ..... £17.02  
Tapes for 340Mb Colorado Drives - DIS 8130
- Colorado Jumbo TapeStreamer ..... £136.00  
Internal 680Mb Tape drive, fits into 3.5" slot - TAP 3680
- Colorado Tracker TapeStreamer ..... £232.00  
External 680Mb Tape drive, plugs into parallel port - TAP 3685
- Colorado Jumbo TapeStreamer ..... £235.00  
Internal 1.4Gb Tape drive, fits into 3.5" slot - TAP 3690
- MC3000XL Tapes ..... £17.28  
For 680Mb Colorado Tape drive, (TAP 3680 & TAP 3685) - DIS 8145
- DT1400 Formatted ..... £22.00  
Tapes for 1.4Gb Colorado Drives - DIS 8156

## JOYSTICKS

### WINGMAN JOYSTICK & SLIPSTREAM

- Hand Contoured
- Throttle Control
- Smooth Action
- 7ft Cable
- Slipstream Game



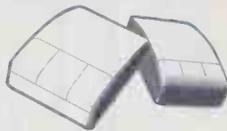
**£25.49**  
EXC VAT PCJ 8576

- Dexxa MAXstick - PC ..... £8.47  
Efficient, precisely designed joystick, Pressure sensitive trigger switch - PCJ 2151
- Dexxa Joystick - PC ..... £12.72  
Centering adjustments on both axes for accurate cursor control - PCJ 2155
- Megagrip VII - PC ..... £14.46  
Redesigned pistol grip, analogue joystick Horizontal/vertical trim adjustment - PCJ 3921
- Megagrip VIII - PC ..... £17.01  
Fast reaction analogue joystick that gives you the edge when needed - PCJ 3931
- Kraft Thunderstick - JS200 ..... £16.98  
Cursor centring adjustments, lightning fast trigger, optional suction feet - PCJ 5826
- Kraft OTC Thunderstick - JS900 ..... £42.51  
Programmable joystick with 8 function buttons to take over keyboard commands - PCJ 5834
- Autoset Joystick Game Card ..... £12.72  
Plug in and play joystick card with 2 ports and control software - PCJ 5853
- Autoset Pro Joystick Game Card ..... £18.68  
The best game card on the market. Plug in and play - 2 ports - PCJ 5861
- Skymaster Joystick - QS206 ..... £25.49  
High precision direction control mechanism, 4 fire buttons, 3 operating modes - PCJ 7206
- Wingman Extreme Joystick ..... £33.19  
Aerodynamically design, quick action trigger, 4 way switching for 360° viewing - PCJ 9664

## FLOPPY DRIVES

- Panasonic 5.25" PC 1.2Mb ..... £34.89  
Internal floppy drive for PCs that fits 95% of all makes - DRI 9752
- Sony 3.5" PC 1.44Mb ..... £21.28  
Internal drive intended for use in PC compatibles - DRI 9732
- Fitting Kit 3.5" Hard Drive ..... £8.51  
Fitting kit allowing 3.5" drive to be fitted into a 5.25" bay - DIA 8510

## MICE & T'BALLS



- ### MICROSPEED
- MicroTRAC Handheld Trackball ..... £42.51  
Fits in the palm of your hand and is left or right handed - MOU 5619
  - PC-TRAC Serial Trackball ..... £46.77  
Large 3 button trackball giving finger-tip control over all your applications - MOU 5626
  - PC-TRAC PS/2 Trackball ..... £51.02  
Large 3 button trackball giving finger-tip control over all your applications - MOU 5631
  - WinTRAC Trackball PD930 ..... £63.79  
Large 3-button quality trackball with "drag lock" function - MOU 5639
  - Replacement Mouse 250DPI ..... £13.57  
Can switch between 2 or 3 buttons Plug and play 250DPI tracking - MOU 5825
  - Mouse Deluxe 500DPI ..... £25.49  
Easy to install, most users can keep existing drivers, 500DPI tracking - MOU 5839

## LOGITECH

- Logitech Pilot Serial Mouse ..... £18.68  
Easy to use with 3 buttons and MouseWare Software - MOU 5026
- Logitech Pilot Mouse (PS/2) ..... £17.87  
The world's most popular mouse, Mouseport version includes MouseWare Software - MOU 5037
- Logitech Pilot Chroma ..... £21.23  
3 button higher performance mouse - green Supplied with mouse pad - MOU 5059
- Logitech Pilot Trackball ..... £25.49  
Serial 9-pin to 25-pin adaptor Includes MouseWare software - MOU 5094
- Logitech My Mouse ..... £18.72  
Mouse in the shape of a small rodent ideal for children of all ages - MOU 5101
- Logitech MouseMan ..... £29.74  
PS/2 mouse and software - MOU 5147



- 3 Button Mouse
  - Ergonomic Design
  - MouseWare Software
  - Serial & PS/2 Compatible
- £33.19**  
EXC VAT MOU 5102

## MICE & T'BALLS

- Logitech MouseMan Upgrade ..... £29.74  
Serial mouse and software - MOU 5148
- Logitech MouseMan Sensa ..... £33.19  
Black Chess Finish - MOU 5231
- Logitech TrackMan Marble ..... £58.72  
Designer trackball - MOU 5432
- Logitech MouseMan Cordless ..... £50.21  
Radio-linked mouse gets around obstacles that stops an infrared mouse - MOU 5156
- Logitech TrackMan Live ..... £118.30  
This is a cordless PC pointing device, sends up to 30ft without pointing - MOU 5426
- Logitech TrackMan II ..... £38.30  
Designed for even the most cluttered desks - Mouse remains stationary - MOU 5411
- Logitech TrackMan Portable ..... £33.19  
Shaped to fit the palm of either hand Includes easy-to-use software - MOU 5438
- Logitech TrackMan Voyager ..... £46.81  
Includes 6 - 9-pin Serial adaptor, case and user guides - MOU 5455
- Logitech Vista ..... £41.70  
Attractive and ergonomic trackball Provides hand and wrist support - MOU 5469

## MONITORS

### SILICA 14" S-VGA COLOUR



- Res. up to 1024 x 768 - 60Hz
  - Non-Interlaced
  - MPR-II
  - 28mm
- £149**  
EXC VAT MON 1514

- Silica 15" NI S-VGA ..... £219.00  
1280 x 1024 resolution non-interlaced 35-48KHz, 28mm dot pitch, - MON 1551
- 17" NI S-VGA ..... £499.00  
1280 x 1024 resolution non-interlaced 35-64KHz, 28mm dot pitch, - MON 1571

## PROCESSORS

- Texas Inst. 486C 33MHz CPU ..... £25.52  
486 compatible CPU running at 33MHz Turns a plug-in 386BX into a 486 compatible - CPU 3533
- Intel 486DX 100MHz Overdrive ..... £135.32  
For 486 5 volt based motherboards Fits into a 486 overdrive slot - CPU 1505
- Intel 486DX 100MHz CPU ..... £135.32  
For 486 5 volt based motherboards Fits in original 486 PGA slot - CPU 1510
- Intel Pentium 75MHz CPU ..... £149.00  
Fits in socket 5, 296 Pin, PGA (Plug-in), for 3.3v operation - CPU 4075
- Intel Pentium P24T Overdrive ..... £197.00  
Fits into 486SX25 or DX2-50 slot. For 5 volt motherboard - upgrades board to run at speed of Pentium 60MHz - CPU 1524

## PROCESSORS

- Intel Pentium 90MHz CPU ..... £237.45  
Multi-tasking P54C 3.3v - CPU 4090
- Intel Pentium 100MHz CPU ..... £326.81  
Fits in socket 5, 296 Pin, PGA, for 3.3v operation - CPU 4100
- Intel Pentium 120MHz CPU ..... £475.74  
Fits in socket 5, 296 Pin, PGA, for 3.3v operation - CPU 4120
- Intel Pentium 133MHz CPU ..... £594.89  
Fits in socket 5, 296 Pin, PGA, for 3.3v operation - CPU 4133

## RAM CHIPS



- 32K x 8-Bit SRAM ..... £9.00  
20ns Cache RAM - MEM 1828
  - 32K x 8-Bit SRAM ..... £15.00  
15ns Cache RAM TAG - MEM 1928
  - 1Mb x 9-Bit SIMM (3 Chip) ..... £29.79  
70ns - MEM 3639
  - 4Mb x 9-Bit SIMM (9 Chip) ..... £114.00  
36 Pin, 70ns - MEM 3849
  - 512K x 32-Bit SIMM ..... £59.00  
72 Pin, 2Mb, Parity - MEM 4052
  - 512K x 36-Bit SIMM ..... £69.00  
72 Pin, 2Mb, Parity - MEM 4056
  - 1Mb x 32-Bit SIMM ..... £118.30  
72 Pin, 4Mb - MEM 4132
  - 2Mb x 32-Bit SIMM ..... £254.47  
72 Pin, 8Mb - MEM 4232
  - 1Mb x 36-Bit SIMM ..... £125.11  
72 Pin, 4Mb, Parity - MEM 4136
  - 8Mb x 36-Bit SIMM ..... £799.00  
72 Pin, 32Mb, Parity - MEM 4836
- All RAM prices are subject to price fluctuations. Call for latest prices

## SCANNERS



- Fast Scanning - 6ppm
  - Integrated Software Package
  - 16.8 Million Colours
  - Plugs Into Parallel Port Interface
- £299**  
EXC VAT SCA 6561

- Logitech ScanMan 256 ..... £84.26  
Black & white scanner for Windows with Optical Character Recognition - SCA 6178
- Logitech ScanMan Easy Touch ..... £135.32  
Portable black & white scanner Includes Software - SCA 6202
- Logitech ScanMan Colour ..... £169.36  
Portable hand colour scanner with Optical Character Recognition - SCA 6237

ALL PRICES EXCLUDE VAT @ 17.5%



## MAIL ORDER • FREE DELIVERY

**0181-309 1111**

### THE SILICA SERVICE

Before you decide WHEN to buy, we suggest you consider WHERE to buy and protect your investment with a purchase from Silica. With our unrivalled experience and expertise, we will provide all the extra help, advice and new product information you may need both now and in the future. Buy direct, visit one of our stores, or return the coupon now and begin to experience the "Silica Service".

#### 17 YEARS EXPERIENCE

Silica has been established for over 17 years, longer than most other computer suppliers, and has a proven track record in professional computer sales.

#### OPEN UNTIL 7PM

Mail order lines are open Mon-Fri 9am to 7pm and Sat 9am to 5.30pm. Call your local store for shop opening times.

#### HOW TO PAY

We accept most major credit cards, cash, cheque or monthly terms (APR 19.9% - written quotes on request).

#### CREDIT TERMS AVAILABLE

10% deposit & 12, 24 or 36 monthly payments (APR 19.9%) or 0% interest available on selected products over £1000. Subject to status - Call for details.

#### WE PRICE MATCH

If before you make your purchase from a Silica store, you see the same goods offered at a lower price by a local competitor, we will match them on a Same Product - Same Price basis. For customers who order by telephone, we will match other mail order companies prices (including their delivery charge). All price matches are subject to our competitor having the goods in stock.

#### WE OFFER DISCOUNTS

To Business, Education and Government purchasers who place volume orders. Call 0181-308 0888.

#### WE SUPPORT YOU

Free Technical Helpline - 0181-309 1111 and Free brochures available on request.

MAIL ORDER & HEAD OFFICE: Silica House, Hatherley Road, Sidcup, Kent, DA14 4DX

## 22 STORES NATIONWIDE

CITY	ADDRESS	PHONE
BRISTOL	Debenhams - 1st Floor, St James Barton	0117-929 1021
CHELMSFORD	Debenhams - 1st Floor, 27 High St	01246 355511
CROYDON	Debenhams - 1st Floor, 11-31 North End	0181-888 4455
GLASGOW	Debenhams - 1st Floor, 97 Argyle St	0141-221 0088
GLOUCESTER	Debenhams - 1st Floor, Kings Square	0145-252 2121
GUILDFORD	Debenhams - 1st Floor, Millbrook	01483 301300
HARROW	Debenhams - 1st Floor, Station Rd	0181-427 4300
HULL	Debenhams - 1st Floor, Prospect St	01482 323151
IPSWICH	Debenhams - 1st Floor, Westgate St	01473 221313
LONDON	Silica - 52 Tottenham Court Rd	0171-580 4000
LONDON	Debenhams - 1st Floor, 334 Oxford St	0171-580 3000
LONDON	Harrods - 1st Floor, Knightsbridge	0171-730 1234
LUTON	Debenhams - 1st Floor, Amale Centre	01582 21201
MANCHESTER	Debenhams - 1st Floor, Market St	0161-832 8666
PLYMOUTH	Debenhams - 1st Floor, Royal Parade	01752 266666
ROMFORD	Debenhams - 1st Floor, Market Place	01708 766666
SHEFFIELD	Debenhams - 1st Floor, The Moor	0114-276 8611
SHEFFIELD	Debenhams - 1st Floor, Meadowside Ctre	0114-256 9779
SIDCUP	Silica - Silica House, Hatherley Rd	0181-302 8811
SOUTHAMPTON	Debenhams - 1st Floor, Queensway	01703 223888
SOUTHEND	Kedfries - 1st Floor, High Street	01702 462426
THURROCK	Debenhams - 1st Floor, Lakeside Centre	01708 863587



\*These stores carry a selected range only but products can be ordered in the stores via Mail Order



18 BRANCHES IN DEBENHAMS FREE DEMONSTRATIONS AVAILABLE

## FREE BROCHURES

CALL 0181-309 1111 OR RETURN THE COUPON

To: SILICA, PCW-1295-240, Silica House, Hatherley Road, Sidcup, Kent, DA14 4DX

Please send me a general PC brochure - free of charge

Please send detailed information on the following products:

.....

Mr/Mrs/Miss/Ms: ..... Initials: .....

Surname: .....

Company (if applicable): .....

Address: .....

.....

Postcode: .....

Tel (Home): .....

Tel (Work): .....

Which computer(s), if any, do you own? .....



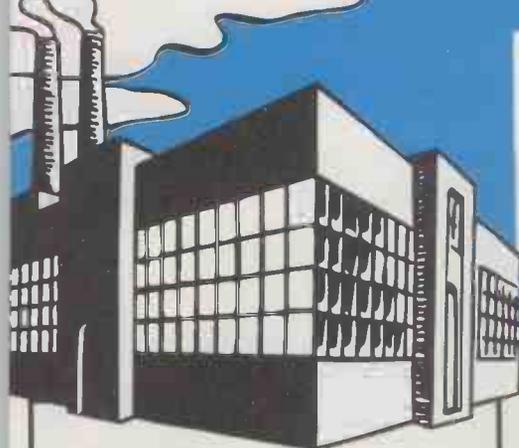
02105

EOAE: Advertised prices and specifications may change - Please return the coupon for the latest information.

SILICA IS A DIVISION OF PRODIGY PLC

# FACTORY PRICES

Leading brand PC components at the lowest prices in the UK



MicroSolutions  
Computer Products



At Express Micro we select the best value for money components and peripherals giving you the finest performance at an unbeatable price. With famous names like Intel, AMD, Cyrix and IBM you know you're getting the best possible quality. Add to that our fast

delivery service, excellent technical support and friendly sales team you know you've come to the right place. And don't forget if you do find it cheaper - call us, we will match it!



## CONTROLLERS

IC80	ISA - I/O & IDE	
	IDE 2FDD/2HDD	£6
IC87	AT I/O Card 2S, (16550 UART) 1P, 1G	£8
IC90	ISA Super I/O 2FDD/2HDD/2S, 1P, 1G	£9
IC93	ISA Multi I/O 2x16550, 1xParallel	£11
	VLB - I/O & E-IDE	
IC75	Vesa Super I/O Card	£11
IC85	Vesa Super I/O (Mode 3) 4HDD/2FDD/2S, 1P, 1G E-IDE	£13
IC56	Vesa Super I/O (Mode 3,4,5) 4HDD/2FDD/2S, 1P	£24
IC60	Vesa Super I/O (Mode 3) 4HDD/2FDD/2x16550/1ECP/EPP	£25
IC20	Vesa Caching Controller	£48
	PCI - I/O & IDE	
IC26	PCI IDE Card	£11
IC10	PCI Multi I/O W/CMC Chip	£21
	SCSI CONTROLLERS	
IC50	PCI NCR SCSI Controller	£35
IC15	Vesa SCSI Controller	£53
IC22	Future Domain PCI SCSI Kit	£99
IC25	Adaptec 1542CF SCSI Card Only	£119
IC30	Adaptec 1542CF SCSI Kit	£157
IC35	Adaptec 2842 VL SCSI Kit	£163
IC40	Adaptec 2742T EISA SCSI Kit	£229
IC45	Adaptec 2940 PCI SCSI Kit	£175
IC47	Adaptec 2940W SCSI Kit	£209
IC42	PCMCIA Adaptec 460 SCSI	£129
IC48	Adaptec 348 Parallel SCSI	£85
IC49	Adaptec 358 Parallel SCSI (Enhanced)	£115
IC94	Vesa EIDE & SCSI Controller with adaptec Chipset & EZSCSI Software	£99

## CPUs

	486	
C14	Intel SX 2-50 CPU	£25
C10	Intel SX-25	£35
C30	Cyrix/SGS Thompson DX2-66 CPU 5V	£39
C31	IBM Blue Lightning DX2-66 3.3V	£32
C35	Intel DX2-66/Intel Overdrive DX2-66	£59
C40	AMD DX2-80 CPU	£54
C42	Cyrix/SGS Thompson DX2-80 CPU	£49
C39	Texas Instruments DX 2-80 3.45V	£35
C43	Intel DX4-75 CPU	£99
C44	AMD DX4-100 CPU 3.3V	£64
C46	Cyrix DX4-100 CPU	£69
C45	Intel DX4-100 CPU	£109
	PENTIUM	
C75	Pentium 75 CPU	£122
C90	Pentium 90 CPU	£185
C100	Pentium 100 CPU	£249
C120	Pentium 120 CPU	£379
C130	Pentium 133 CPU	£479

CALL FOR LATEST PRICES THEY COULD BE LOWER!

## MEMORY

	30 PIN SIMMS	
ME03	256K SIMM 70ns	£7
ME5	1Mb x 9 3 chip	£25
ME10	4Mb x 9 3 chip	£85
	72 PIN SIMMS	
ME15	4Mb (1 x 32) 72 Pin SIMM	£85
ME17	4Mb (1 x 36) 72 Pin SIMM	£102
ME20	8Mb (2 x 32) 72 Pin SIMM	£179
ME22	8Mb (2 x 36) 72 Pin SIMM	£189
ME25	16Mb (4 x 32) 72 Pin SIMM	£289
ME27	16Mb (4 x 36) 72 Pin SIMM	£299
ME30	32Mb (8 x 32) 72 Pin SIMM	£625
ME32	32Mb (8 x 36) 72 Pin SIMM	£649
	72 PIN EDO RAM	
ME18	4Mb 72 Pin EDO SIMM	£102
ME24	8Mb 72 Pin EDO SIMM	£215
ME29	16Mb 72 Pin EDO SIMM	£459

OUR PRICES FOR MEMORY ARE CHANGING ALL THE TIME! CALL US FOR UP-TO-DATE PRICES ON ALL THE POPULAR CONFIGURATIONS!

## MOTHERBOARDS

	VESA LOCAL BUS (3 VL SLOTS)	
ME25	486 DX/SX, 4x30 & 2x72 PIN SIMM 0K Cache, Zif	£35
ME12	486 DX/SX, 4x30 & 2x72 PIN SIMM 128K Cache, Zif	£45
M35	486 DX/SX, 4x30 & 2x72 PIN SIMM W/Back Cache, Zif	£40
M37	486 DX/SX, 4x30 & 2x72 PIN SIMM 256K Cache, Zif	£62
	486 PCI BUS	
MA0	486 DX/SX, PCI Green 256K Cache	£69
MA3	VIP 486DX/SX, W/B Cache, Zif	£52
MA5	VIP 486DX/SX, 256K Cache, Zif	£71
	PENTIUM PCI BUS	
M91	Intel Triton Chipset Pentium 75/90/100/120/133, 256K Cache On-board support for EDO RAM	£139
M95	Intel Triton Chipset Pentium, 75/90/100/120/133, 512K Cache On-board support for EDO RAM	£169
M92	Intel Triton Chipset, 256K Pipeline burst Cache, support for EDO RAM, VRM Socket giving support for the next wave of Pentium CHIPS This board is simply the quickest & best board on the market today!	£189
	MATH CD-PROCESSORS	
MC5	387SX & 487SLC Co-Pros (16Mhz-40Mhz)	£19
MC10	387SX & 486DLC Co-Pros (16Mhz-40Mhz)	£19
	HEAT SINKS AND FANS	
HS5	Heat sink and fan for 486	£3
HS10	Heat sink and fan for 486	£4
HS20	Heat sink and fan for Pentium 75/90/100/120/133	£6
	INTEL OVERDRIVE CHIPS	
OP5	Overdrive 486SX2-50MHz	£75
OP10	Overdrive 486DX2-50MHz	£78
OD15	Overdrive 486DX2-66MHz	£99
OD20	Overdrive 486DX4-100MHz	£139
OD25	Pentium Overdrive 63MHz	£195
	CYRIX UPGRADE CHIPS	
CUS	Cyrix 386SX-20 to 486SX-40MHz	£125
CU10	Cyrix 386SX-25 to 486SX-50MHz	£145
CU15	Cyrix 386DX-20 to 486DX-40MHz	£125
CU20	Cyrix 386DX-25 to 486DX-50MHz	£145
CU25	Cyrix 386DX-33 to 486DX-66MHz	£149

## CASES

	VALUE SERIES (INC. 200W POWER SUPPLY)	
CSR2	200W PS2 Type Power Supply	£14
CS5	Value Mini Tower & LED	£24
CS10	Value Desktop & LED	£26
CS15	Value Full Tower & LED & 230W PSU	£39
	DELUXE SERIES (INC. 200W POWER SUPPLY)	
CS70	Deluxe Mini Tower Case & LED	£33
CS75	Deluxe Desktop Case & LED	£35
CS79	Deluxe Full Tower Case & LED	£59

## CABLES & ACCESSORIES

ACS	1.5m Parallel Printer Cable	£2
AC10	5m Parallel Printer Cable	£3
	2 & 4 Port Auto Printer Switch Boxes	
	• Automatic switching between 2 computers and 1 printer	
	• No external power supply needed	
	• For parallel port (DB25 Connector)	
	• Manual switching possible	
	<b>AUTO PRINTER SWITCH BOXES FROM £8</b>	
AC15	2-1 Auto Printer Switch Box	£8
AC20	4-1 Auto Printer Switch Box	£14
AC25	25 Pin Male to 25 Pin Male Cable (suitable for above printer switch box)	£2
AC40	Floppy Disk Cable	£3
AC35	IDE Cable	£3
AC50	PC to Monitor Power Cable	£4
AC55	British Mains 3 Pin Fused Power Cable	£3.50
AC60	Keyboard Extension Cable	£3.50
AC65	VGA/SVGA Monitor Extension Cable	£5
AC45	PS/2 Keyboard Adaptor (Std. keyboard to PS/2)	£5
AC70	High Quality Mouse Mat	£2

## INPUT DEVICES

K5	Metal Base 102 Key UK Keyboard	£9
K6	Mitsumi 102 Key UK Keyboard	£10
K10	Click Action 102 Key UK Keyboard	£14
K20	Fujitsu 4870 Click Keyboard	£16
K25	Fujitsu 4700 Click Keyboard	£26

## Microsoft Natural Keyboard

- Unique contoured design - encourages a balanced, more natural hand and wrist position
- 104 key design - extra function keys
- Intellitype software - a Windows based utility for customising the way you work



K30	Microsoft Natural Keyboard	£64
AC45	PS/2 Keyboard Adapter	£5
	MICE	
M10	2-Button Serial Mouse with driver software	£4
M11	Logitech Pilot Mouse	£15
M12	Mitsumi High Quality Serial Mouse	£6.50
M15	Microsoft Ergonomic Mouse 2.0	£19
AC75	Trust Joyfighter 100 Joystick This joystick features switchable autofire and 2 fire buttons. Rugged construction	£6.50
AC85	Trust Padfighter 200 Joypad Designed to be connected to any joystick port, to increase reaction speeds with any game The pad is subdivided into control and fire sections. Also include auto fire feature	£6.50
AC86	Trust Keyboard Emulator Pad 150 Specially designed for those games that require the use of the computer keyboard. Keystroke learning function. Key combinations for upto 3 different games can be stored. Can use keyboard simultaneously with this pad.	£17
AC87	Trust Wireless Pad Fighter 250 Features same as Padfighter 200 except with no wires! Works by infra-red remote control	£30
	DIGITISING TABLETS	
DT10	Trust 12 x 12 Digitising Tablet 4 Button Pack, Light Pen, Templates for Autocad, etc	£89
DT5	Trust 18 x 12 Digitising Tablet 8 Button Pack, Light Pen, Windows 3x drivers, Templates for Autocad etc	£158

## Trust 18x12 Digitising Tablet

Now you can do high-precision drafting in many Windows applications

- 18"x12" drafting service
- Resolution: 1016dpi
- Windows 3.1x drivers
- Summa MM series compatible
- 6-button puck



## OPTICAL DRIVES

OP5	Fujitsu 230MB 3.5" Internal Optical Drive	£389
OP15	Fujitsu 230MB 3.5" Parallel Port Optical Drive	£575

## FLOPPY DISK DRIVES

AC80	Box of 10 Formatted 3.5" Diskettes 1.44 MB OEM	£4
AC81	FUJI Branded High Quality Box of 10 1.44MB Diskettes	£5.75

PLEASE NOTE! Specifications are liable to change without prior notice. All trademarks are recognised. Offers subject to availability. All prices exclude delivery charge & VAT at 17.5%. E & OE. \*Price match and 24 hour delivery subject to terms and conditions available upon request.



# DIRECT FROM CHOICE



All available ex-stock for next-day shipping\* Making the right Choice is easy!

**COLORADO**  
MEMORY SYSTEMS INC.

**Seagate**

**Microsoft**

**NOVELL**

## MONITORS

### Smile 15" XGA Colour Monitor

- FST No Reflection Glare Screen
- 0.28 Dot Pitch
- Microprocessor Control LCD Display
- Non-interfaced to 1280x1024 resolution



SMILE 15" XGA MONITOR  
**£229**

SMILE (MID-RANGE QUALITY MONITORS)	
M05	9" Mono SVGA (MA-0933) .....£68
M09	9" Digital Control Colour SVGA .....£276
M015	14" SVGA Colour 0.28dp (NI 800x600) (CK-1450-28) .....£135
M025	14" SVGA Colour 0.28dp (NI 1024x768) MPR2 (CK-1451) .....£147
M030	15" SVGA Colour 0.28dp (NI 1024x768) MPR2 (CA-1515VL) .....£199
M035	15" SVGA Col 0.28 (NI 1024x768) MPR2 Digital (CA-1515DL) .....£205
M040	15" XGA Col 0.28 Digital (NI 1024x768) MPR2 (CA-1506) .....£228
M045	+ LCD Display Panel (NI 1280x1024) .....£397
M045	+ LCD Display Panel (NI 1280x1024) MPR2 (CA-1716) .....£397
M050	17" XGA Col 0.26 Digital LCD (NI 1280x1024) MPR2 (CA-1718) .....£438
M060	+ LCD Display Panel (NI 1280x1024) .....£438
M060	20" XGA Col 0.28dp Digital MPR2 (NI 1024x768) .....£759
M060	+ LCD Display Panel (NI 1280x1024) .....£759
TRUST (MID-RANGE QUALITY MONITORS)	
M07	14" Mono SVGA .....£59
M012	14" 0.31dp SVGA (NI 800x600) Colour .....£123
M017	14" 0.28dp SVGA (NI 800x600) Colour .....£145
VIEWSONIC (MID-TO HIGH-RANGE MONITORS)	
M027	14" V6 MPR2 (NI 1024x768) .....£148
M031	15" V15S MPR2 (NI 1024x768) .....£198
M046	17" V17 MPR2 (NI 1280x1024) .....£489
M065	20" V20 MPR2 (NI 1600x1200) .....£978
M070	21" V21 MPR2 (NI 1600x1200) .....£1329
SONY (HIGH-RANGE MONITORS)	
M075	15" CPDSF1 0.25dp MPR2 (NI 1024x768) .....£299
M080	17" CPDSF1 MPR2 (NI 1280x786) .....£589
M085	17" GDM17SE1T MPR2 (NI 1280x786) .....£805
M090	20" GDM20SE1VT MPR2 (NI 1280x1024) .....£1299
M095	20" GDM2038 MPR2 (NI 1600x1200) .....£1380

## SCANNERS

### Trust Colour Hand Scanner

- 16.7 million colours
- 400dpi max. resolution
- Scan merging scanning in several passes
- 256 grey scale
- TWAIN compatible

TRUST COLOUR HAND SCANNER  
**£75**

TRUST SCANNERS	
SC5	Trust 256 Greyscale Hand Scanner .....£36
SC10	Trust 16.7M Colour Hand Scanner .....£75
SC15	Trust Imagery 1200 Colour Flatbed Scanner .....£289
SC20	Trust Imagery 2400 Colour Hand Scanner .....£363
SC25	Transparency Kit for 2400 .....£173

## PRINTERS

HEWLETT PACKARD	
TPR10	Hewlett Packard Deskjet 600 Printer .....£209
PR15	Hewlett Packard Deskjet 660C Colour Printer .....£275
PR20	Hewlett Packard LaserJet 4/5L .....£365
PR32	Colour Upgrade for DeskJet 600 .....£28

CANNON	
PR50	Mono Portable Printer BJ30 .....£139
PR55	BubbleJet Printer BJ200E .....£160
PR60	Colour Portable Printer BJC70 .....£219
PR65	BubbleJet Printer BJC4000 .....£239
PR70	Colour Printer BJC4000 .....£222
PR75	Colour InkJet BJ600E .....£323

CONSUMABLES	
PR5	Toner Cartridge for HP4 Laser .....£36
PR7	Toner Cartridge for HP4 Laser .....£36

## SCSI HARD DRIVES 3.5

CONNER	
HD45-C	CFP1060 1GB SCSI .....£249
HD55-C	CFP21055 2.1GB SCSI .....£499
HD60-C	CFP42075 4.2GB SCSI .....£749
SEAGATE	
HD45-S	ST31230 1GB SCSI .....£289
HD55-S	ST32430 2.1GB SCSI .....£599
HD60-S	ST15230 2.1GB SCSI .....£799
MICROPOLIS	
HD50-MS	MIC4221 2GB SCSI .....£579
HD55-MSAV	MIC4221AV 2.1GB SCSI AUDIO VISUAL .....£599
HD60-MS	MIC3243 4.35GB SCSI .....£759
HD60-MSAV	MIC3243AV 4.35GB SCSI AUDIO VISUAL .....£799
HD65-MS	MIC1991 9.1GB SCSI .....£1,425

## 2.5 IDE HARD DRIVES

HITACHI (12.5mm High)	
HD35-H	DK221A-34 340MB .....£149
HD40-H	DK211A-51 540MB .....£199
HD45-H	Hitachi 1GB .....£CALL
TOSHIBA (12.5mm High)	
HD40-T	MK2426FC 540MB IDE .....£207

## TAPE DRIVES

### Iomega ZIP Drives

- Portable
- Expand your Hard Drive without limits
- Parallel or SCSI
- Easy Hard Drive Back Up
- Interchangeable 100MB Disks (200MB with Compression)

IOMEGA ZIP DRIVES  
**£159**

T7	Parallel Port ZIP Drive .....£159
T10	SCSI Port ZIP Drive .....£159
T72	100MB ZIP Disk .....£14.50

IOMEGA	
T7	420MB Internal Tape Drive .....£75
T12	420MB External Tape Drive .....£175
T80	DITTO 800 Internal Tape Drive .....£139
T85	DITTO 800 External Tape Drive .....£225

COLORADO	
T11	Jumbo 350MB Tape Drive .....£73
T13	Jumbo 700MB Tape Drive .....£139
T16	Trakker 350 External Tape Drive .....£145
T17	Trakker 700 External Tape Drive .....£189
T65	T1000 800MB Travan Tape Drive .....£139

CONNER	
T50	Tape-Stor 420MB Tape Drive .....£89
T60	Tape-Stor Travan 800 Tape Drive .....£149
T61	Tape-Stor Travan 800 External Tape Drive .....£239
T53	2GB Turbo DAT Drive .....£525
T54	4GB Turbo DAT Drive .....£599

EKABYTE	
T55	4200 SCSI DAT Drive .....£525

TANDBERG	
T56	500MB SCSI Tape Drive .....£329
T57	1.2GB SCSI Tape Drive .....£419

MEDIA	
T35	DC2120 Unformatted Tape .....£7
T40	DC2120 Formatted Tape .....£8.50
T42	QIC-WIDE 420MB Tape .....£14
T43	2GB 4mm DAT Tape .....£7
T45	MC3000XL 700MB Tape .....£15

### Colorado 700MB Trakker External Tape Drive

- Reliable mass storage backup system
- Fast IDE interface • Low cost storage



TRAKKER 700 EXT. TAPE DRIVE  
**£189**

## 3.5 IDE HARD DRIVES

MAXTOR	
HD25-M	7420AV 420MB .....£101
HD30-M	7546AV 540MB EIDE .....£105
HD38-M	7850AV 850MB EIDE .....£127
HD40-M	71260AV 1.2GB EIDE .....£165
HD43-M	71600AV 1.6GB EIDE .....£289
CONNER	
HD25-C	CFA420A 425MB E-IDE .....£87
HD30-C	CFA540A 540MB E-IDE .....£98
HD34-C	CFA635A 634MB E-IDE .....£113
HD38-C	CFA850A 850MB E-IDE .....£122
HD40-C	CFA1275A 1.2GB E-IDE .....£155

SEAGATE	
HD25-S	ST3491 420MB 14ms .....£99
HD30-S	ST3660A 540MB EIDE .....£99
HD40-S	ST1220A 1GB EIDE .....£159

WESTERN DIGITAL	
HD34-W	AC2635 635MB EIDE .....£129
HD35-W	AC2700 730MB 12ms .....£129
HD38-W	AC2850 850MB EIDE .....£129
HD40-W	AC31200 1.2GB EIDE .....£190
HD43-W	AC31600 1.6GB EIDE .....£299

### Maxtor 850MB E-IDE Hard Disk Drive

- Fast E-IDE interface
- 11MS access time
- Value for money: only 14.9p per megabyte



MAXTOR 850MB E-IDE HD  
**£127**

**Maxtor**

**CALL FOR LATEST PRICES THEY COULD BE LOWER!**



Turn the page for more factory-priced offers from Choice Peripherals

**CALL NOW**  
**01909**  
**530 242**  
or FAX 01909 530 261

Choice Peripherals  
Units 1&2,  
Highgrounds Way,  
Rhodesia,  
Workshop, Notts,  
S80 3AF.



**"Get Factory Prices Direct From Choice Peripherals"**



# FACTORY PRICES

Leading brand PC components at the lowest prices in the UK



**MicroSolutions**  
Computer Products



## The Choice Charter

- NO Credit Card Surcharges
- Same Day Shipping
- Lowest Prices - Guaranteed\*
- Massive Choice
- Huge Stocks
- Fast & friendly service



## MULTIMEDIA PRODUCTS

### SOUND CARDS

SoundBlaster Compatible	
S020	Expert Media 16-Bit Sound Card with Panasonic/Sony/Mitsumi Interface .....£30
S022	Elite 16-Bit Sound Card with Panasonic/Sony/Mitsumi/IDE Interface .....£33
S022	18-Bit Sound Card with speakers .....£42
S025	Trust Sound 16 Plus 16-Bit Sound Card with 4 CD-ROM Interfaces .....£43
S025	Wave Table Upgrade for Trust Sound 16 Plus .....£92
S035	Trust Sound Wave 32 (Wave Table Card) with 4 CD Interfaces & IDE .....£76
Creative Labs Sound Blaster Sound Cards	
S060	Sound Blaster 16 Value with new Vibra Chipset .....£55
S063	Sound Blaster 16 Pro .....£95
S064	Sound Blaster 16 Pro ADSP .....£115
S063	Sound Blaster 16 SCSI 2 .....£109
S065	Sound Blaster Wave Blaster Upgrade Card .....£115
S065	Sound Blaster AWE 32 Value Edition .....£119
S067	Sound Blaster AWE 32 Full Edition .....£159

### Sound Blaster AWE 32 Full Version

- Desk Standing Microphone
- 32 Voice Synthesiser
- Reverb, Chorus & Qsound
- Upgradeable Memory
- Includes Comprehensive Software Package
- 128 Instruments & 6 Drum Kits



### Creative Labs Multimedia

S075	Video Blaster SE100 .....£169
S097	300 Blaster Game Player .....£285
Trust Multimedia	
S090	Trust Video Master Game Player VGA to TV .....£69
S095	Trust Video Master MPEG Player .....£168
S0100	Trust PCTV Video Master - Plays TV in Windows .....£149
S0101	Trust Teletext Module for PCTV Card .....£39
S0103	Trust Cinema Module for PCTV Card - Plays CDi & MPEG Movies .....£109
S0102	Trust FM Radio Card - Listen to the radio on your PC .....£29

### Trust Home PC/TV Card

- Watch television or video on your PC
- On screen display for all functions
- Max resolution 1024x768 (SGVA)
- Includes Windows software and cables



### Midi Keyboards, etc

S096	Trust Home Music Maker .....£58
S097	Trust Professional Music Maker .....£105

### Multimedia Speakers

SP5	Trust Soundwave 40 15W Speakers .....£12
SP10	Trust Soundwave 30 25W Speakers .....£18
SP15	Trust Soundwave 20 25W Speakers with stands .....£19
SP20	Trust Soundwave 10 80W Speakers .....£30
SP22	Trust Soundwave 240 240W Speakers .....£49
SP24	Yamaha M5 6W High Quality Speakers .....£36
SP25	Yamaha M10 10W High Quality Speakers .....£43
SP30	Yamaha MSW10 25W Sub Woofer System .....£75

### Yamaha MSW 10 Subwoofer System

- For the ultimate multimedia sound
- Add to your existing speakers
- Active servo technology for bass response
- Magnetically shielded
- 25 watts high power output
- Automatic power switch



### VIDEO CARDS

### Diamond Stealth 64D 1MB Video Card

STEALTH 64D 1MB  
£85

ISA Video Cards	
V9	Mono Card with Printer Port .....£7
V5	ISA 256k SVGA Card .....£16
V10	ISA 512k SVGA Card .....£22
V20	ISA Cirrus Logic 1Mb 5422 16.7M Col. Windows Accelerator .....£37

### Vesa Local Bus

V25	VESA Trident 1Mb 9440 Windows Accelerator .....£52
V30	VESA Cirrus Logic 1Mb 5428 Windows Accelerator .....£45
V32	VESA Cirrus Logic 1Mb 5429 Windows Accelerator .....£45

### PCI Video Cards

V45	PCI Trident 1Mb 9440 Windows Accelerator .....£48
V47	PCI Ali 1Mb Windows Accelerator .....£50
V50	PCI S3 Trio64 1Mb Windows Accelerator .....£64

### Diamond Video Cards

V31	VESA Diamond Stealth SE 1MB Windows Accelerator .....£64
V33	PCI Diamond Stealth 64D 1Mb Windows Accelerator .....£64
V35	VESA Diamond Stealth 64D 1Mb Windows Accelerator .....£84
V35	PCI Diamond Stealth 64D 1Mb RAM Windows Accelerator .....£84
V36	PCI Diamond Stealth 64D 2Mb RAM Windows Accelerator .....£115
V62	PCI Diamond Stealth 64D VDRAM 2Mb .....£189
V65	1Mb DRAM Upgrade .....£49
V71	Stealth 64 Video VRAM 2Mb Upgrade Module .....£77

### VideoLogic Video Cards

V85	Grafix Star 300 1MB PCI .....£79
V90	Grafix Star 500 1MB PCI inc. AVI scaling .....£119
V95	Grafix Star 700 2MB VRAM PCI inc. AVI scaling .....£219

### VideoLogic Grafix Star 700

- "Personal Computer World" Editors Choice (Nov 95)
- 16.7 Million Colours at 1600x1200 Resolution
- Uses S3 Vision968 High Performance Graphics Accelerator
- Refresh Rates upto 120Hz
- Includes Comprehensive Software Package
- 5 Year Warranty, Teh. Support, BBS
- Expandable to 4Mb



### CD-ROM DRIVES

### TOSHIBA Quad Speed IDE CD-ROM

- 600KB/s data transfer rate • Fast IDE interface
- Digital audio output • MPC2 and PhotoCD compatible

PACE 14400 FAX/MODEM  
£139

C005	3 to 1 CD-ROM Interface Card Sony/Mitsumi/Panasonic .....£10
C025	Panasonic CR562B Dual Speed .....£45
C075	Mitsumi Quad Speed FX-4000 IDE .....£99
C077	Toshiba XM5302B Quad Speed IDE .....£114
C078	NEC Quad Speed IDE .....£105
C081	Vertos Quad Speed IDE Sony Optics .....£95
C092	Trust Carousel Quad Speed inc Free CD .....£105
C091	Pioneer DR-U124X-5 Quad Speed IDE .....£109
C095	MicroSolutions BackPack Quad Speed External .....£245

### SCSI CD-ROM DRIVES

C0150	Nakamichi MBR-77 CD Stacker Dual Speed .....£215
C079	Toshiba SCSI Quad Speed .....£160
C0105	Toshiba XM3601B Internal Quad Speed (4.4X) .....£206
C0110	Toshiba XM3601B External Quad Speed (4.4X) .....£195
C096	Pioneer DR-U124X-4 Internal Quad Speed (4x4X) .....£199
C047	Pioneer DRM-604X Quad Speed 6 Disk Jukebox Drive .....£489

## FAX MODEMS/MODEMS

### Pace 28800 Fax/Modem

- 28800 Send and Receive
- Lifetime Warranty
- FREE Compuserve Membership and £10 FREE usage
- Includes Windows Fax and Communication Software
- V.42/V.42bis Error Correction

PACE 28800 FAX/MODEM  
£139

F125 Pace 28800 Fax/Modem .....£139

### ZOLTRIX FAX MODEMS Inc. Cables, Windows Fax & Comms Software

F10	Internal 14400 V17 V42Bis V32Bis Card .....£48
F12	Internal 14400 External Fax Modem V17 V32Bis V42Bis .....£55
F15	Internal 14400 Fax/Voice Card .....£53
F20	Internal 28800 VFast Card V34 .....£87
F60	External 28800 VFast Card V34 .....£90

### TRUST FAX MODEMS (BART) Inc. Cables, Windows Fax & Comms S/W

F25	Internal 14400 Fax/Modem Card .....£66
F66	External 14400 Fax/Modem .....£81
F66	Internal 28800 Fax/Modem Card .....£128
F70	External 28800 Fax/Modem .....£130

### US ROBOTICS (BART)

F80	Sportster 14,400 Fax/Modem Card .....£105
F80	Sportster 14,400 External Fax/Modem .....£105
F90	Sportster 28,800 Fax/Modem Card .....£156
F95	Sportster 28,800 External Fax/Modem .....£156
F100	Worldport Pocket Duel Standard .....£129
F115	Worldport PCMCIA 2496 + Fax .....£129
F120	Worldport PCMCIA V34 + Fax .....£169



## STEALTH 64 VIDEO VRAM

### NEW! Diamond Stealth 64 Video VRAM Card

Advanced 64-bit technology and high-speed VRAM, offering unequalled performance in DTP, etc.

- Supports a 24-bit display at 800x600
- Maximum resolution of 1280x1024 with 65,536 colours and a top refresh rate of 120Hz
- Drivers for Windows 3.1, OS/2 2.1 & 3.0.



Personal Computer World



OUR PRICES ARE CHANGING ALL THE TIME!  
CALL US NOW TO GET THE MOST UP-TO-DATE PRICES ON ALL THE POPULAR MULTIMEDIA PRODUCTS!

### NEW! ZOLTRIX 14,400 Full-Featured Budget Voice Fax/Modem System

- Automatically detects and routes incoming voice, fax and data calls to the correct module of integrated fax, data or voice
- Create up to 999 voice mailboxes, each with a personal mailbox greeting message
- Listen to voice messages through the handset, speakers or via a sound card
- Notifies you of received messages and logs all incoming messages for each mailbox
- 14,400bps full duplex data: V22bis and V32bis data
- MNP5/V42bis data compression
- Includes: telephone plug & cable, software and manual.

14,400 VOICE FAX/MODEM  
£55



PLEASE NOTE! Specifications are liable to change without prior notice. All trademarks are recognised. Offers subject to availability. All prices exclude delivery charge & VAT at 17.5%. E & OE. \*Price match and 24 hour delivery subject to terms and conditions available upon request.



# DIRECT FROM CHOICE



All available ex-stock for next-day shipping\* Making the right Choice is easy!

**COLORADO**  
MEMORY SYSTEMS INC.

**Seagate**

**Microsoft**

**NOVELL**

## NETWORKING

CHOICE ETHERNET CARDS	Price
ISA NE2000 Compat. (BNC) - Jumperless	£16
ISA NE2000 Compat. (BNC/RJ45) - Jumperless	£18
VESA NE2000 Card (BNC/RJ45)	£46
PCI NE2000 Card (BNC/RJ45)	£65
Parallel Port Pocket NE2000 (BNC/RJ45)	£49
PCMCIA NE2000 (BNC/RJ45)	£79
Trust Novell Print Server	£169
NE2000 BOOT ROM	£5

3-COM ETHERNET CARDS	Price
3COM Etherlink III 3C509 ISA (BNC)	£62
3COM Etherlink III 3C509 ISA (RJ45)	£62
3COM Etherlink III 3C509 ISA Combi (BNC/RJ45)	£75
3COM Etherlink III 3C509 ISA BNC 5 Pack	£335
3COM Etherlink III 3C509 ISA RJ45 5 Pack	£335
3COM Etherlink III 3C509 ISA Combi 5 Pack	£355
3COM Etherlink III 3C579 EISA BNC	£139
3COM Etherlink III 3C579 EISA RJ45	£139

HUBS & REPEATERS	Price
Trust 8 Port Smart Hub	£92
Trust 16 Port Smart Hub	£173
Trust 2 Port Ethernet Repeater	£104
Trust 6 Port Ethernet Repeater	£119

**Trust 16 Port Smart Hub**

- 16 UTP port concentrator with fault isolation
- 5-step LED metre for charging and "collision rate"
- 10 Mbit per second • Processes all ethernet packages

**£173**

CABLES & TOOLS, ETC	Price
100M RG58 Coax Cable	£21
UTP 1000FT Cable-Easy Pull Box Stranded Cat 5	£60
BNC Plug Crimping Tool	£9
Coax Stripper Tool	£8
RJ45 Crimp Tool	£7
BNC Crimp Plug	£1
BNC T-Piece	£1
BNC In-Line Coupler	£1
BNC Terminator-50 Ohm	£1
UTP 3MTR Drop Connector Cable - Cat 5	£3
UTP 5MTR Drop Connector Cable - Cat 5	£4
UTP 7MTR Drop Connector Cable - Cat 5	£5
UTP/RJ45 Crimp Plug	£0.25

TRUST ENERGY PROTECTOR SERIES OF SMART UPS	Price
Energy Protector 400VA UPS	£104
Energy Protector 650VA UPS	£139
Energy Protector 1200VA UPS	£242
Energy Protector Monitor Card & Shutdown Software	£15

## KINGSTON NETWORKING

**Kingston ISA COMBI CARD**

- QST Art Installation Utility with Mouse Support
- Supports all popular network operating systems inc. Windows, OS/2 Warp and Novell
- Lifetime Warranty • FREE Kingston Technical Support

**£29**

ISA Combi Card	£29
PCI Combi Card	£65
8 Port Smart Hub	£95
8 Port Stackable Smart Hub	£105
16 Port Smart Hub	£175

## SOFTWARE

GENERAL OEM	Price
Encarta 95	£25
MS CD-ROM Sampler	£5
MS Works on CD V3.0	£19
Microsoft Golf	£19
MS Dangerous Creatures	£19
MS Family Bundle (includes all of above)	£49
Lotus SmartSuite V3 CD-ROM	£129
CD Tower Disk Storage Rack (60 CD's)	£16
MS Value Pack on 3.5" Floppy (inc. Golf, Money, Works & Publisher)	£75

WINDOWS 95 ALL RETAIL BOXED WITH DISCS & MANUAL	Price
MS Windows 3.x to Windows 95 Upgrade on CD/3.5"	£59
MS DOS to Windows 95 Upgrade on CD/3.5"	£119
MS Plus for Windows 95 on CD/3.5"	£29
MS Access for Windows 95 on 3.5"	£229

## UPGRADE TO WINDOWS 95 FOR ONLY

Windows 95 is the most important Windows upgrade ever! It replaces Windows 3.1, Windows for Workgroups 3.11 and all versions of MS-DOS. With its new 32-bit architecture, it's faster, easier and more enjoyable to work with. Windows 95 has an easier-to-use interface that lets you use long file names and gives you one-click access to all of your documents and programmes via the Start button. It's also ready for the new Plug & Play technology, automatically connecting with compatible disk drives, sound cards and other peripherals.

- S100 MS Windows 3.x to Windows 95 Upgrade on CD .....£59
- S105 MS Windows 3.x to Windows 95 Upgrade on 3.5" .....£59

**MS Publisher for Windows 95**

The perfect tool for creating newsletters, brochures and flyers - quickly and easily. You don't need design experience, Publisher's award-winning power and ease of use allow even novices to create professional publications cost-effectively.

**£62**

S110 MS DOS to Windows 95 Upgrade on CD	£119
S115 MS DOS to Windows 95 Upgrade on 3.5"	£119
S120 MS Plus for Windows 95 on CD	£29
S125 MS Plus for Windows 95 on 3.5"	£29
S130 MS Access for Windows 95 on CD	£229
S135 MS Access for Windows 95 CCP Upgrade on 3.5"	£107
S140 MS Publisher for Windows 95 on 3.5"	£62

**MS Office for Windows 95**

MS Office 95 contains four full-featured Windows 95-ready applications. MS Word, MS Excel, MS Schedule and MS Powerpoint. It handles all your word processing, spreadsheets, presentation graphics and personal organisation.

**£139**

S145 MS PowerPoint for Windows 95 on 3.5"	£229
S150 MS PowerPoint for Windows 95 Comp. U/G on 3.5"	£107
S155 MS PowerPoint for Windows 95 CCP U/G on 3.5"	£82
S160 MS Office for Windows 95 on CD	£333
S165 MS Office for Windows 95 on 3.5"	£333
S170 MS Office for Windows 95 Comp. Upgrade on CD	£164
S175 MS Office for Windows 95 Comp. Upgrade on 3.5"	£164
S180 MS Office for Windows 95 CCP Upgrade on CD	£139
S185 MS Office for Windows 95 CCP Upgrade on 3.5"	£139
S190 MS OfficePro for Windows 95 on CD	£431

S135 MS Access for Windows 95 CCP Upgrade on 3.5"	£107
S140 MS Publisher for Windows 95 on 3.5"	£62
S145 MS PowerPoint for Windows 95 on 3.5"	£229
S150 MS PowerPoint for Windows 95 Competitive Upgrade on 3.5"	£107
S155 MS PowerPoint for Windows 95 CCP Upgrade on 3.5"	£82
S160/165 MS Office for Windows 95 on 3.5"/CD	£333
S170/175 MS Office for Windows 95 Competitive Upgrade on CD/3.5"	£164
S180/185 MS Office for Windows 95 CCP Upgrade on CD/3.5"	£139
S190/195 MS OfficePro for Windows 95	£431
S200/205 MS OfficePro for Windows 95 Competitive Upgrade on CD/3.5"	£246
S210/215 MS OfficePro for Windows 95 CCP Upgrade on CD/3.5"	£205
S220 MS Works for Windows 95 on 3.5"	£54
S225 MS Schedule+ for Windows 95 on 3.5"	£68
S230 MS Excel for Windows 95 on 3.5"	£229
S235 MS Excel for Windows 95 Competitive Upgrade on 3.5"	£107
S240 MS Excel for Windows 95 CCP Upgrade on 3.5"	£82
S245 MS Excel for Windows 95 Cross Platform CCP Upgrade	£70
S250/255 MS Word for Windows 95 on 3.5"/Comp. Upgrade on 3.5"	£229/107
S260 MS Word for Windows 95 CCP Upgrade on 3.5"	£85
S305 Office Blox for Windows 95 on 3.5"	£55

S195 MS OfficePro for Windows 95 on 3.5"	£431
S200 MS OfficePro for Windows 95 Comp. U/G on CD	£246
S205 MS OfficePro for Windows 95 Comp. U/G on 3.5"	£246
S210 MS OfficePro for Windows 95 CCP Upgrade on CD	£205
S215 MS OfficePro for Windows 95 CCP Upgrade on 3.5"	£205
S220 MS Works for Windows 95 on 3.5"	£54
S225 MS Schedule+ for Windows 95 on 3.5"	£68

**MS Schedule+ for Windows 95**

MS Schedule 95 gives you complete control of your business environment. It's the ideal tool for managing calendars, appointments, tasks and contacts. Schedule+ lets you manage work either on your own PC or within a workgroup.

**£68**

S230 MS Excel for Windows 95 on 3.5"	£229
S235 MS Excel for Windows 95 Competitive U/G on 3.5"	£107
S240 MS Excel for Windows 95 CCP Upgrade on 3.5"	£82
S245 MS Excel for Windows 95 Cross Platform CCP U/G	£70
S250 MS Word for Windows 95 on 3.5"	£229
S255 MS Word for Windows 95 Comp. Upgrade on 3.5"	£107
S260 MS Word for Windows 95 CCP Upgrade on 3.5"	£82

**CALL NOW**  
**01909 530 242**  
or FAX 01909 530 261

**Choice Peripherals**  
Units 1&2,  
Highgrounds Way,  
Rhodesia,  
Workop, Notts,  
S80 3AF.

**"Get Factory Prices Direct From Choice Peripherals"**

## Rapier ELS DX2-66 Best Buy

- 486DX2-66 Processor
- 4Mb RAM, Write-Back CPU Cache
- 540Mb EIDE Hard Disk Drive
- Pentium™ Upgradeable Motherboard
- Vesa Local Bus Fast EIDE Controller
- Quality 102 Key UK Keyboard
- 1Mb Vesa Local Bus Windows Accelerator
- 14" Colour SVGA Monitor
- 3 VESA Local Bus Slots
- Windows for Workgroups 3.11 & MS-DOS 6.22
- 2 Serial, 1 Parallel & 1 Games Ports
- 3.5" Diskette Drive • Serial Mouse
- Mid Size Desktop Chassis or Mini-Tower
- Lifetime Warranty & Technical Support

24  
HOUR  
DELIVERY

Just  
£539



Rapier ELS DX2-66 shown with optional CD-ROM

## Rapier DX4-100 Multimedia Best Buy

- 486DX4-100 Processor
- 8Mb RAM, 256K Cache
- 850Mb EIDE Hard Disk Drive
- Quad Speed CD-ROM Drive
- Pentium™ Upgradeable M/board
- PCI Fast EIDE Controller
- 1Mb PCI Windows Accelerator
- Quality 102 Key UK Keyboard
- 14" NI MPR2 Multisync SVGA Colour Monitor
- 3.5" Diskette Drive • Serial Mouse
- Mid size Desktop Chassis or Mini-Tower
- 16-Bit Sound Card & Speakers
- Microsoft Software: Encarta '95, Works, CD Sampler, Golf, Entertainment Pack & Dangerous Creatures
- Windows for Workgroups 3.11 & MS-DOS 6.22 • Lifetime Warranty & Technical Support

24  
HOUR  
DELIVERY

Just  
£929



Rapier ELS DX2-66 ..... **£539**      Rapier ELS DX4-100 ..... **£579**      Rapier DX4-100 Multimedia ..... **£929**

# Looking for a and a PC fast?

## Rapier Pro+ Pentium 133 Multimedia

- Intel Pentium Processor running at 133MHz
- 1.7Gb EIDE Hard Disk Drive
- Quad Speed CD-ROM Drive
- Fujitsu Full Size Tactile 102 Key UK Keyboard
- Mid Size Desktop Chassis
- 17" NI MRP2 Multisync 0.26dp Digital Colour Monitor
- 3.5" Diskette Drive
- Wave Table 16-Bit Sound Card & Speakers • Serial Mouse
- Microsoft Software: Encarta '95, Works, CD Sampler, Golf, Entertainment Pack & Dangerous Creatures
- Windows for Workgroups 3.11 & MS-DOS 6.22
- Lifetime Warranty & Technical Support
- 16Mb EDO RAM, 256K Cache
- 2Mb Diamond Stealth 64 Video VRAM
- PCI Fast EIDE Controller



Just  
£2349

24  
HOUR  
DELIVERY

Rapier Pro+ Pentium 133... **£2,349**  
 Rapier Pro+ Pentium 90 ..... **£2,079**      Rapier Pro+ Pentium 120... **£2,249**



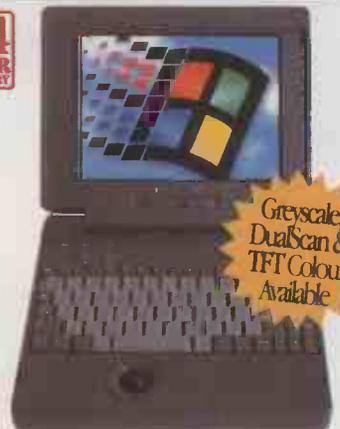
**Express Micro**

All prices are plus VAT & Delivery. All prices & specifications subject to change. £&OE.

## Rapier Lite

- 4Mb RAM (Exp. to 36Mb)
- 340Mb Removable Hard Drive
- 1Mb Video RAM, VESA Local Bus
- Internal 1.44Mb Diskette Drive
- Built-in Audio (SoundBlaster Compat.)
- 2 x PCMCIA Type II slots or 1 Type III
- 86 Key UK Keyboard
- 1 Parallel Port & 1 Serial Port
- 1 Video Port
- SCSI/VESA Docking Station Connector
- Built-in Trackball
- 1 Year Warranty

24  
HOUR  
DELIVERY



Greyscale,  
DualScan &  
TFT Colour  
Available

486 DX4-75 ..... **£929**  
 486 DX4-100 ..... **£989**  
 Dual/scan colour model ..... plus **£289**  
 TFT colour model ..... plus **£949**

## Upgrades

Optional Upgrades On All Systems

4Mb-8Mb Memory Upgrade .....	<b>£99</b>
8Mb-16Mb Memory Upgrade .....	<b>£189</b>
16Mb-32Mb Memory Upgrade.....	<b>£319</b>
5.25" 1.2Mb Floppy Drive.....	<b>£32</b>
420Mb Internal Tape Streamer .....	<b>£109</b>
700Mb Internal Tape Streamer .....	<b>£189</b>
Internal 14,400 Fax/Modem .....	<b>£49</b>
NE2000 Compat. Ethernet Card .....	<b>£19</b>
HP Deskjet 540 InkJet Printer.....	<b>£209</b>
HP Deskjet 660 Colour InkJet.....	<b>£CALL</b>
Lotus SmartSuite 3.1 (full version inc. all disks and manuals).....	<b>£129</b>

## Notebook Optional Upgrades

MS-DOS 6.22 .....	
& Windows for Workgroups 3.11 .....	<b>£69</b>
4Mb-8Mb Memory Upgrade .....	<b>£129</b>
4Mb-20Mb Memory Upgrade .....	<b>£479</b>
520Mb Hard Drive .....	<b>£95</b>
PCMCIA Ethernet Card (BNC/PL45).....	<b>£85</b>
Multimedia Docking Station .....	<b>£289</b>

## Rapier Pentium 75 Multimedia

- Intel Pentium Processor running at 75 MHz
- 8Mb RAM, 256K Cache
- 850Mb EIDE Hard Disk Drive
- Quad Speed CD-ROM Drive
- 1Mb PCI Windows Accelerator
- 1Mb PCI Fast EIDE Controller
- Quality 102 Key UK Keyboard
- 14" NI MRP2 Multisync SVGA Colour Monitor • 16-Bit Sound Card & Speakers
- Mid Size Desktop Chassis or Mini-Tower
- 3.5" Diskette Drive • Serial Mouse
- Microsoft Software: Encarta '95, Works, CD Sampler, Golf, Entertainment Pack & Dangerous Creatures
- Windows for Workgroups 3.11 & MS-DOS 6.22 • Lifetime Warranty & Technical Support

**24 HOUR DELIVERY**

Just **£1009**



Rapier Pentium 75.....**£1,009**

Rapier Pentium 90.....**£1,069**

Rapier Pentium 100 .....**£1,099**

## Rapier Pro Pentium 90 Multimedia

- Intel Pentium Processor running at 90 MHz
- 2Mb Diamond Stealth 64
- Quad Speed CD-ROM Drive
- Intel Triton Chipset with support for Pipeline Burst Cache
- Mid Size D/top Chassis or Mini-Tower
- 15" NI MRP2 Multisync Digital Colour Monitor
- Fujitsu Full Size Tactile 102 Key UK Keyboard
- 3.5" Diskette Drive • Serial Mouse
- Microsoft Software: Encarta '95, Works, CD Sampler, Golf, Entertainment Pack & Dangerous Creatures
- Windows for Workgroups 3.11 & MS-DOS 6.22
- Lifetime Warranty & Technical Support

**24 HOUR DELIVERY**

Just **£1469**



Rapier Pro Pentium 90.....**£1,469**

Rapier Pro Pentium 120.....**£1,649**

Rapier Pro Pentium 133.....**£1,789**

Rapier Pro Pentium 75.....**£1,409**

Rapier Pro Pentium 100 .....**£1,499**

# fast PC...

## At Express Micro we ship same day!



**H**ave you ever wondered why it takes up to six weeks for some manufacturers to deliver your PC?

We have.

### 24 Hour Delivery

That's why at Express Micro we have all our most popular Rapier configurations pre-built. Simply order your Rapier PC before 1pm and we guarantee that it's delivered to your door the very next day\*. If we are unable to fulfill our promise, we will gladly deliver your PC for free.

Look out for the '24 Hour Delivery' stamp. It's your guarantee of same-day shipping.

### High Performance Windows 95

All Rapier PCs are Windows 95 ready. And to make the most of it, we think you're going to need even greater performance. So we've upgraded ALL new Rapier PCs.

### New Higher Specifications

To really boost your productivity, all Rapier PCs now come with a minimum of 540Mb hard disk space. Each has EIDE controllers as standard. So every time your PC reads or writes to your hard drive it does so faster and more efficiently.

Every Rapier now features Windows accelerated graphics, quality colour displays and the fastest CPUs. Even the toughest multimedia applications are no match for your Rapier.

### Superior Build Quality

Every Rapier PC that we manufacture has a designated engineer to supervise the whole of the build process. Your PC is then shipped with a certificate stating who built it, when it was built and the



**Express Micro**

Express Micro guarantee of satisfaction.

### Technical Support

Should you ever need technical support, or in the unlikely event of a system failure, you'll find our expert technical support team eager to quickly remedy any problem. With specific enquiries you are welcome to speak to the engineer that built your PC.

For your peace of mind we offer full lifetime technical support and our own 12 month return to base warranty.

### Order Now!

Get the fastest PCs, fast. Compare our prices and specifications. We think you won't find better value anywhere.



## CALL TODAY 01909 530 242

Express Micro Ltd., Units 1&2, High Grounds Way, High Grounds Industrial Estate, Rhodesia, Worksop, S80 3AF. Fax 01909 530 261



Please rush me a free Rapier PC brochure

CODE SHO 11/95

Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Post Code \_\_\_\_\_  
 Tel. \_\_\_\_\_ Fax. \_\_\_\_\_ PCW 12/95



\*Special conditions may apply. Please call for a full list of terms and conditions.

Please Return to: Express Micro Ltd., Units 1&2, High Grounds Way, High Grounds Industrial Estate, Rhodesia, Worksop, S80 3AF.

Excellent Quality • Superior Service • Unbeatable Value

**DABS DIRECT**

freephone

**0800 558866**

PERSONAL COMPUTER SYSTEMS

**MULTIMEDIA UPGRADE OPTIONS**

Creative Soundblaster 16 Value IDE	50
Creative AWE32 Value sound card	120
Quad Speed CD Drive	99
12w Speakers	14
25w Speakers	21
80w Speakers Bass, Treble	35

**HARDWARE OPTIONS**

Tape Streamer 420Mb Int add	95
Tape Streamer 850Mb Int add	155
Microsoft Natural Keyboard add	50
250/280VA UPS (single PC) add	90
USR Sportster 14k4 Int modem add	104
USR Sportster 28k8 Int modem add	156

**PENTIUM OPTIONS**

16Mb EDO RAM instead of 8Mb add	180
32Mb EDO RAM instead of 8Mb add	540
256k synchronous RAM	60
Extra 1Mb DRAM on Video card	30
Midi Tower (3 x 5.25" bay) add	10

**486 OPTIONS**

16Mb instead of 4Mb add	299
Extra 1Mb DRAM on Video card	30
Midi Tower (3 x 5.25" bay) add	10
Adaptec 1542C and to change from IDE to SCSI HD 150	

**MONITOR UPGRADE OPTIONS**

15" LR NI, MPR-II add	80
17" LR, MPR-II add	330
20" LR NI, MPR-II add	900
21" LR NI, MPR-II add	1000
Sony CPD-15SF add	150
17" Iiyama VisionMaster MF-8617 add	355

These prices only available with systems

**DABS SYSTEMS**

Prices From **£845**

"Efficiency helps the customer".

**DABS PCI SYSTEMS**

All DABS Systems include: •PCI Motherboard with ZIF socket for easy upgradeability •EDO RAM (486DX4 contains standard RAM) •Enhanced IDE Hard Disc •PCI 64 Bit Accelerated 1Mb video card •Onboard EIDE Mode 3 controller •14in non-interlaced SVGA monitor •256k 15ns standard secondary RAM (120 & 133 use synchronous cache RAM) •1.44Mb Floppy drive •4 PCI and 4 ISA expansion slots (486 has 3 PCI & 3 ISA)•Onboard, 2 fast serial, ECP parallel •Cherry high quality 102 key keyboard •Original Microsoft Serial Mouse V2.0 •MS Windows 95 •5 Year Warranty\*

HD	486DX4-100	Pent 75	Pent 90	Pent 100	Pent 120	Pent 133
	8mb	8mb	8mb	8mb	16mb	16mb
540Mb	845	935	1000	1015	1450	1555
850Mb	865	955	1020	1035	1470	1575
1.2Gb	895	985	1050	1065	1500	1605
1.6Gb	1045	1155	1200	1215	1650	1735

**DABS MULTIMEDIA SYSTEMS**

All DABS Multimedia Systems include standard components mentioned above with the addition of: •PCI 64 Bit Accelerated 1Mb video card with MPEG software playback •Creative Labs 16 bit Sound Card •Quad speed CD drive •12w Mains Power Active Speakers •MS Works, MS Encarta •5 Year Warranty\*

HD	486DX4-100	Pent 75	Pent 90	Pent 100	Pent 120	Pent 133
	8mb	8mb	8mb	8mb	16mb	16mb
540Mb	1045	1215	1285	1350	1700	1800
850Mb	1065	1235	1305	1370	1720	1820
1.2Gb	1095	1265	1335	1400	1750	1850
1.6Gb	1245	1415	1485	1530	1900	2000

Desktop or Mini Tower available at the same price



Multimedia systems include



Our customers know us best

"Quite simply they have saved us a huge amount of money"  
Jonathan Shepstone,  
Systems Librarian at The  
Patterson Institute  
PC Direct August 1995

**MORE THAN JUST LOW PRICES**

- Value for Money
- Nationwide Delivery
- One Stop Shop
- Knowledgeable and Friendly Service
- Free Technical Support
- Instant Account Facilities†
- Repair & Upgrade Services
- Freephone Ordering

**DABS**  
2  
COLLECTION  
LOCATIONS

**DABS**  
NATIONWIDE  
DELIVERY

**DABS**  
TOTAL  
PACKAGE  
PRICE

**DABS**  
WARRANTY  
5  
YEARS

**DABS**  
WARRANTY  
1 YEAR  
OSM  
4 YEARS  
RTB  
(LABOUR ONLY)

**DABS**  
WARRANTY  
LIFETIME  
TELEPHONE  
TECHNICAL  
SUPPORT

\* 5 year warranty comprises 1 year OSM, 4 years RTB (labour only) OSM agreement on hardware commences 14 days after receipt of goods.  
† Subject to status





Excellent Quality • Superior Service • Unbeatable Value

# DABS DIRECT

freephone

# 0800 558866

PERSONAL COMPUTER SYSTEMS

**BOLTON 01942 794000 EDINBURGH 0131 556 4114 LONDON 0171 582 4777**

## REMOVABLE DRIVES

D2 - SYQUEST DRIVES			
88mb Ext Par PC	305	105mb Ext Par PC	335
200mb Ext Par PC	425	270mb Ext Par PC	425
88Mb Ext SCSI	230	135Mb Int IDE	130
135Mb Ext SCSI	155	200Mb Ext SCSI	345
270Mb Ext SCSI	349	Shark SCSI-Par cable	65

IDMAGA			
ZIP 100Mb Ext SCSI	123	ZIP 100Mb Parallel	129
Jaz 1Gb			
PANASONIC			
PD Drive + SCSI (V)	490	PD Drive SCSI	450
Macintosh complete systems also available			

## SOUND CARDS

AZTECH			
Sound Galaxy Pro 16 II	40	Waverider 32+	72

CREATIVE LABS			
SB 16 Value IDE	62	SB 16 Pro IDE	85
SB 16 Pro ASP IDE	108	SB Pro 16 SCSI-2	103
SB AWE 32 Full IDE	165	SB AWE 32 Value IDE	122
MIDI Lead	15	WaveBlaster 2	94
BlasterKeys midi Keyboard	115	BlasterKeys + AWE32 v.a	295

MIRO			
Sound FM10	58	Sound PCM10	76
Sound PCM1 Pro	121		

## ORCHID

Gamewave 32+	70	Sounddrive 16 EZ	60
Sounddrive EZ SCSI	78	Soundwave 32 Pro	129
Soundwave 32Pro SCSI143	143	Wavebooster 2Mb	65
Wavebooster 4Mb	85	Wavebooster 4MbFX	99

## NETWORK CARDS

3COM			
3C-509B BNC UTP	55	3C-509E Combo	57
3C-589 ComboPCMCIA	125	3C-529B BNC MCA	139
3C-579 BNC EISA	138	3C-590 PCI Combo	87

## DLINK

DE-220C BNC	37	DE-220CT Combo	45
DE-220ACT Combo+AU1	30	DE-220T UTP ISA	55
DE-620CT Combo Par	85	650CT Combo PCM	75

## GENIUS

NE2000 Combo	20	NE2000B Combo	53
NE2000 Combo PnP	46	NE2100B Combo	46
Pocket Parallel	49	PocketPCMCIA BNC/RJ45/83	

## INTEL ETHEREXP PRO

10 Combo PnP	62	10 Combo PnP PCI	105
10 Combo Flash PnP	72	100 PCI UTP	149

## SMC

Elite Ultra 16	45	Elite Ultra 16 Combo	65
EliteCard UTP	84	EliteCard Combo	115
EtherPower PCI Adapter UTP/BNC	89		
EtherPower PCI Adapter UTP/BNC	96		
EtherEZ Plug 'n' Play Adapter BNC/UTP	58		
EtherEZ Plug 'n' Play Adapter BNC/UTP	58		
Fast Enet 10/100 PCI	129	FastEnet 10/100EISA149	

## XIRCOM

BNC Parallel	185	BNC PCMCIAZ	165
UTP Parallel	185	UTP PCMCIAZ	135
Combo Parallel	159	Combo PCMCIAZ	130
CEM II PCMCIAZ 10BT Ethernet & FAX/Modem	255		
CEM II PCMCIAZ 10BT Ethernet & FAX/Modem	255		
CEM II PCMCIAZ Combo ethernet & FAX/Modem	285		

All cards are ISA unless otherwise specified

## PORTABLES

### COMPAQ CONTURA

410 M250	822	410C M350	1302
410XC M350	1873	420C M420	1401
420C M420	1566	430C M720	1897
430C M720	1897		

### HP OMNIBOOK

600C DX2/50 4170Mb	1413	600C DX4/75 8170Mb	1737
600C DX4/75 8260Mb	1809	600C DX4/75 8260Mb	2177
400C DX2/50 8240Mb	1650	400C DX4/100 8240Mb	2074
400C DX2/50 8200Mb	1872	400C DX4/75 8200Mb	2066
400C DX4/75 8240Mb	2188	400C DX4/75 8200Mb	2347
400C DX4/75 8180Mb	2660	400C DX4/75 16100Mb	3120
400C DX4/100 8340Mb	2327	400C DX4/100 8200Mb	2485
400C DX4/100 8180Mb	2770	500C P90 161200Mb	3420
500C P95 161200Mb	3784		

### TOSHIBA

T1950CT/200	1699	T2100CT/350	1920
T2110 4/330	832	T2150CDS/260	1669
T2150CDS/520	1920	T2150CDD/520	2672
T3600CT/500	2087	T4600C/230	2171
T4600C/320	2337	T4800CT/500	3143
T4900CT/772	3342	T6600C/510	2934
T2110CS 4/350	1335	T2130CS 8/520	1585
T2130CT 8/520	2087	Satellite Pro 400CS2384	
SatellitePro400CDDT	3090	Portegé 610CT	2970

## olivetti portable computers

Echos 24C 486DX2/50 4/260	£1124
Echos 24C 486DX2/50 4/350	£1212
Echos 26C 486DX4/75 4/350	£1338
Echos 46C 486DX4/75 4/340	£1338
Echos 48PC 486DX4/100 8/540	£1924

## Wacom Graphics Tablet

ii 4A	215	ii Pro A3	435
FX A4 4 btn cursor	275	FX A3 Pro	495

## WACOM TABLETS

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

## Summagraphics

ii 4A	215	ii Pro A3	435
FX A4 4 btn cursor	275	FX A3 Pro	495

## Summagraphics

A2	959	A1	1177
A0	1695	A0+	1914

## Summagraphics

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

## Summagraphics

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

## Summagraphics

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

## Summagraphics

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

## HANDHELD

HEWLETT PACKARD			
HP200LX 1Mb	380	HP200LX 2Mb	429
1000CX	255	Connectivity Pack	75
PC Cable	17	Mac Cable	17
OSM	34		

PSION ORGANISER SERIES II			
Model LZ	99	Model LZ64	125
32k Rampak	39	32k Datapak	29
128k Flashpak	49	256k Flashpak	109
Formatter 256k	17	Mains Adapter	10
PC Link	45	Carry Case	10

PSION SERIES 3			
Series 3a 256k	175	Series 3a 512k	199
Series 3a 1Mb	249	Series 3a 2Mb	299
Series 3S 256k	129	PC Comms Link	46
Parallel Cable	23	Leather Wallet	18
Fax Modem	129	128k Flash SSD	26
128k RAM SSD	37	256k Flash SSD	39
512k RAM SSD	89	512k Flash SSD	65
1Mb RAM SSD	175	1Mb Flash SSD	87
2Mb Flash SSD	137	4Mb Flash SSD	255
Autorestore Ser 3	50	Act Ser 3	69
Chess Ser 3a	31	Toukirk 1 Ser 3	39
Dateviewer Ser 3/3a	45		

For All Psion Software Please Call

## MICE

MICROSOFT			
Mouse IP Combo	33	Home Mouse	27

## LOGITECH

Pilot Serial or PS/2	17	Pilot Trackball	25
Mouseman PC or Mac	31	Trackman Portable 30	
Mouseman Cordless	49	Trackman Combo 40	
Trackman Live	95	Trackman Voyager 45	

## PRIMAX

3 button serial (white/black/blue/red)	7
Master Mouse	19

## HUBS

### 3COM LINKBUILDER

FMS II 12port & AU1 355	FMS II 24port & AU1	635
-------------------------	---------------------	-----

### DLINK

DE809TC 8port & BNC130	DE812TP 8port BNC BLK	175	
DE816TP 16port 5 BNC & AU1	DE824TP 24port & BNC & AU1	335	
DE1200 12port	299	DE1600 16port	525

### HP ADVANCESTACK

Hub 8u 8port	132	Hub 12u 12port	216
Hub 12 12port	415	Hub 24 24port	605
Hub 48 48port	1132	Hub 12 SNMP	542
Hub 24 SNMP	819	Hub 48 SNMP	1289

### SMC

TP6 6port	120	TP6B 6port	125
CX3 3port	210	TP12 12port	245
CX6 6port	430	FL6 6port	971

### TIGERHUB

3312C 12port	325	3314T 14port	360
3326TC 26port	575	3328T 28port	645

## PLOTTERS

### HEWLETT PACKARD

DesignJet 230 A1	1385	DJet 230 A1 mono	1900
DesignJet 250 A1	1696	DesignJet 250C A1	2328
DesignJet 600 A1	2715	DesignJet 600 A0	3246
DesignJet 650C A1	4387	DesignJet 650C A0	4387
HP DesignJet DSM	300	DesignJet 750C A1	3624
DesignJet 750C A0	4319		

### ROLAND

Sketchmate A4	409	Sketchmate A3	545
DX1-1150	585	DX1-1250	710
DX1-1350	945	GRX-350	2379

### SUMMAGRAPHICS SUMMAJET

Mono A1	1225	Colour A1	1540
Mono A0	1685	Colour A0	2108

## DIGITISING TABLETS

### CALCOMP

Drawing Board II A5	205	Drawing Board II A4	269
---------------------	-----	---------------------	-----

### SUMMAGRAPHICS

ii 4A	215	ii Pro A3	435
FX A4 4 btn cursor	275	FX A3 Pro	495

### SUMMAGRAPHICS

A2	959	A1	1177
A0	1695	A0+	1914

### SUMMAGRAPHICS

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

### SUMMAGRAPHICS

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

### SUMMAGRAPHICS

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

### SUMMAGRAPHICS

AriPad	129	AriPad & Dabber	155
AriPad & Painter 3	359	A5 Menu Overlay	255
A4+ Menu Overlay	355	A3 Menu Overlay	559

### SUMMAGRAPHICS

**PRICE MATCHING**  
Please call for details



# DABS DIRECT

PERSONAL COMPUTER SYSTEMS

TRANSAX

**FREE PRINTER CABLE WITH ALL PRINTERS**

**Working 01483 797474 INTERNET sales@dabs.co.uk**

## SOFTWARE

### BUSINESS

ACCOUNTING			
Quicken 8 DOS	32	Quicken 4 Win	28
Quicken Deluxe Home	45	Quicken Deluxe Bus	45
QuickBooks 3 Win	82	QuickTax Return '95	27
QuickChoice	28		
Sage DOS	Win	DOS Net	Win Net
Bookkeeper	55	75	
Accountant	159	189	
Accountant+ 241	271	399	449
Fin Controller	318	353	545
Payroll II	240	139	165
Sage Instant Accounting	85	Sage Instant Payroll	65
Sage Moneywise	31	Sage Job Costing	109
CAD			
AutoCAD LT v2	353	ACAD LT Libraries	Call
Autosketch DOS 3	60	Autosketch 2 Win	75
Generic CAD0.6.1	Call	TurboCAD DOS/Win	59

COMMUNICATIONS			
Carbon Copy	74	CommWorks	89
Crosstalk Win	69	DataTalk 4 DOS	85
Delrina Comms Suite	80	DDSFax Pro 2	44
EZ Internet Starter Pack	26	Laplink Win	86
Laplink Pro 5	59	PC Anywhere H&R	95
ProComm+ 2 Win	56	WinFax Pro 4	55
WinComm Pro	56		

DATABASES			
Approach 3	82	Access 2	221
Database 5	225	Database 5 DOS	382
Database 5 3u DOS	639	dbase 5.5 Win	220
dbase 5 DOS	119	dbase 5.5 Upgrade	48
Filemaker Pro Win	80	FoxPro v3	120
FoxPro v3 Pro Win	105	Notes Starter 2u	499
Notes Express	335	Paradox 5 Win	219
Paradox 4.5 DOS	325		

DTP			
Acrobat 2 Win	150	PageMaker 5	375
PageMaker Classic	50	PagePlus Lite Win	29
PressWorks 2	23	Pressworks P/Pack 51	
Quark Xpress 3.3	550	MS Publisher 2 Win	62

GRAPHICS			
Clarix Impact	89	Corel Draw 3 FD/CD	61
Corel Draw 3 CD	42	Corel Draw 4 FD/CD	99
Corel Draw 4 CD	94	Corel Draw 5 FD/CD	355
Corel Draw 5 CD	275	Corel Draw 6 CD	280
Draw 3/4 - 6 CD	230	Draw 5-6 Upg CD	140
Corel 3-5 Upg FD/CD	245	Corel 3-5 Upg CD	199
Corel 4-5 Upg FD/CD	145	Corel 4-5 Upg CD	115
Corel PhotoPaint 5+	45	Corel Art Show 4	31
Corel CD Powerpack	24	Corel Flow	45
Corel Gallery 2	45	Corel Pro Photo CD	13
Charisma	180	Dabbler V3	75
Designworks V3	84	Designworks V3 CD	69
Freelance 2	258	Illustrator PC	289
MediaBlitz Win	45		

### BUSINESS

GRAPHICS continued			
Persuasion 3	193	Photoshop 3	382
Powerpoint 4	224	Premiere 4	319
Toolbook 3	110	Visio Express	39
Visio 4 Win 95 +Win3	95	Visio 4 VU	58
Visual Reality V2	Call	Vis Reality V1-2 upg	Call
INTEGRATED PACKAGES			
ClarixWorks 3	55	ClarixWorks 4	80
Corel Office Companion	65	Harvard Portfolio	205
MS Works 3	82	Perfect Office 3	155
Perfect Office Pro	330	Perfect Office Upg	125
Perfect Off Pro Upg	189	Smartsuite 4	295
MS Office 4.2 Win	325	MS Office 4.2 CCP	160
MS Office 4.2 CU	218	MS Office Pro 4.3	417
MS Office Pro 4.3 CCP	245	MS Office Pro 4.3 CU265	

NETWORKING			
Personal Network	43	Network 4.15u	385
Network 4.1 10u	895	Network 4.1 25u	1299
Network 4.1 50u	1725		
OCR			
Catchword Pro	65	OmniPage Pro	325
OmniPage Direct	62	TextBridge 3	75
TextBridge Pro	249	Wordscan Plus v4	275

OPERATING SYSTEMS			
OS/2 3 Warp CD	42	OS/2 3 Warp FD	49
Win NT 3.51 Server	485	Win NT 3.51 Workst	215
PROGRAMMING			
Assembler 6.1	134	Borland C++ 4.5	220
Delphi	155	Delphi CU	105
Delphi CU upg	115	Turbo C++ Win	54
Turbo Pascal Win 1.5	78	Basic Std	70
MS Visual B 4 Win	58	MS Vis Basic Pro 4 Win	319
MS Vis C++ 4 Win CD	Call		

PROJECT MANAGEMENT			
Project 4 DOS	205	Project 4 Win	260
Superproject DOS	450	Superproject Win	460
ROUTING			
ARoute Exp UK+Ire FD	34	ARouteExp UK+Ire CD	45
ARoute Exp Europe FD	34	ARouteExp Europe CD	45
MS ARoute Exp CD/FD	Call		

SPREADSHEETS			
1-2-3 v5 Win	209	Excel 5	218
Quattro Pro 6	149	Supercalc	59
UTILITIES			
AfterDark 95	27	ArcSolo Win	69
ACTI 2 Win	135	CheckIt Pro	58
Conner Backup	29	Cleansweep	26
CP AntiVirus	58	Corel SCSJ 2	36
Dashboard Win	32	Dashboard 95	29
Desview 386	106	Dr Sol AntiVirus Win	69
FirstAid Win 95	36	Norton Anti-Virus	92
Anti-Virus Win95	53	Norton BackupDOS	85
Norton BackupWin	85	Norton Utilities Win 95	85
Norton Navigator w/vids	69		
Norton Navigator Win95 Trade-up	35		
Anti-Virus Win95 Trade-up	28		
Norton SpeedDrive 4	32	Lotus Organizer 2	79
PC Tools 8 DOS	73	PC Tools 2 Win	47
QEMM 7.5	44	Rimglance	14
Sidekick 95	29	Sidebar	29
SoftRam Win 95	49	Stacker 4 DOS/Win	54
Telemagic	175	Web Author	64
Web Server	60	XTree Gold DOS	82
XTree Gold Win	65		

WORD PROCESSING			
Ami Pro 3.1	82	Lotus WordPro 96	Call
Word 6.0 Win	219	Word 6.0 CCP Upg	82
WordPerf 6.1 Win	159	Wordperfect 6 DOS/211	
WordStar Win	27		

WORD PROCESSING			
Ami Pro 3.1	82	Lotus WordPro 96	Call
Word 6.0 Win	219	Word 6.0 CCP Upg	82
WordPerf 6.1 Win	159	Wordperfect 6 DOS/211	
WordStar Win	27		

**Visio TPP CAD made simple**  
Converts AutoCAD DWG files to SmartShapes  
Preserves attribute and extended entity data  
Produces Bill of Materials  
Office and SmartSuite compatible  
Existing Visio users upgrade for **£99**  
New Users **£249**

**AutoCAD LT v2 AMAZING VALUE £353**  
LT Drafting Packs (Electrical, Architectural or Engineering) **£99 each**

**NORTON UTILITIES**  
Data Protection and recovery for Windows 95 **£85**

**Microsoft**

Windows 3.x to Win 95 Upgrade 3.5" 59  
Windows 3.x to Win 95 Upgrade CD 59  
Windows 3.x to Win 95 Upgrade 1uMLP 57  
MS-DOS to Win 95 Upgrade 3.5" 112  
MS-DOS to Win 95 Upgrade 1u MLP 96  
Plus! Pack add-on 3.5" 26  
Plus! Pack add-on CD 26  
Plus! Pack add-on 1u MLP 23

Access 7	Full Version	Education Version	Version Upgrade	Competitive Upgrade
Excel 7	225	125	82	107
Office 7 1st	332	179	139	162
Office Pro 7 2nd	429	219	204	245
Powerpoint 7	229	125	82	107

Works £54, Spreadsheet £58, CD £109, FD £65

**More Windows 95 products**

Visio 4	95	58
Carol Draw 6	280	from v3 230
Visual Basic 4	58	35
Visual Basic 4 pro	319	105
Visual Basic 4 Enterprise CD	585	
Visual. c++ 4 CD	call	169
Money 4	26	21
Harvard Graphics 4	215	87
Harvard Chart XL 2	129	72
Stacker 4.1	38	25
Sidekick 95	29	29
Dashboard 95	29	29
SoftRam 95	49	49
FirstAid 95	36	36
Norton Utilities 95	85	52
Norton AntiVirus 95	53	28
Norton Navigator 95	69	35
AfterDark	27	

**GAMES**

Battle Beast	24
AI Unser Racing	19
Fury 3	26
Fury 3 + SideWinder Pro	45

**HARDWARE**

Intelpoint Mouse	38
Natural Keyboard	62
SideWinder Joystick	20
SideWinder 3D Pro Joystick	36

Designed for **Microsoft Windows 95**

**CLARIS £80**

**FILEMAKER PRO**

- CompuServe introductory membership
- Backus Junior
- FileMaker Pro Application
- CDROM
- Claris T-Shirt

**TextBridge Pro**

Free upgrade to Windows 95 version offering valid till 31.12.95

- Award winning accuracy on normal, faxed and dot matrix text.
- Exclusive DocuRT™ technology reconstructs cell tables allowing edits.
- Instant Access OCR™ from Windows app.
- Post recognition editing within your WP
- OLE 2.0, drag and drop support
- 11 European languages and more... **£270**

**ENTERTAINMENT**

Win95 and TOP ENTERTAINMENT

11th Hour	27	1944 Across the Rhine	27
3D Atlas	42	AI Unser racing	20
Air Warriors Plus	23	Alone in the Dark 3	30
Basic Bridge	24	Battle Beast	24
BioForge	35	Buried in Time	24
Descent	24	Disc World	25
Dungeon Master 2	25	Plus	22
Rugby World Cup	25	Flight Unlimited	22
Full Throttle	31	FX Fighter	21
Harpoon Multimedia	23	Hi Octane	29
Magic Carpet	29	Magic Carpet Plus	29
Phantasmagoria 2	24	Phantasmagoria	29
Premier Manager 3	22	Prisoner of Ice	28
Psycho Pinball	23	Sim City 2000	24
Space Quest 6	25	Star Trek: A Final Unity	35
Star Trek: Dmnpedia	30	Super Karts	21
Terminal Velocity	21	Theme Park	26
Transport Tycoon	26	US Navy Fighters	30
Virtual Pool	25	XCom2	25

**COREL HOME TITLES**

Adventures w/Edison	20	All Movie Guide	32
Arcade Mania	20	Bernard of Hollywood	32
Blue Tortoise	20	Nikola's Trains	20
Wild Board Games	20	Wild Cards	20
Worlds Greatest Books	32		

**DABS DIRECT SUMMER BARGAIN SOFTWARE CLEARANCE LINES**

1-2-3 V3.1+ Win 5 user	300	1-2-3 V2.4 DOS 5 user	200
1-2-3 V1.1 Win 5 user	150	1-2-3 V1.1 Win 20 user	500
Adobe Streamline Win	99	Agla Desktop Styles (Font)	10
APT Fingers Win	12	Asymetric Mediabitz Win	39
Autouroute 5 Database Editor	50	Borlano Full C++ V3.1	99
Borland Prolog for C++	20	Borlano Office Win 2.0	99
CE Prokey Win	65	Datassoft OS-Fax Win	20
Facelift for Wordperfect DOS10	Freehand 4 68000 Mac	250	
GST Designworks 2 Win	IBM DisplayWrite 5	199	
Intel LANDesk 1.5 Server	Intel QuickVoice Win	430	
Learn to Type 5.25"	Lotus CC-Mail DOS 4.0 Plus	28	
Lotus Improv V2.0	MS DOS 6.0MS Win 3.1	20	
MS DOS 6.0 Upg 5.25"	MS Mail 3.2 Server+10u	250	
MS Office V4.0 Int 4.2 Ed	MS Project 4 Win MLP NM32	50	
MS Win 3.11 MLP NM	52	Paras DMP Superprint 5	
PFS Poweralbum	1	PFS Publisher Win	15
Sage PC Planner Ref 3	20	Seagate only Superstor 5	
SPC Harvard Clipart	25	S&S Ringence	12
Strac Stacker V2-V3 Upg	10	Sublogia USA Ext for FS4 20	
Visio Exp Smartsuite	20	Sublogia USA Ext for FS4 20	
Xerox Rooms for Win	10	WRQ Reflection 4 +DOS 175	

**EA CLASSIC RANGE**

Kasparov/GrandSlam Bge	10	M Jordan in Fight	10
Papalou IV Powerminger	10	Privater	10
Best of Entertainment	10	Shogakukan	10
SSN Sea Wolf	10	Strike Commander	10
Syndicate Plus	10	Win Wing Commander II	10

**STRICTLY WHILE STOCKS LAST**

**ENTERTAINMENT CONTINUED**

**MICROSOFT HOME TITLES**

500 Nations	23	Ancient Lands	23
Bookshelf '95	55	Beethoven	28
Best of Entertainment	10	Cinemania '95	27
Composer Collection	49	Cooking	23
Creative Writer	23	Dangerous Creatures	25
Dinosaurus	23	Dogs	23
Encarta '95	59	Encarta '95 CD	23
Encyclopedia Nature	22	Fine Artist	23
Flight Simulator 5.1	25	Fl Sim Paris addon	10
Frank Lloyd Wright	23	Fury 3	26
G Wilson Haunted House	24	Golf 2	23
Oceans	23	Magic Bus-Human Body2	24
Magic Bus-Solar Sys	23	Mozart	23
Musical Instruments	23	National Art Gallery	28
Schubert	23	Sounds Bits (3 packs)	11
Sound System 2	95	Strauss	26
Stravinsky	23	Space Simulator	24
Wine Guide	23		

**EDUCATION**

**LANGUAGE TRANSLATION**

Accent Express	35	Accent Special Ed.	85
Accent Pro	175	EZ Language - French	29
EZ Lang - German	29	EZ Language - Italian	29
EZ Lang - Japanese	29	EZ Language - Russian	29
EZ Lang - Spanish	29	EZ Language Suite	49
Global Link Assistant	31	GlobalLink PowerTrans	95
Global Link Power Pro	245		

**EDUENTAINMENT**

Comptons Encyclop	41	Fun Sc Dreamland 4-7	17
Fun School 4	24	Fun School - Spelling	25
Fun School Space 6-9	17	Fun School Time 8-11	17
Fun School - Maths	25	Fun School Paint@Draw	25
Fun School-Science & Eco	25	Granada 30 Int Designer	19
Groliers Encyclop	40	Harry Haunted House	28
Hutchinson 95 Ency	35	Joy of Sex	17
Kid Pix 2	21	Klik & Play	44
Little Monster	28	MacMillan Childs Dict 17	35
MBeacon Typing	21	Mano is Missing	35
Marios Time Machine	18		

Excellent Quality • Superior Service • Unbeatable Value

# DABS DIRECT

freephone

# 0800 558866

PERSONAL COMPUTER SYSTEMS

**BOLTON 01942 794000 EDINBURGH 0131 556 4114 LONDON 0171 582 4777**

### CONSUMABLES

<b>DISCS UNBRANDED each</b>	<b>10</b>	<b>100</b>	<b>250</b>
350i DSD	30p	20p	18p
720i DSD	45p	35p	30p
1.2Mb DSHD	50p	40p	35p
1.44Mb DSHD	50p	40p	35p
<b>BRANDED Price includes labels</b>			
360i DSD	40p	30p	25p
720i DSD	55p	40p	35p
1.2Mb DSHD	60p	45p	40p
1.44Mb DSHD	50p	40p	35p
<b>CD RECORDABLE</b>	<b>1</b>	<b>10</b>	<b>100</b>
650Mb/74min	8	7	6

### CABLES

<b>IBM Parallel Printer</b>	<b>2m</b>	<b>3m</b>	<b>5m</b>	<b>10m</b>
Macintosh Printer	5	10	10	10
IBM D25-D25 (M or F)	4	6	7	18
IBM D9F-D25M Modem	5	5	5	7
Centronics C36M-C36M	6	8	10	17
Ethernet BNC-BNC	4	4	5	5

### ADAPTORS

BNC T-Piece	2	BNC Terminator	5
SCSI C50 Terminator	10	D9-D25 Serial	5
PS/2-PC Keyboard	5	VGA-PS/2	8

### DATA CARTRIDGES

DC120 Formatted	10	DC120XL 170/340Mb	14
MC3000XL 340/680Mb	19	MC3000XL 680/1360	19
200/420Mb oc-Wide	14	420/850Mb oc-Wide	17
DC6150 150Mb	10	DC6250 250Mb	15
DC6525 525Mb	17	DC8100 1Gb	23
2Gb/4Gb 90m DAT	8	4Gb/16Gb 120m DAT	25

### SYQUEST/OMEGA CARTRIDGES

44Mb	29	88Mb	34
105Mb	35	135Mb	41
200Mb	52	270Mb	45
ZIP 100Mb	12		

### DATA SWITCHES

2/1 Parallel Man	7	2/1 Parallel Auto	19
4/1 Parallel Man	10	4/1 Parallel Auto	29
2/1 Serial Man	7	2/1 Serial Auto	19
4/1 Serial Man	10	Others	Call

### MO DISCS

128Mb 3.5"	14	230Mb 3.5"	19
1.3Gb 5.25"	59	Panasonic Pd disk	33

### ORIGINAL INKJET CARTRIDGES

Canon BJ10e/xx/xx	13	Canon BJ200	15
Canon BJ300/330	11	Canon BJ30 Black	25
Canon BJ30 Ink Tank	10	Canon BJ70 Colour Tank	27
Canon BJ70 Bk Ink Tank	5	Canon BJ70 Colour Tank	7
Canon BJ600 HiCap Bk	8	Canon BJ600 Colours	17
Canon BJ600 Black	14	Canon BJ800 Colours	18
Canon BJ4000 Black	20	Canon BJ4000 Col	31
Epson Stylus 1170/870	20	Epson Stylus 800/1000	9
Epson Stylus 800 HiCap	23	HP DJ 310/320/Port	13
Epson Stylus Col Col	16	HP Deskjet Colour	11
HP Deskjet HiCap Bk	17	HP Deskjet Colour	18
HP DJ 1200C Black	17	HP DJ 1200C Colours	22
HP DJ 850C/1500C Bk	18	HP DJ 850C Colour	18
HP DJ 660C/Black 600	19	HP DJ 660C 600 Col	20
HP DesignJet 650 Black	20	HP DesignJet Colours	20
HP Paintjet Colour	20	HP Paintjet Black	18
HP Paintjet XL Black	19	HP Paintjet XL Colours	19
Star SJ144 Black paper	6	Star SJ144 Col paper	6
Star SJ144 Black OHP	12	Star SJ144 Col OHP	14

### ORIGINAL RIBBONS

Citizen 1200/Swift 9	4	Citizen Swift 24/240	4
Citizen Swift 24x	6	Citizen Swift Colour	11
Epson LQ100/150 Black	5	Epson LQ100/150 Col	15
Epson 80col 9pin	5	Epson 80col 24pin	6
Epson 132col 9pin	6	Epson 132col 24pin	7
Epson LQ860 Black	10	Epson LQ860 Colour	16
Pan KX-P115 9pin	5	Pan KX-P145 24pin	6
Pan KX-P155 24pin	6	Pan KX-P155 9pin	6
Pan KX-P160P 9pin	7	Pan KX-P165P 9pin	13
Pan KX-P150	8	Pan KX-P150C	15
Star LC10/20/100 Black	4	Star LC10/100 Colour	6
Star LC24 24pin Mono	5	Star LC15 Black	5
Star LC200 Black	5	Star LC200 Colour	11
Star LC240C Black	6	Star LC240C Colour	10
Star LC24/300 Black	4	Star LC24/300 Colour	10
Star XB24 Black	8	Star XB24 Colour	11

### ORIGINAL TONERS

Brother HL630/631/660	23	Epson EPL4x00	60
Epson EPL5600	105	Epson EPL5000/S200	82
HP Laserjet 4L/4P	43	HP IIS/4S/4S/IMX	77
HP Laserjet 4/4M/+	67	HP 5P/5MP	55
HP 5L	call	Kyocera FS400	15
HS1550/1600/3400/3600/5500	45	Laserjet II/III (EPS)	46
Laserjet IIP (EPL)	49	Lexmark Optra	109
NEC SuperScript 610	69	Panasonic 4400/5400	10
Panasonic 4420	24	Panasonic 4410/30/40	28
Panasonic 4450/55	24	Panasonic 6100/6150	12
MT T-Win	8	MT T9005	15

### PAPER

Listing 8.5"x11" x200	20	Listing A4 70g x200	20
Listing A4 90g x1500	20	Copier A4 Cut shi x500	5
Canon Glossy x50	20	Canon A4 x200	21
Canon A3 x200	36	Canon A4 Trans x50	35
Epson Starter Pack	33	Epson 360dpi x200	18
Epson 720dpi x200	20	Epson Trans x50	35
Epson 360dpi A3 x200	40	Epson 720dpi A3 x200	60
Epson UltraGloss x30	38	HP Designjet paper	Call
HP Premium Glossy x10	38	HP Premium Glossy x30	36
HP Premium Paper x200	15	HP Premium Trans x20	18
HP Premium Trans x50	33	HP Variety Pack	12
Disc Labels 3.5" x1000	8		

### DOT MATRIX PRINTERS

<b>1200+ Parallel</b>	<b>92</b>	<b>ABC Mono</b>	<b>101</b>
ABC Colour	123	Swift 90 Mono	113
Swift 200 Mono	136	Swift 240 Colour	178
Swift 240x	215	Swift 9x	169
	332		
<b>DEC</b>			
LA75-AE	425	LA310-AE	480
LA70-AE	250	LA600-AE	2369

### EPSON

LX-1050	179	FX-870	237
FX-1170	296	LQ-150	112
LQ-150 colour kit	25	LQ-300	143
LO-570+	289	LQ-870	365
LO-1050 Colour	589	LQ-1070+	230
LQ-1170+	425	DLO-3000	780
DPX-8000	1939	DPX-5000	1169

### FUJITSU

DL-900	189	DL-4600 mono	749
DL-4600 colour	900	DL-1150	240
DL-5600 colour	1110	DL1000	199

### MANNESMANN TALLY

MT0216	89	MT83	154
MT84	192	MT1136	310
MT150/9	259	MT150/24	415
MT151/9	310	MT151/24	439
MT350	1145	MT360	1425
MT360 2T	3750	MT645	3159
MT691	Call	MT6082	Call

### OKI

280 Parallel	190	320 Parallel	305
321 Parallel	365	380 Parallel	220
385 Parallel	310	520 Parallel	335
521 Parallel	395	395 Mono	630
395 Colour	715	530 Parallel	435
591 Parallel	499	340	849

### PANASONIC

KX-P1150	92	KX-P2023	107
KX-P2124	191	KX-P2124 Colour	220
KX-P2135 Colour	123	KX-P1524	190
KX-P3626	252	KX-P3636	266

### SEIKOSHA

SP1900	89	SP2400	122
SP2415	185	MP1350	268
MP8500	295	SL90+	95
SL96	132	SL150	215
SL210	315	SL270	375
LT200X	140	BP5780 MxII	979
BP7800	1099	SBP10	1749

### STAR

LC90	79	LC100 Colour	89
LC240	89	LC240C	108
LC15	179	LC24-15 MxII	230
ZA200C + DSM	268	ZA250C + DSM	315
XB24/200C + DSM	332	XB24/250C + DSM	399

### LASERS

#### BROTHER

HL-630 GDI	315	HL-631 GDI	339
HL-660 GDI	845	HL-1260	899

#### CANON

LBP-4u	365	LBP-430w	355
LBP-1260	893	LBP-8 IIR	1520

#### EPSON

EPL-3000	335	EPL-5200+	405
EPL-9000	1089	EPL-9000PS	1499

#### HEWLETT PACKARD

Laserjet 5L	345	Laserjet 5P	569
Laserjet 5MP	701	Laserjet 4+	965
Laserjet 4M+	1290	Laserjet 4V	1363
Laserjet 4M+	1965	Laserjet 4Si	2054
Laserjet 4Si/IMX	2925	Laserjet Colour	4179

#### ORIGINAL HP LASER MEMORY UPGRADES

Printer	1Mb	2Mb	4Mb	8Mb
LJ III/IIIIP/III	69	119	239	-
4+ /ASJ/PJ/SP/4V/Colour	69	119	167	329
4L	59			

AMP uses same as 4P, etc.  
4/4+ Postscript level 2 225 4P Postscript 2 190  
4+ Duplex Unit 497 4Si Duplex Unit 389

**...AND THE AWARD FOR THE BEST VALUE MONO PRINTER GOES TO STAR'S WINTYPE 4000 LASER**

**COMPUTER SHOPPER**

- BEST PRINTING ACTION
- BEST SUPPORTING CAST
- BEST FEATURES
- BEST SCENES ICONS
- BEST FONT SIZES
- BEST DPI

**STAR**

### LASERS CONTINUED

<b>FS400</b>	<b>345</b>	<b>FS1550</b>	<b>855</b>
FS1500	1045	FS3400	1339
FS3600	1749	FS3500	1999
FS5500	3339	FS8500	1559

### LEXMARK

Optra L	1369	Optra LX	1875
Optra LXI	2229	Optra R	965
Optra RX	1469	WinWriter 200	359

### MANNESMANN TALLY

TAMin	239	T9005	325
T9005Plus	Call	T9005PS	699
MT9008	729	T9017	1749
MT9040	Call		

### NEC

SuperScript 610+	282	SuperScript 660	389
SuperScript 660i	555	ColourScript 9000	638

### OKI

DL400ex	269	DL410ex	379
DL810ex	669	CL870	769

### PANASONIC

KX-P4401	285	KX-P4430	490
KX-P5400	519	KX-P4440	699
KX-P6100	288	KX-P6150	317

### Most laser printers come with 12m DSM

### olivetti inkjet printers

JP50	£181
JP360	£166
JP360	£207
P450	£207
P450	£249

### OKI People Technology

#### OL400w LED Page Printer

4 Pages Per Minute	300 x 300 dpi	£279
--------------------	---------------	------

#### OL600ex LED Page Printer

6 Pages Per Minute	600 x 600 dpi	£299
--------------------	---------------	------

#### OL61

**PRICE MATCHING**  
Please call for details



# DABS DIRECT

PERSONAL COMPUTER SYSTEMS

**HASSLE FREE - ORDER NOW OVER THE INTERNET**

**Woking 01483 797474 INTERNET sales@dabs.co.uk**

TRANSAX

£ 899.<sup>VAT</sup>



**HL1260**  
12ppm, 600dpi  
PCL 5 emulation  
Enhanced Memory  
management  
Postscript

£ 445.<sup>VAT</sup>



**HL660**  
6ppm, 600dpi  
GDI Printing  
PCL 5 emulation  
Enhanced Memory  
management

*speed and simplicity*

£ 315.<sup>VAT</sup>

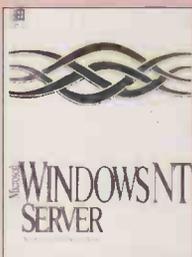


**HL630**  
6ppm, 300dpi  
GDI Printing  
PCL 4 emulation  
Enhanced Memory  
management

People only notice who makes the laser printer when something goes wrong.  
We're happy to remain anonymous.



## Windows NT Network



Microsoft

Ready to run for 5 users, all cables & connectors included, all software configured ready to run.



### Comprises

- 5 Pentium 75 8/540 PC's
- Pentium 100 full tower server, 32Mb ram, 4.3 SCSI HD
- Window NT Server 3.5.1, 5 client licence
- All client PC's run in Window 95
- SMC 6 port UTP Hub
- All cables & connectors
- Educational Prices available



### Prices

System	Standard	Educational
System as above	7995	7695
System as above with Multimedia CD/Sound Card	8795	8495
System as above with Office 95	10295	9395

### IMPORTANT NUMBERS

EDINBURGH Sales 0131-556 4114  
LONDON Sales 0171-582 4777  
BOLTON Sales 01942 794000  
WOKING Sales 01483 797474  
All Customer Services 01942 794020

### CARRIAGE

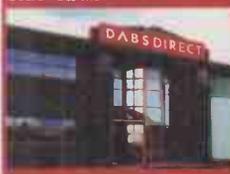
HARDWARE/SOFTWARE (PER ORDER)  
Standard GB 1-3 working day Delivery £8.00  
Next working day Delivery £15.00  
N Ireland/Highlands/CI/DM 1-3 Days Call  
Saturday Delivery (Mainland GB) £30.00

CONSUMABLES  
Standard UK 1-3 working day Delivery £4.00  
Next working day Delivery £6.50  
Call for quotes on other areas/times

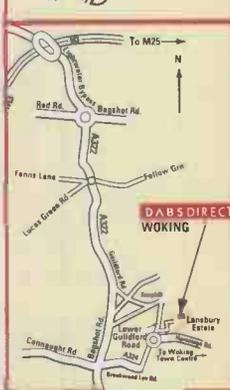
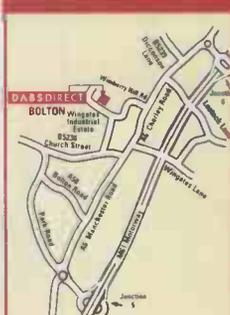
PRICES ARE PER ORDER NOT PER BOX  
ALL DELIVERY TIMES SUBJECT TO CLEARANCE FUNDS  
BEING IN STOCK AND UNSOLD. PLEASE ADD VAT TO ALL PRICES.

### HOW TO FIND US

DABS DIRECT  
DIRECT HOUSE  
30 WINGATES INDUSTRIAL PARK  
WESTHOUGHTON  
BOLTON BL5 3XU



DABS DIRECT  
THE LANSBURY ESTATE  
102 LOWER GUILDFORD ROAD  
KNAPHILL  
WOKING  
SURREY GU21 2EW



### TERMS

EU residents add 17.5% VAT to all prices except books.  
We also supply many products not listed here. Export orders welcome, carriage charged at cost. Official orders accepted only from public sector/education/listed PLCs. Prices listed are CWO (cheques, cash, credit/debit card, postal order, bank transfer, bankers draft). Surcharge applicable on business cheques using Transax.  
Leasing finance to businesses available subject to status. Minimum order value £750, please call for details. Written details on request.  
14 day credit terms available to public sector & quoted PLCs only. Add 2% to prices listed for credit. Personal cheques over £1000 or without cheque card and business cheques which do not include Transax surcharge may take up to 14 days to clear.  
Prices and manufacturers specifications subject to change without notification. Goods offered subject to being unsold. Goods not offered on a trial basis. All returns must have prior authorisation. All orders are subject to our terms & conditions, available upon request. Proprietor: D. Alpertin, E&OE (2.10.95).  
RESTOCKING FEE CHARGED ON NON-EFFECTIVE RETURNS. DUE TO CURRENCY FLUCTUATIONS ALL PRICES MAY CHANGE

## HP OfficeJet LX

Personal Printer-Fax-Copier

The all-in-one solution that doesn't compromise on features.



**High-quality InkJet Printing**  
600 x 300 dpi with RET ensures crisp text and eye-catching graphics

**Plain-paper Fax Output**  
No more curly, waxy thermal paper! With the HP OfficeJet LX you can enjoy all the benefits of plain paper

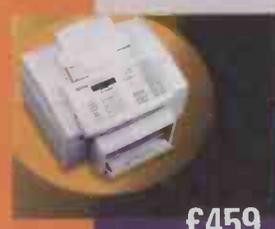
**PC Fax Capability**  
Send your faxes directly from your Windows applications. Receive incoming messages into your PC and select which should be printed.

**Time Saving/Efficiency**  
Just one product to setup and use! Just one print cartridge to change.

**Plug and Play**  
The HP OfficeJet LX is as easy to use and install as standalone devices.

**Space Saving**  
You don't need several machines for your office. The HP OfficeJet LX can do it all.

Print and fax your images and pictures with the HP OfficeJet LX



£459

## HP Support Pack Guide

HP Part No.	Products Covered	Standard Warranty	HP Support Pack	Price
H5461A	HP DeskJet/Writers Mono	3 Year Unit Exchange	3 Year on-site - next day/exchange	£40
H5463A	HP DeskJet Portable (320)	1 Year Return	3 Year on-site - next day/exchange	£40
H5464A	HP Displays, Monitors, Terminals			
	HP200LX	1 Year Return	3 Year on-site - next day/exchange	£42
H5466A	HP DeskJets/Writers (Colour)	3 Year Unit Exchange	3 Year on-site - next day	£55
H5467A	HP Fax 900, HP Fax-950	1 Year Unit Exchange	3 Year on-site - next day/exchange	£75
H5468A	HP ScanJets (Mono)	1 Year Return	3 Year on-site - next day	£85
H5473A	HP LaserJet 4L, HP DeskJet 1200C/PS, 1600C/CM	1 Year Unit Exchange or 1 Year Return	3 Year on-site - next day	£105
H5475A	HP ScanJets (Colour)	1 Year Return	3 Year on-site - next day	£140
H5476A	HP LaserJet 5P/5SMP	1 Year Return	3 Year on-site - next day	£142
H5478A	HP JetStore, HP SureStore	1 Year Return	3 Year on-site - 4 hour response	£210
H5479A	HP LaserJet 4 Plus, 4M Plus	1 Year Return	3 Year on-site - next day	£180
H5480A	HP VL2, N2/N2i, M2/M2i, XM2, XP/60, XU	1 Year on-site	3 Year on-site - next day	£125
H5481A	HP NetServer LC	2 Year Return	3 Year on-site - 4 hour response	£265
H5482A	HP LaserJet 4V/MV	3 Year on-site - next day	3 Year on-site - next day	£235
H5485A	HP Disk Arrays/Storage Systems	1 Year on-site	3 Year on-site - 4 hour response	£280
H5486A	HP Designjets	1 Year on-site - next day	3 Year on-site - next day	£300
H5487A	HP NetServer LF	3 Year on-site - next day	3 Year on-site - 4 hour response	£375
H5489A	HP NetServer LM	3 Year on-site - next day	3 Year on-site - 4 hour response	£420
H5432A	HP LaserJet 4Si/4SiMX	1 Year on-site - next day	3 Year on-site	£530
H5505A	HP Colour LaserJet	1 Year on-site	3 Year on-site - next day	£1280

**£569** **HP LaserJet 5P Printer**

- True 600dpi laser printing
- HP's Microfine toner and Resolution Enhancement technology
- Different levels of greyscale and halftones
- 6 page-per-minute engine, 20MHz processor, instant-on fuser and HP's enhanced PCL 5
- 2 Paper trays and EconoMode draft printing and Power-save mode

**£325** **HP DeskJet 850c Printer**

- High quality 600x600 dpi black with new pigment ink
- New colour inks for more brilliant colours
- HP's Resolution Enhancement technology
- 26 built in scalable typefaces
- Single, manual and automatic sheet feed
- Multiple paper types and sizes, envelopes, labels
- Dual I/O (PC or Macintosh)
- 1 year warranty

Excellent Quality • Superior Service • Unbeatable Value

The Pioneers  
have arrived!

# WILD WEST COMPONENTS

# THE WILD

Watch there! These prices  
are our REAL sales prices. Check other  
suppliers' real prices first, then call us!

**WATCH OUT FOR  
THE COWBOYS!**

How?

When  
you're  
buying  
mail  
order  
make sure  
the deal you  
see on the  
page doesn't



have a heap big markup  
when you come to order.

Prices will always  
fluctuate but at Wild  
West we do our best to  
keep them stable and  
always inform you of  
changes and why.

**SHERIFF LO-COST  
GUARANTEES  
THE BEST PRICES**

Yee-Hah!

We've run high prices  
out of town. All  
you bargain  
hunters are  
in for a  
good time!  
I will beat  
any  
confirmed  
advised



price in this here  
magazine. Now get on  
them new fangled  
telephones and start  
orderin'!

**FREE MOUSE MAT  
WITH YOUR FIRST  
ORDER AND OTHER  
GIFTS AND  
SPECIAL OFFERS  
TO FOLLOW!**

JUST HOW DO YOU ORDER CASES OR  
CARDS FROM ANY OF THESE DRIVES

## WILDWEST SPECIALS - HARD DRIVES

IDE	
Western Digital - 3 year warranty - Complete with setup software	
AC2635 835Mb E-IDE access time: 10ms, 64k cache, speed: 5400rpm	£108
AC2880 890Mb E-IDE access time: 10ms, 64k cache, speed: 5400rpm	£134
AC2100 1Gb E-IDE access time: 10ms, 64k cache, speed: 5495rpm	WESTERN DIGITAL £172
AC31200 1.28Gb E-IDE access time: 10ms, 64k cache, speed: 4500rpm	£189
AC31600 1.6Gb E-IDE access time: 10ms, speed: 5200rpm, 128k cache mode 4	£259
Fujitsu - Mode 4, MR Head Technology	
M1603T 540MB 3-Year Warranty, E-IDE access time: 10ms, 128k cache, speed: 5400rpm	£105
M1608T 1081MB 3-Year Warranty, E-IDE access time: 10ms, 128k cache, speed: 5400rpm	£157
Seagate - 3 year warranty	
ST3491A 426MB E-IDE access time: 14ms, 128k cache	£95
ST3660A 545MB E-IDE access time: 14ms, 128k cache	£105
ST5850A E-IDE access time: 11ms, 256k cache	Seagate £138
ST5180A 1GB E-IDE access time: 12ms, 256k cache	£169
ST31270A 1.2GB E-IDE access time: 12ms, 256k cache	£181
Conner - 3 year warranty	
CF5340A 540MB E-IDE access time: 14ms, 64k cache, speed: 3600rpm	£98
CF5355A 850MB E-IDE access time: 14ms, 64k cache, speed: 3600rpm	CONNER £119
CF5890A 850MB E-IDE access time: 14ms, 64k cache, speed: 3600rpm	£128
CF51275A 1.275Gb E-IDE access time: 14ms, 64k cache, speed: 3600rpm	£169
Maxtor - 2 Year	
7425AV 426MB E-IDE access time: 12ms, 64k cache, speed: 3500rpm	£92
7451AV 541MB E-IDE access time: 12ms, 128k cache, speed: 4480rpm	£105
7850AV 850MB E-IDE access time: 12ms, 64k cache, speed: 3500rpm	maxtor £130
71260AT 1.260Gb E-IDE access time: 12ms, 256k cache, speed: 4500rpm	£175
7451AP 1.6Gb E-IDE access time: 12ms, 128k cache, speed: 5400rpm	£279
SCSI	
Conner - 5 year warranty	
CFP1080 ANTIGUA 1.080Mb access time: 11ms, speed: 5400rpm, 256k cache	£202
CFP2108 CAYMEN 2.108Gb access time: 9ms, speed: 5400rpm, 256k cache	CONNER £479
CFP2107 CAYMEN 2.107Gb access time: 9ms, speed: 7200rpm, 512k cache	£526
CFP4207 CAYMEN 4.2Gb access time: 9ms, speed: 7200rpm, 512k cache	£754
Fujitsu - Fast SCSI-2	
M1613S 540MB 3-Year Warranty, access time: 10ms, speed: 5400rpm, 128k cache MR	£127
M1605S 1.1Gb 5-Year Warranty, access time: 10ms, speed: 5400rpm, 128k cache MR	£206
M2932S 2.1Gb 5-Year Warranty, access time: 10ms, speed: 5400rpm, 512k cache MR	£525
M2934S 4.350Mb 5-Year Warranty, access time: 10ms, speed: 7200rpm, 512k cache MR	£755
IBM - Fast SCSI-2	
540Mb Aladin 2-Year Warranty, access time: 12ms, speed: 5400rpm, 192k cache	£121
1Gb Desk Star 5-Year Warranty, access time: 10.5ms, speed: 5400rpm, 512k cache	IBM £207
2.1Gb Ultra Star 5-Year Warranty, access time: 7.5ms, speed: 7200rpm, 512k cache MR	£266
4.3Gb Ultra Star 5-Year Warranty, access time: 7.5ms, speed: 7200rpm, 512k cache MR	£1205
5.2Gb Ultra Star 5-Year Warranty, access time: 7.5ms, speed: 7200rpm, 512k cache MR	£1209
Seagate - 5 year warranty	
ST3120N Hawk Fast 1Gb Fast SCSI-2 access time: 10ms, 512k cache	Seagate £281
ST31230W Hawk Fast 1Gb Fast WIDE SCSI-2 access time: 10ms, 512k cache	£371
ST3243N Hawk Fast 2.1Gb SCSI-2 access time: 10ms, speed: 5400rpm, 512k cache	£550
ST32430W Hawk Fast WIDE SCSI-2 access time: 10ms, speed: 5400rpm, 512k cache	£593
ST32550N Barracuda Fast SCSI-2 2.1Gb access time: 8ms, speed: 5400rpm, 512k cache 16"	£699
ST35230N Hawk Fast SCSI-2 4.0Gb access time: 9ms, speed: 5400rpm, 512k cache 16"	£739
ST31510N Barracuda Fast SCSI-2 4.0Gb access time: 8ms, speed: 7200rpm, 1024k cache 16"	£1049
SPECIAL HARD DISK BUNDLES	
M1606T 1081Mb E-IDE 10ms 128k cache 5400rpm E-IDE 4HDD/2FDD 2S (UART) 1P, 1G, UMC Chipset, E-IDE Mode 3&4	£169
AC2850 890Mb E-IDE 10ms 64k cache 5400rpm E-IDE 4HDD/2FDD 2S (UART) 1P, 1G, UMC Chipset, E-IDE Mode 3&4	£149
M1605S 1.1Gb Fast SCSI-2 10ms 5400rpm 128k cache MR PCI NCR 810 SCSI-2 Card	£229
ST31230N Hawk Fast 1Gb Fast SCSI-2 10ms 512k cache PCI NCR 810 SCSI-2 Card	£299

## MORE HARD DRIVES

Quantum IDE - 2 year warranty	
MAVERICK 540MB 14ms 128k cache	£98
LIGHTNING 540MB 11ms E-IDE 128k cache	£115
FIREBALL 540MB 12ms 128k cache	£118
LIGHTNING 730MB 11ms E-IDE 128k cache	£125
TRAILBLAZER 850MB 14ms 128k cache	£130
FIREBALL 1Gb 12ms 128k cache	£169

Quantum SCSI - 2 year warranty	
Maverick 540MB 14ms	£107
Lightning 730MB 11ms	£129
Trailblazer 850MB 12ms	£149
Fireball 1Gb 12ms	£259
Atlas XP32150S 2.1Gb 9ms 1024k cache, 7200	£361
Grand Prix XP34301S 4.3Gb 9ms 512k, 7200	£731

Micropolis SCSI - 5 year warranty	
M3221 2Gb 8.5ms - Fast SCSI-2	£579
M3243 4.2Gb 8.5ms - Fast SCSI-2	£769
M1991 9.1Gb 12ms - Fast SCSI-2	£1399
M3243AV 2Gb 8.5ms - Audio Visual	£639
M3243AV4.2Gb 8.5ms - Audio Visual	£839
M1991AV 9.1Gb 12ms - Audio Visual	£1479

HP SCSI - 5 Year	
2Gb SureStore 5400rpm 9.6ms	£499

Accessories	
Hard Drive Brackets	£5
Removable IDE Hard Drive Rack	£19
IDE Hard Drive Cable	£5

**2.5" IDE HARD DRIVES**  
We stock Quantum, Fujitsu, Seagate, and  
Western Digital. Please call.

**NEW! Syquest EZ Drive**  
More speed, Mb & security!  
135Mb per cart, 13.5ms access time,  
2-Year Warranty

Internal IDE Kit  
**£145**

REMOVABLE DRIVES	
SyQuest Internal Drives	
SQ5200 5.25" Removable 200MB HDD	£259
SQ3270A 3.5" Removable 270MB (IDE/AT) HDD	£259
SQ3270S 3.5" Removable 270MB (SCSI) HDD	£259
SyQuest External Drives - ex. interface	
SQ3270 PP 270MB Parallel Port Drive	£425
SQ3270 EXT 270MB External SCSI Kit no iface	£364
NEW! SyQuest EZ Drives	
SyQuest - EZ 135 Internal IDE Kit	£145
SyQuest - EZ 135 SCSI External	£175
SyQuest - EZ 135 Parallel Port Device	£641
SyQuest Media	
SQ400 5.25" 44MB Cartridge for SQ555	£30
SQ800 6.25" 88MB Cart. for SQ510C & SQ5110	£34
SQ2000 5.25" 200MB Cartridge for SQ5200	£32
SQ310 3.5" 105MB Cart. for SQ310SA & SQ310SS	£38
SQ327 3.5" 270MB Cartridge for SQ3270	£42

OPTICAL DRIVES	
Fujitsu	
230Mb Optical Drive 3.5 Internal Bare	£389
230Mb Optical Drive 3.5 Internal Kit	£599
230Mb Optical Drive 3.5 Parallel Kit	£699

Panasonic	
PD Drive Quad CD-ROM 650Mb Optical	£96
PD Drive Kit Int. inc. SCSI I/O Adapter	£79
PD Drive Kit Ext. inc. SCSI I/O Adapter	£79
Media 650Mb	£17
LF7304 1.5Mb Re-Writable Optical External	£149
LF7300 5Mb Re-Writable Optical External	£149

## FLOPPY DRIVES

3.5" 1.44Mb Drive	£16
5.25" 1.25Mb/360K Drive	£28
PANASONIC 3.5" 1.2Mb	£22
PANASONIC 5.25" 1.2Mb	£32

## TAPE STREAMERS

INTERNAL	
Colorado Jumbo D125 350Mb Internal	£79
Colorado Jumbo D125 680Mb Internal	£115
Colorado HP Colorado T1000 800Mb	£129
Colorado Jumbo D150 1.4Gb Internal	£188
Colorado Travan 800 Kit, Not including tape	£125
Omega Tape 700 Internal (680Mb Comp.)	£134
Imega Ditto 800	£199
Conner Tape Store 420AT (complete kit)	£36
Conner Tape Store 850AT (complete kit)	£185
Conner Tape Store 4000 SCSI	£435
Conner Tape Store 4000 EIDE	£435
Conner 2GB DAT Internal Drive	£524
Conner 8GB DAT Internal	£623
Conner 800MB Travan Kit, Inc tape	£130
Wangtek 250Mb Internal SCSI	£289
Wangtek 500Mb Internal SCSI	£389
Wangtek 1GB Internal SCSI	£489
Wangtek 3100 Internal 2GB SCSI DAT Drive	£518
Wangtek 3200 Internal 4-8GB SCSI DAT Drive	£629
Wangtek 3400DX Int. 8-16GB SCSI-2 DAT Drive	£729

H.P. - Bare Drives	
HP Surestore 2000i 2GB	£589
HP Surestore 5000i 4GB	£625
HP Surestore 6000i 8GB	£785

EXTERNAL	
Colorado Tracker IT 35 350Mb	£148
Colorado Tracker IT 25 700Mb	£198
Wangtek 500MB External SCSI	£535
Wangtek 1GB External SCSI	£635
Wangtek 3100 Ext. 2GB SCSI DAT Drive	£524
Wangtek 3200 Ext. 4-8GB SCSI DAT Drive	£699
Wangtek 3400 Ext. 8-16GB SCSI DAT Drive	£795
Conner Tape Store 420 AT	£239
Conner Tape Store 850 AT	£285
Conner Tape Store 4000 SCSI AT	£589
Conner Travan 800 Kit inc Tape/Software	£190
HP Surestore 2000e 2GB	£699
HP Surestore 3000e 4GB	£789
HP Surestore 6000e 8GB	£945

PARALLEL PORT Tape Streamers	
Backpack 1980 250MB Parallel	£269
Backpack 900 680MB Parallel	£319
Imega 250MB Parallel	£135
Imega Tape700 Ex (680MB Comp.)	£195
Imega Ditto 800MB Parallel Port	£199

Others	
Sony Digital Data Storage DDS-2 4GB	£639

Software	
Arcadia Backup Exec for Windows 95	£75
Cheyenne ArcServe version 5 for Netware	£159

Tapes	
MC3000XL Tape for Imega 700	£15
3M 400MB Tapes for Imega Ditto	£25
DC2120 Tape	£12
2GB DAT Tape	£12

Please call for complete range of backup software

## CONTROLLERS

BEST SELLING CONTROLLERS	
Multi Super I/O - 2FDD/2HDD 2S, 1P, 1G	£8
Enhanced IDE 4HDD/2HDD 2S (UART) 1P, 1G, UMC Chipset, E-IDE Mode 3&4	£19.95
P2000 Enhanced IDE 4HDD/2FDD 2S (UART) 1P, 1G CMD, SMC, WINBOND Chipsets, Enhanced IDE Mode 3 to 5	£25.99
PCI NCR 810 SCSI-2 Card	£45
Serial Card with fast UART 16550	£27
2940 PCI SCSI Wide Kit	£238
Altra Total CD Kit	£39
Altra Total Connect Kit	£68
Bus Logic KT946C PCI SCSI Adapter	£199

IDE ISA	
Multi Super I/O - 2FDD/HDD 2S, 1P, 1G	£8

IDE ISA Cache	
Bus Logic KT910 IDE 16 Bit	£74
Promise DC200 4HDD/2FDD No Cache	£68

VESA Local Bus Controllers	
**Enhanced IDE 4HDD/2FDD 2S (UART), 1P, 1G UMC Chipset, E-IDE Mode 3&4	£19.95
**P2000 Enhanced IDE 4HDD/2FDD 2S, 1P, 1G CMD, SMC, WINBOND Chipsets This controller supports EIDE Mode 3to5	£25.99
Bus Logic KT410 VLB 32 bit IDE Cache	£94
Bus Logic KT910 IDE Host Adapter	£139
VL395 SCSI/IDE 2S, 1P, 1G 64K	£95
VL395 SCSI/IDE3-Cache SCSI	£88
Promise DC4030VL 4HDD/2FDD	£88
DC-680VL 4HDD/2FDD 0K	£98
Promise DC-420VL 512K 2S, 1P Max 1Mb	£84
Promise DC440VL SCSI/IDE 2S, 1P, 1G	£148
Bus Logic BT454C VLB Fast SCSI Host Adapter	£146
Bus Logic TB440C VLB Fast SCSI H/W, no floppy	£139

PCI Controllers	
PCI IDE Controller (mode 3,4)	£25
PCI NCR 810 SCSI Card	£45
Future Domain SCSI PCI Controller	£98

**WE OFFER FULL INSTALLATION  
SERVICES. CALL FOR A QUOTE.**

# BEST PRICES IN TOWN!

## MORE CONTROLLERS

DC-5030 IDE Cache Controller (0K) PCI	£104
<b>SCSI Controllers</b>	
Bus Logic BT545C ISA 16bit SCSI Adaptor	£169
Bus Logic KT545C ISA 16bit SCSI Adaptor	£179
Bus Logic BT445C VLB 32 bit SCSI Adaptor	£149
Bus Logic KT445C VLB 32 bit SCSI Adaptor	£154
Bus Logic BT946C PCI SCSI Adaptor	£194
Bus Logic KT946C PCI SCSI Adaptor	£199
Bus Logic BT640A MCA 32 bit SCSI Adaptor	£229
Bus Logic BT747C EISA Fast SCSI Adaptor	£239
Bus Logic BT747C Fast SCSI EISA 32 bit	£259
<b>Bus Logic ISA - VLB - PCI</b>	
BT545C ISA 16 Bit SCSI Adaptor	£169
KT545C ISA 16 Bit SCSI Adaptor	£179
BT445C VLB 32 Bit SCSI Adaptor	£149
KT445C VLB 32 Bit SCSI Adaptor	£154
BT946C PCI SCSI Adaptor	£194
KT946C PCI SCSI Adaptor	£199
BT640C MCA 32 bit SCSI Adaptor	£229
BT747C EISA Fast SCSI Adaptor	£239
BT747C Fast SCSI EISA 32 bit	£259

<b>Adaptec</b>	
1505Ultra Total CD Kit	£39
1515Ultra Total Connect Kit	£68
1542 SCSI Controller Bare	£117
1542 SCSI Complete Kit	£154
2742 EISA SCSI Complete Kit	£235
2740/2 Multi Channel EISA SCSI Comp.	£255
2842 VL Local Bus SCSI	£156
2825 IDE/SCSI Total Advantage VL Bus	£105
2940 PCI SCSI Kit	£170
2940 PCI SCSI Wide Kit	£238
3940 PCI SCSI Multi Channel Complete Kit	£285
348 MINISCSI Plus (Parallel SCSI Adap)	£38
348 MINISCSI Plus (Enh Parallel SCSI Adap)	£112
400 SCSI PCMCIA	£145

<b>Future Domain</b>	
TMC 850 ISA 8 Bit CD Rom Kit	£32
TMC 1610 MCDI ISA 16 Bit CD Rom Kit	£48
TMC1680 ISA with Floppy Support	£83
TMC 3260 PCI SCSI Kit	£109
MCS 700 MCA Kit	£109
SCSI 2 Go PCMCIA	£159

<b>I/O Controllers</b>	
Parallel Port Card	£9
Serial Card	£9
Serial Card with Fast UART 16550	£27
4 Port RS232 Adaptor	£88

**P2000 VLB E-IDE  
Super I/O Card with 2 UARTs  
£25.99**

## MOTHERBOARDS

**REMEMBER PART-NERS, CHOOSE  
YOUR MOTHERBOARD, YOUR CPU,  
AND THEN THE MEMORY!**

<b>Motherboard with NO CPU</b>	
<b>VESA Local Bus 486</b>	
486 SX/DX/DX2, 256K cache, Green, 7 x ISA slots, 3 x VLB slots (4 x 30-pin, 2 x 72-pin) P24T Upgradeable	£54
486 SX/DX/DX2/DX4-100, 256K cache, Green, 7 x ISA slots, 3 VLB, 4 ISA, (4 x 30-pin & 2 x 72-pin) P24T Upgradeable	£65
FIC 486 SX/DX/DX2/DX4-100, 256K cache, Green, 7 x ISA slots, 3 VLB, 4 ISA (4 x 72-pin) P24T Upgradeable ZIF socket	£69

<b>PCI Bus 486</b>	
486 SX/DX/DX2/DX4-100, 256K cache, Green, 7 x ISA slots, 3 PCI, 4 ISA, (4 x 72-pin) P24T & D Upgradeable	£79
<b>FIC PIO-2 486 SX/DX/DX2/DX4-100, 256K cache (upgradeable), Green, 4 x ISA, 4 x PCI slots (4 x 72-pin), *Full I/O includes E-IDE + Floppy, 2 x 16550 UART Serial ports, (ECP + EPP) Parallel Port, ZIF socket, P24T &amp; D Upgradeable</b>	
	£99

**FIC PIO-2 with  
AMD 486 DX4-100  
Processor & 8Mb  
SIMM Bundle  
£330**

<b>PCI Bus Pentium</b>	
FIC PA-1000 60/66 Pentium, Apollo 530 chipset, 256K cache (upgradeable), Green, 4 x ISA, 4 x PCI slots (4 x 72-pin), *Full I/O includes E-IDE + Floppy, 2 x 16550 UART Serial ports, (ECP + EPP) Parallel Port, ZIF socket	£110
FIC PA-2000 75/90/100/120 Pentium, Apollo 570+ chipset, 256K cache (upgradeable), Green, 4 x ISA, 4 x PCI slots (4 x 72-pin), *Full I/O includes E-IDE + Floppy, 2 x 16550 UART Serial ports, (ECP+PPP+SIR) Parallel Port, ZIF socket, PnP Flash BIOS	£125

<b>TRITON Chipset Pentium Motherboard</b>	
Pentium 75/90/100/120/133MHz 256K cache (upgradeable), Full Specification Including, EIDE Hard Disk support, Floppy Disk, ECP + EPP Parallel Port, 16550 UART Serial Port, Games Port, Flash BIOS, Plug & Play Compliant, Supports EDO RAM	

## CPUs

SCS Thomson DX2-66 (5V)	£30
IBM 486DX2-66 3.3V (Heatsink Req'd)	£36
Cyrix DX2-66MHz CPU (5V) (Heatsink included)	£34
Cyrix DX4-100MHz CPU (3.45V)	£62
AMD 80486DX4-100MHz CPU	£65
AMD 80486DX4-120MHz CPU	£85
Intel 80486DX2-66MHz CPU	£74
Intel 80486DX4-100MHz CPU	£110
Pentium 75MHz CPU	£125
Pentium 90MHz CPU	£190
Pentium 100MHz CPU	£245
Pentium 120MHz CPU	£390
Pentium 133MHz CPU	£480

<b>Heat Sink</b>	
Heat Sink with Fan	£7
Heat Sink with Fan For Pentium	£9

**Overdrive Chips for 25MHz to boards...Call**

**Upgrade Chips - 386 to Cyrix 486...Call**

## MEMORY

<b>30-pin SIMMs &amp; SIPPs</b>	
1Mb x 9, 3-chip, 70ns	£26
1Mb x 9, SIMMs, 9 chip, 70ns	£32
4Mb x 9, SIMMs, 70ns	£95
<b>72-pin SIMMs</b>	
1Mb x 32, 70ns, (4Mb)	£88
2Mb x 32-4 chip, 70ns, (8Mb) Reconn for 486	£179
2Mb x 32-8/12 chip, 70ns, (8Mb) Reconn for Pentium	£185
4Mb x 32, 70ns, (16Mb)	£314

<b>72-PIN SIMMS with DRAM Parity</b>	
1Mb x 36, 70ns, (4Mb)	£108
2Mb x 36, 70ns, (8Mb)	£209
4Mb x 36, 70ns, (16Mb)	£359

<b>EDO RAM</b>	
1Mb x 32, 70ns (4Mb)	£112
2Mb x 32, 70ns, (8Mb)	£235
4Mb x 32, 70ns, (16Mb)	£415

## INTEL MOTHERBOARDS

<b>Zappa Advanced Pentium Boards</b>	
Zappa Pentium 75MHz 256K cache, No RAM	£309
Zappa Pentium 75MHz 8MB EDO RAM	£479
Zappa Pentium 90MHz 256K cache, No RAM	£379
Zappa Pentium 90MHz 8MB EDO RAM	£579
Zappa Pentium 100MHz 256K cache, No RAM	£459
Zappa Pentium 100MHz 8MB EDO RAM	£606

\* Intel Triton Chipset, Full I/O, All of the quality expected from Intel. Please phone for full details

**TRITON Pentium Chipset Motherboard, 256K cache, 100MHz Pentium, 16MB RAM**

**Yee-haw! £725**

<b>Endeavour Advanced Pentium Boards</b>	
Endeavour Pentium 90MHz No cache, No RAM	£399
Endeavour Pentium 90MHz 256K cache, No RAM	£439
Endeavour Pentium 100MHz 256K cache, No RAM	£539
Endeavour Pentium 120MHz 256K cache, No RAM	£689
Endeavour Pentium 133MHz No cache, No RAM	£799
Endeavour Pentium 133MHz 256K cache, No RAM	£859
256K Cache "on-a-stick" for CELP socket	£59

<b>Pentium TRITON Chipset Motherboard</b>	
TRITON Pentium 75MHz, w/256K cache	£255
TRITON Pentium 90MHz w/256K cache	£320
TRITON Pentium 100MHz, w/256K cache	£389
TRITON Pentium 120MHz, w/256K cache	£499
TRITON Pentium 133MHz, w/256K cache	£656

## CD-ROM KITS

Creative Labs Gameblaster AWE32 4X Kit	£275
Creative Labs Multimedia Home CD	£275
Creative Labs Discovery 4X	£265
Creative Labs Gameblaster CD16	£297

**When you buy any CD Rom from WildWest**

Choose from the following Selection

Offer 1 - Encarta '96 only £34.98

Offer 2 - Cinamania '96 only £19.98

Offer 3 - Game Empire 280 various games £4.98

Offer 4 - Fun to learn 5 CD's inc - The Muppets

Welcome to BodyLand Kid Zoo, Lehmanns Oregon Trail £18.99

Offer 5 - The War II D-Day & Midway, Creative Encyclopedias £19.99

Offer 6 - Conquer (RRP£4.99) Super 3D graphics, One Step CD Rom

Offer 7 - Cup Art, Games, Fonts £49.99

## CD ROM DRIVES

<b>Creative 2X IDE CD with 2 Games CD's</b>	
	£83
<b>IDE Interface</b>	
Goldstar GCD-R5408 4 Speed CD	£98
Mitsumi CRMC-FX4000 Quad Speed IDE	£99
Goldstar GCD-R420 2 speed CD ROM	£68
NEC Quad Speed CD IDE (Bare Drive)	£112
Aztech Dual Speed CD CDA268-031 IDE (includes cable, disk manual)	£62
Aztech Quad Speed CD CDA468-011 IDE (includes cable, disk manual)	£98
Toshiba XM5302B Quad Speed ATAPI IDE	£110
Wearnes CDD-220 Quad Speed IDE	£119
Pioneer DR-UA124X 4.4X CD ROM Drive	£119

<b>SCSI Interface</b>	
Pioneer DR-U124x4.4xSCSI-2	£185
NEC 3XP Triple Speed Portable	£239
NEC 6Xi Internal Six Speed	£249
NEC 6Xi External Six Speed	£355
NEC AT SCSI Interface Kit	£55
NEC AT Parallel/SCSI Interface Kit	£89
Plextor 6PLeX 6 speed CDROM Drive Internal	£345
Plextor 6PLeX 6 speed CDROM Drive External	£419
Plextor 4PLeX Int. 4-Speed CD ROM PH43CH (1Mb cache, inc. rail, SCSI + caddy)	£240
Plextor 4PLeX External 4 Speed CD ROM PH45CH (1Mb cache, inc. rail, SCSI, caddy)	£315
Plextor 4PLeX Internal 4 Speed CD ROM PH43CS (256K cache, inc. rail SCSI + caddy)	£325
Plextor 4PLeX Internal 4 Speed CD ROM PH45CS (256K cache, inc. p/cble, SCSI + caddy)	£315

**4PLeX drives are SCSI-2 + 2 yr warranty**

Toshiba XM-5201 SCSI-2 3 Speed Bare Int	£128
Toshiba XM-3601B SCSI 4 Speed Bare Int 4.4X	£202
Toshiba XM-3801S SCSI 4 Speed Int Kit	£288
Toshiba XM-3801S SCSI 4 Speed Ext Kit	£419

**GoldStar Quad Speed IDE CD £98**

<b>PCMCIA CDROM Drives</b>	
Cyberman Dual Speed CM2 58 + 16bit Soundcard	£369
Cyberman Quad Speed CD ROM	£385
Cyberman Quad Speed CD ROM PCMCIA	£385
Panasonic PCMCIA CD ROM	£259

<b>Parallel CD ROM Drives</b>	
Backpack CD ROM/DS 2 Speed Parallel	£289
Backpack CD ROM/AS 4 Speed Parallel	£329

<b>JukeBox CD Drives</b>	
Nakamichi MBR-7 2 Speed 7 disk stacking	£255
Pioneer DRM-604X 4 Speed 6 Disk Jukebox	£479
Pioneer 1804X 4 Speed 18 Disk Jukebox	£1298

<b>Writable CD ROM Drives</b>	
JVC XR-W2001 2 Speed Int SCSI CD Recorder	£1359
Kodak Photo CD Writer 225	£2199
Kodak Multi-Write Publishing Software	£739
Kodak Writable CD Media	£9
Philips CDD522 CD Recorder Ext	£1490
Pinnacle Micro RCD1000	£995

## SOUND CARDS

Sound Blaster 16 Value (with CD interface)	£56
Sound Blaster 16 Pro (with IDE/Panasonic I/F)	£83
Sound Blaster 16 Pro AdSP	£104
Sound Blaster AWE 32 Value Edition	£119
Sound Blaster AWE 32 Full Edition	£156
3DO Blaster	£279
Wave Blaster II	£89
Midi Blaster	£93
Creative Keys, AWE 32 + 49 Key Keyboard + S/W + Call the Ranch	£289

**SoundBlaster AWE 32 Full Edition £156**

## SOUND CARDS

Orchid SoundDrive 16 EZ	£56
Orchid SoundDrive 16 EZ + SCSI	£72
Orchid GameWave 32 Plus	£72
Orchid GameWave 32 Pro	£125
Orchid GameWave 32 Pro SCSI	£139
Orchid Wavebooster 2MB + CueBase Lite	£69
Orchid Wavebooster 4MB + CueBase Lite	£99
Orchid Wavebooster 4MB + FX + Midisoft	£119

Gravis Ultrasound Max. Card	£133
Gravis Ultrasound Midi Kit	£27
Gravis Ultrasound ACE Waveable Add-in Card	£24

Microsoft Windows Software & Microphone	£38
Microsoft Windows Sound Card	£104

Aztech Sound Galaxy Nova 16 Extra	£74
Aztech Sound Galaxy Pro 16	£58
Aztech Sound Waverider 32+	£94
Aztech Sound Waverider 32+Kit	£295

MiroSOUND FM10	£59
MiroSOUND PCM10	£79
MiroSOUND PCM11	£125
MiroSOUND PCM12	£135

<b>Others</b>	
Portable Sound Plus	£108

## SPEAKERS

Screen Beat 4 Speakers	£9
Screen Beat 6 Speakers	£10
Screen Beat 3 Speakers	£12
Screen Beat Pro 30 Speakers	£28
Creative 300 10 Watt Speakers	£65
Creative 600 20 Watt Speakers	£70
80 Watt Performance Mains Powered Speakers	£49
Yamaha Multimedia Speakers YST-M10	£43
ZIFI Pro 2 Speakers	£38

## MULTIMEDIA CARDS

**SoundBlaster Multimedia Home CD £275**

If you don't see what you want please phone and ask for a great price!!!

Hauppauge Win/TV Celebrity	£249
Hauppauge Win/TV Cinema	£185
Hauppauge Win/TV Prisma	£145

Orchid 1MB Kelvin MPEG	£235
Orchid 2MB Kelvin MPEG	£279
Orchid Viola	£249
Orchid Viola Premium	£539
Orchid Viola Pro	£419

Sigma Design Reelmagic Full Version	£319
Sigma Design Reelmagic Lite	£195

Rombo Media Pro HI-RES	£205
Rombo Media Pro Plus	£185
Rombo PC Tuner	£62
Rombo TV Buster External	£42
Rombo TV Buster Internal	£42
Rombo TV Tuner with Teletext	£97

MiroVIDEO 2MB 20TD Live PCI or VLB	£315
MiroVIDEO DGI Plus (with Adobe Premiere, Adobe Photoshop & 3DFT)	£560
MiroVIDEO 1MB 12PD AVI Accelerator	£85
MiroVIDEO 2MB 12PD AVI Accelerator	£125
MiroVIDEO MPEG Maker Software	£179

**TO ORDER, CALL WILDWEST ON  
01245 262627**

**FAX US ON 01245 261646**

**UNIT 4, SOUTH OAK, RIVERHEAD INDUSTRIAL ESTATE, CHELMSFORD, ESSEX, CM1 1PD.**



All prices exclusive of VAT & delivery. All sales subject to standard WildWest terms and conditions E&OE.

We guarantee you the routinest - tootiest prices in this magazine!

We're from the deep south so you be sure you'll get mighty fine hospitality.

Get next-day delivery on all items in stock at the ranch house.

Call us if you don't see what you need

The Pioneers  
have arrived!

# WILD WEST COMPONENTS

**CIRCLE YOUR  
WAGONS FOR  
OUR LAST  
STAND SPECIALS**

Check out our pages every month for 'Last Stand' specials. Best selling products at amazing prices. But hurry they're soon wiped out - I should know!

**OH NO! IT'S  
THAT PESKY  
SMALL PRINT**

### Wild West Terms and Conditions

All prices are shown excluding VAT (17.5%) and delivery charges (subject to VAT). Price guarantee applies to delivered price of product and only to current UK sourced product (OEM, liquidated or promotional items are all excluded). While we will always do our best to price match, we reserve the right to refuse a price match should that price fall below our cost price.

Delivery is next day by insured courier. Please ensure there is someone present to receive the goods. Delivery charges may vary according to goods. Please check at time of ordering.

All special deals and promotional offers are strictly subject to stock. Please confirm stock availability with Wild West before ordering.

Photocopies of products throughout this advertisement are for identification only and may not accurately reflect packaging.

When returning products, please call and request a return number. Goods cannot be accepted without a return number. Goods must be in reasonable condition. A 15% restocking fee will be charged for goods not listed herein. Faulty goods will be exchanged. Wild West will not be held responsible for any carriage charges relating to returned goods.

Full set of terms and conditions available upon request.

Goods will be returned unopened.

**FREE MOUSE MAT  
WITH YOUR FIRST  
ORDER AND OTHER  
GIFTS AND  
SPECIAL OFFERS  
TO FOLLOW!**

**BEST BOLLER IF YOU NEED CASES OR  
CABLES FOR ANY OF THESE DRIVES**

## MODEMS

### US Robotics

Call the 'Ranch' for details on the Internet Bundle  
 Courier V34 28.8 Int. Fax/Modem Internet Bundle £236  
 Courier V34 28.8 Ext. Fax/Modem Internet Bundle £236  
 Sportster 28.8 V34 Fax Ext. Internet Bundle £155  
 Sportster 28.8 V34 Fax Int. Internet Bundle £155  
 Sportster 14.4 Fax External Internet Bundle £104  
 Sportster 14.4 Fax Internal Internet Bundle £104  
 Worldport Dual Standard Cellular £122  
 Worldport 2496+ Fax Pocket £195  
 Worldport - Dual Standard Cellular PCMCIA £159  
 Worldport 2496+ Fax PCMCIA £129

US Robotics

**US Robotics Sportster  
External 14.4  
Fax/Modem  
£104 +Internet  
Bundle**

**Wild Modems - BART-approved**  
 Wild V34 External Fax/Modem £129  
 Wild V34 Internal Fax/Modem £119  
 Wild 14.4 External Fax/Modem £85  
 Wild 14.4 Internal Fax/Modem £85  
 \*All Wild modems come complete with Delta WinFaxLite, DOS FaxLite, Combi for DOS and Windows

**RoadRunner Rocket Bundles**  
 Silver Pack (inc. V32 bis Modem, serial cable, BT lead, PSU, no software) £115  
 Gold Pack (as above + BT T Piece, 9.28 way adaptor and TRN-Send Win DOS Lite) £129  
 Gold RocketBoard Bundle (As Gold Pack + Dual 16C550 High Speed CD) £145  
 Platinum Pack (as Gold Pack + 19200bps V32 Turbo RoadRunner Rocket) £165  
 Andest VPA V22 BIT £339  
 Andest VPA V32 BIT + RocketBoard £439  
 Andest RocketBoard - High Speed 16C550 Serial Card £57

**Motorola**  
 3400 Online Solution to Internet W/ Data/Fax Modem - V34, 28.800 1 Month Free connection to Compuserve... £179  
 3400 Pro 28.8 Data/Fax Modem... £169

**Pison Dacom**  
 Gold Card V34 + Fax PCMCIA Modem £185  
 Gold Card V32 + Fax PCMCIA Modem £174

**Pace**  
 NETLINK V32 (21 days connection and Software) - Inc Internet access pack, MobilFAX 144... £127  
 NETLINK GOLD V34 (21 days connection and Software) - Inc Internet access pack, MobilFAX 144... £210  
 Microlin fx 34 PC Internal Fax Modem £175  
 Linnet 34 fx Desktop V34 Fax Modem £175  
 Microlin fx 34 Pocket Fax Modem £175  
 Microlin fx 34 PCMCIA V34 Fax Modem £275  
 Microlin fx 32 Plus Internal Fax Modem £129  
 Linnet 32 Plus fx V32 Desktop Fax Modem £159  
 Microlin fx 32 Plus Pocket Fax Modem £159  
 Microlin fx NB 32 Plus PCMCIA Fax Modem £185  
 MobilFAX 14,400 £117  
 Message Desk £199

**Hayes**  
 Optima 28.8 VFC + Fax £385  
 Optima 28.8 VFC + Fax Value Pack £685 (2 x Optima 28.8 - 2 Enhanced Serial ports and may not accurately reflect packaging)  
 Optima 14.4 + Fax 144 £259  
 Optima 14.4 + Fax 144 PCMCIA £214  
 Accura 28.8 + Fax VFC V32bis £179  
 Accura 14.4 + Fax V32bis £135

**Cables**  
 9 to 25 Pin Modem Cable £6  
 25 to 25 Pin Modem Cable £6

**Automatic Fax Switches**  
 Andest MSL Manager 1100 Fax/Phone £88  
 Andest MSL Manager 3300 £99  
 Andest MSL Manager 3300M £119  
 Andest MSL Manager 7700 £139

## CASES

Deluxe Desktop Case with LED £34  
 Deluxe Mini Tower Cases with LED £34  
 Deluxe Slim-Line Case £46  
 Deluxe Large Mini Tower Case + LED £58  
 Deluxe Midi Tower Case £58  
 Deluxe Desktop Multi Media Case £69  
 All above cases + screws/cables  
 Deluxe Full Tower Case with LED £69  
 Full Tower case + screws/cables

When you buy any 1Gb Hard Drive or 4Mb memory module (or larger), you qualify to buy Windows 95 Upgrade for only... **£49**

# THE WILD

## KEYBOARDS & MICE

Membrain 102Key UK Keyboard £10  
 Cherry G83-6000 Keyboard Click £19  
 Microsoft Natural Keyboard For Windows 95 £64  
 Keytronics Windows 95 Keyboard £29

**Adaptors**  
 PS2 Keyboard Adaptor (AT to PS2) £5  
 PS2 Keyboard Adaptor (PS2 to AT) £5  
 Keyboard Extensions Cable £5

**Mice**  
 Standard 3 Button Mouse MS Compatible £6  
 Genius Easy Mouse £8  
 Genius Mouse 3 £14  
 Genius II Mouse £22  
 Logitech Pilot Mouse Serial £17  
 Logitech Pilot Mouse PS2 £17  
 Logitech Trackman Pilot £24  
 Logitech Mouseman Serial £28  
**Special Logitech Mouseman Sensa - 4 colours £35**  
 Logitech Mouseman Bus £32  
 Logitech Cyberman 3D Mouse £58  
 Logitech Trackman II PC £42  
 Logitech Trackman Portable £30  
 Logitech Trackman Voyager £44  
 Logitech Trackman Vista £42  
 Logitech Trackman Mouseman Cordless £47  
 Microsoft Home Mouse + 18 games £20  
 Microsoft Bus Mouse £17  
 Microsoft Mouse V2.0 Combo with IntelliPoint £38  
 Genius 'Easy Painter' Digitizer £64

## MORE VGA CARDS

**Orchid**  
 1MB Kelvin 64 £87  
 2MB Kelvin 64 £115

**Taxan**  
 1MB Taxan GTS WinBoost £112  
 2MB Taxan GTS WinBoost £143  
 2MB Taxan WinTurbo 64 £193  
 4MB Taxan Win Turbo 64 £337

## VESA LOCAL BUS

**Generic**  
 1MB Cirrus Logic 5428/29 Win ACC VLB £48  
 1MB Tseng ET4000/W32 VLB £78  
 1MB Cardex 90C33 £78  
 2MB Tseng ET4000/W32 VLB £108  
 2MB Cirrus Logic 5428/29 Win ACC VLB £98

**Diamond**  
 1MB Diamond Stealth SE VLB £64  
 2MB Diamond Stealth SE VLB £118  
 1MB Diamond Stealth 64 Video DRAM VLB £83  
 2MB Diamond Stealth 64 Video DRAM VLB £118  
 2MB Diamond Stealth 64 Video VRAM VLB £197  
 4Mb Diamond Stealth 64 Video VRAM VLB £309

**Fahrenheit**  
 1MB Fahrenheit 64 £108  
 2MB Fahrenheit 64 £134  
 2MB Fahrenheit Pro 64 £218  
 2MB Fahrenheit Pro 64 £304

**Hercules**  
 1MB Hercules Dynamite Pro VLB £135  
 2MB Hercules Dynamite Power VLB £194  
 2MB Hercules Graphite Terminator 64 VLB £262  
 4MB Hercules Graphite Terminator 64 VLB £369

**Matrox**  
 2MB MGA Impression Lite VLB £193  
 2MB MGA Impression Plus VLB £245

**Number Nine Visual Technology**  
 1MB 9FX Vision 330 VLB £89  
 2MB 9FX Vision 330 VLB £135  
 1MB 9FX Motion 531 VLB £129  
 2MB 9FX Motion 531 VLB £169  
 2MB 9FX Motion 771 VLB £220  
 4MB 9FX Motion 771 VLB £329  
 4MB Imagine 128 1280 VLB £470  
 4MB Imagine 128 1600 VLB £605  
 8MB Imagine 128 VLB £1025

**Orchid**  
 1MB Orchid Kelvin EZ VLB £67  
 1MB Orchid Kelvin 64 VLB £85  
 1MB Orchid Fahrenheit 64 VLB £95  
 2MB Orchid Kelvin 64 VLB £115

**2Mb Diamond Stealth 64 Video DRAM PCI £128**

2MB Orchid Fahrenheit 64 VLB £135  
 2MB Orchid Fahrenheit Pro 64 VLB £222  
 4MB Orchid Fahrenheit Pro 64 VLB £285

**Spea**  
 1MB Spea Videoseven Mirage P64 VLB £108  
 2MB Spea V7 Mercury P64 VLB £208

**STB**  
 2MB STB Powergraph 64 VLB £139  
 1MB STB Velocity 64 VLB £135  
 2MB STB Velocity 64 MPEG £215  
 4MB STB Velocity 64 MPEG £310

**Taxan**  
 1MB Taxan GTS WinBoost VLB £115  
 2MB Taxan GTS WinBoost VLB £139  
 2MB Taxan WinTurbo 64 VLB £189  
 4MB Taxan WinTurbo 64 VLB £329

**Techworks**  
 1MB Thunderbolt VL £92  
 2MB Thunderbolt VL £128

**VideoLogic**  
 1MB GraphixStar 300 VLB £95  
 2MB GraphixStar 300 VLB £135  
 1MB GraphixStar 500 VLB (inc AVI scaling) £177  
 2MB GraphixStar 500 VLB (inc AVI scaling) £179  
 2MB GraphixStar 700 VLB £239  
 2MB GraphixStar 700 VLB £378

## PCI

**Generic**  
 1MB Cirrus Logic 5430 PCI £52  
 1MB Cirrus Logic 5434 PCI £58  
 1MB Ark 2000 Card PCI £58  
 1MB Tseng ET4000/W32P PCI £78  
 1MB Advanced Logic AL2301 PCI £78  
 2MB Tseng ET4000/W32P PCI £106  
 2MB Cirrus Logic 5434 PCI £97  
 2MB VRAM S3 964 ACCELERATOR CARD £159

**Diamond**  
 1MB Diamond Stealth SE PCI £69  
 2MB Diamond Stealth SE PCI £119  
 1MB Diamond Stealth PCI £84  
 2MB Diamond Stealth 64 Video DRAM PCI £128  
 2MB Diamond Stealth 64 Video VRAM PCI £195  
 4MB Diamond Stealth 64 Video VRAM PCI £314

**Hercules**  
 1MB Hercules Stingray PCI £97  
 1MB Hercules Stingray PCI Pro Video £106  
 1MB Hercules Stingray PCI Video £127  
 1MB Hercules Stingray PCI Video £145  
 1MB Hercules Dynamite Power PCI £149  
 1MB Hercules Graphite Terminator 64 PCI £259  
 1MB Hercules Graphite Terminator 64 PCI £389

## SCANNERS

**Hewlett Packard**  
 Hewlett Packard Scanjet 3C £599

**Sicos**  
 Sicos Colour Page Scanner £225

**Trust**  
 Trust 1200dpi Flatbed Scanner £290  
 Trust 2400dpi Flatbed Scanner £390

**Microtek**  
 Microtek SMIisp £415  
 Microtek SMIhit £699  
 Microtek SMIlg £329  
 Microtek SMIi £289

**Epson**  
 Epson LapCAT GT300 £305  
 Epson CTX6500 Parallel - PhotoShopLE/OmniPage Direct/Pagekeeper... £385  
 Epson CTX6500 SCSI - PhotoShopLE/OmniPage Direct/Pagekeeper... £459  
 Epson CTX6500 Parallel - PhotoShopLE/OmniPage Direct/Pagekeeper... £489  
 Epson CTX6500 SCSI - PhotoShopLE/OmniPage Direct/Pagekeeper... £569  
 Epson CTX9000 SCSI - PhotoShopLE/OmniPage Direct/Pagekeeper... £669  
 Epson GT16500 SCSI - Adobe Photoshop V3 £759  
 Epson GT19000 - Adobe Photoshop V3 £859  
 Epson Bi-Directional Parallel Port £35

**Nikon**  
 CoolScan £975  
 Scantouch LE £905

**UMAX**  
 Page Office £279  
 Vista T630 300 x 600dpi Colour Scanner £379  
 Vista S8 400 x 800dpi Colour Scanner £529  
 UC 1260 Colour Scanner £749  
 Powerlook 600 x 1200dpi Colour Scanner £1949

**Genius**  
 Scanmate/256 £64  
 Scanmate/Colour SE £119  
 Scanmate/Colour Pro £129  
**Logitech**  
 Logitech Scanman 32 WIN £55  
 Logitech 256 Scanner £69  
 Logitech Easy Touch Scanner £97  
 Logitech Scanman Colour £164  
 Logitech Scanman Power Page £287

**Genius Scanmate/Colour Pro 800dpi hand-scanner with loads of software including Morph Editor £129**

**Other**  
 ScanFX - Scanner, Fax, Copier £389

**Andest**  
 Andest FaxScanner (win) - converts fax machine into A4 scanner £59

## VGA CARDS

**ISA**  
**Generic**  
 256K VGA 800 x 600 16C £18  
 512K VGA 1024 x 768 16C £22  
 1MB Trident 8900D 1024 x 768 256C £38

**Hercules**  
 1MB Hercules Dynamite Pro £138  
**Matrox**  
 2MB MGA Impression Plus ISA £257  
 2MB MGA Impression Plus 200/220 £395

# LOW PRICES IN TOWN!

## MORE VGA CARDS

**Matrox**  
 2MB Matrox Millennium WRAM PnP Compliant...£210  
 4MB Matrox Millennium WRAM PnP Compliant...£310

**Number Nine Visual Technology**  
 1MB 9FX Vision 330 PCI.....£95  
 2MB 9FX Vision 330 PCI.....£139  
 2MB 9FX Motion 531 PCI.....£135  
 2MB 9FX Motion 531 PCI.....£179  
 2MB 9FX Motion 771 PCI.....£220  
 4MB 9FX Motion 771 PCI.....£335  
 2MB Imagine 128 1280 PCI.....£369  
 4MB Imagine 128 1280 PCI.....£470  
 4MB Imagine 128 1600 PCI.....£610  
 8MB Imagine 128 PCI.....£1030

**Orchid**  
 1MB Orchid Kelvin EZ PCI.....£65  
 1MB Orchid Kelvin 64 PCI.....£80  
 2MB Orchid Kelvin 64 PCI.....£113  
 1MB Orchid Fahrenheit 64 PCI.....£95  
 2MB Orchid Fahrenheit 64 PCI.....£133  
 2MB Orchid Fahrenheit Pro 64 PCI.....£210  
 4MB Orchid Fahrenheit Pro 64 PCI.....£289

**STB**  
 1MB Powergraph PCI 64.....£147  
 2MB Nitro 64 PCI.....£143  
 2MB STB Velocity 64V MPEG.....£239  
 4MB STB Velocity 64V MPEG.....£389

**Taxan**  
 1MB Taxan GTS WinBoost PCI.....£117  
 2MB Taxan GTS WinBoost PCI.....£143  
 2MB Taxan WinTurbo 64 PCI.....£239  
 4MB Taxan WinTurbo 64 PCI.....£389

**Techworks**  
 1MB Thunderbolt-T PCI.....£74  
 2MB Thunderbolt-T PCI.....£129

**Videologic**  
 1MB GraphicsStar 300 PCI.....£95  
 2MB GraphicsStar 300 PCI.....£135  
 1MB GraphicsStar 500 PCI.....£128  
 2MB GraphicsStar 500 PCI (inc AVI Scaling).....£185  
 2MB GraphicsStar 700 PCI (inc AVI Scaling).....£255  
 4MB GraphicsStar 700 PCI.....£369

## MORE MONITORS

**Iiyama 17" MF8617E Vision Master FST**

**£515**

**FREE next day mainland delivery**

**Taxan**  
 14" Taxan Ergovision 400LR.....£178  
 14" Taxan Ergovision 410LR N-I.....£183  
 14" Taxan Ergovision 420LR N-I.....£235  
 15" Taxan Ergovision 580 LR 1024 x 768 N-I.....£272  
 17" Taxan Ergovision 880 LR 1024 x 768 N-I.....£488  
 17" Taxan Ergovision 885 LR 1280 x 1024 N-I.....£599  
 17" Taxan Ergovision 895 LR 1280 x 1024 N-I.....£794  
 20" Taxan Ergovision 1080 1280 x 1024 N-I.....£888  
 21" Taxan Ergo 2100 LR 1600 x 1200 N-I.....£1424

**Viewsonic**  
 14" Viewsonic 13ES.....£178  
 15" Viewsonic 15ES.....£260  
 15" Viewsonic 15C.....£308  
 17" Viewsonic 17CS.....£314  
 17" Viewsonic 17CA.....£621  
 20" Viewsonic 20C.....£978  
 21" Viewsonic 21.....£1044

**Smile - Now with 2 years on-site warranty**  
 14" 1414LV SVGA Colour.....£160  
 15" 1515SL SVGA MPRII.....£245  
 15" 1515CL XGA Digital.....£256  
 17" 1715SL XGA Colour Digital LED MPRII.....£412  
 17" 1715CL XGA Colour Digital LED MPRII.....£429

**Goldstar**  
 GS1451CD 14".....£167  
 GS1505DM 15".....£193  
 GS1520DM 15".....£226  
 GS1727DM 17".....£439

## MORE PRINTERS

**Canon**  
 Canon B130 Mono Portable printer.....£175  
 Canon B1200 Bubblejet Printer.....£157  
 Canon B1C70 Colour Portable Printer.....£215  
 Canon B1230 Printer.....£236  
 Canon B1300 80 Column Bubblejet.....£345  
 Canon B1330 136 Column Bubblejet.....£388  
 Canon B1C4000 Colour.....£218  
 Canon B1600E Colour Inkjet.....£319  
 Canon B1C800 Colour Bubblejet.....£1045  
 Canon B1C820 Colour.....£1199

**Brother**  
 Brother HL-630 6ppm Windows Printer.....£317  
 Brother HL-631 6ppm Windows Printer.....£339  
 Brother HL-660 600dpi Windows 6ppm Laser.....£450  
 Brother HL-1260 1200dpi 12ppm B&W Laser.....£895

**Epson Stylus Colour II**

**£329**

**Mitsubishi**  
 Mitsubishi Personal Colour Printer.....£456

**NEC**  
 NEC Superscript 610 Plus 6ppm Laser.....£288  
 NEC Superscript 660 8ppm Laser.....£394  
 NEC Superscript 660i 6ppm Laser.....£545  
 NEC Superscript Colour 3000 1ppm Laser.....£658

**OKI**  
 OKIjet 300c Ink Jet.....£239  
 OKI OL4100ex 4PPM Laser Printer.....£272  
 OKI OL4100ex 4PPM 600dpi Laser Printer.....£378  
 OKI OL660 6PPM Laser Printer.....£555  
 OKI OL810ex Laser Printer.....£735

**Star**  
 StarWintype 4000 Laser Printer.....£290

**Panasonic - Dot Matrix**  
 Panasonic KK-P-1150 9 Pin.....£87  
 Panasonic KK-P-2023 24 Pin Mono.....£191  
 Panasonic KK-P-2124 24 Pin Mono.....£123  
 Panasonic KK-P-2135 24 Pin Colour.....£252  
 Panasonic KK-P-3626 24 Pin Mono.....£252

**Panasonic - Laser**  
 Panasonic KK-P-6100 6PPM GDI.....£273  
 Panasonic KK-P-6130 6PPM GDI.....£305  
 Panasonic KK-P-4430 8PPM.....£512  
 Panasonic KK-P-4440 10PPM.....£712  
 Panasonic KK-P-5400 4PPM.....£469

## NETWORKING

**CeLAN NE2000 Comp.16 Bit Combo ISA**

**£23**

**CeLAN Cards - Novell Approved**  
 CeLAN NE2000 Comp. 16 Bit BNC.....£19  
 CeLAN NE2000 Comp. 16 Bit RJ45.....£19  
 CeLAN NE2000 Comp. 16 Bit Combo ISA.....£23  
 CeLAN NE2000 Comp. 32 bit Combo PCI.....£69  
 CeLAN NE2000 Boot ROM.....£5

**All the above carry lifetime warranty**

**Novell**  
 Novell NE1000 8 bit ISA.....£74  
 Novell NE2000 Plus 16 Bit BNC.....£49  
 Novell NE2000 Plus 16 Bit RJ45.....£55  
 Novell NE2000 Plus 16 bit Combo Card.....£59  
 Novell NE2000 Plus 5 Pack 16-bit either RJ45 or BNC.....£255

**TO ORDER, CALL WILDWEST ON**

**01245 262627**

**FAX US ON 01245 261646**

**UNIT 4, SOUTH SIDE, RIVERMAD INDUSTRIAL ESTATE, CHELMSFORD, ESSEX, CM1 1PD.**

## NETWORKING

**3Com**  
 3COM Etherlink III 3C509 ISA BNC.....£59  
 3COM Etherlink III 3C509 ISA RJ45.....£59  
 3COM Etherlink III 3C509 ISA Combo.....£69  
 3COM Etherlink III 3C509 ISA either BNC or RJ45 5 Pack.....£315  
 3COM Etherlink III 3C509 ISA RJ45/A1056 BNC Combo 5 Pack.....£335  
 3COM Etherlink III 3C579 EISA BNC.....£129  
 3COM Etherlink III 3C579 EISA RJ45.....£129  
 3COM Etherlink III 3C589 PCMCIA RJ45.....£135  
 3COM Etherlink III 3C589 PCMCIA RJ45&BNC.....£139

**SMC Ethercard**  
 SMC Elite Ultra ISA RJ45.....£58  
 SMC Elite Ultra ISA BNC.....£58  
 SMC Elite Ultra ISA Combo RJ45 & BNC.....£63  
 SMC PCI Ethernet Adaptor.....£569  
 SMC PCI Ethernet Adaptor 5 Pack.....£320  
 SMC Elite Ultra ISA J45 6 Pack.....£325  
 SMC Elite Ultra ISA J45 & BNC 6-Pk.....£355  
 SMC Elite Ultra EISA 32C BNC & RJ45.....£154  
 SMC EtherEZ ISA RJ45.....£58  
 SMC EtherEZ ISA BNC.....£58  
 SMC EtherEZ ISA Combo RJ45 & BNC.....£65  
 SMC EtherEZ ISA RJ45 or BNC 5 Pack.....£298  
 SMC EtherEZ ISA Combo RJ45 & BNC 5 Pack.....£329

**INTEL**  
 INTEL Etherexpress ISA 16 BNC.....£60  
 INTEL Etherexpress ISA 16 RJ45.....£67  
 INTEL Etherexpress ISA Flash Combo.....£89  
 INTEL Etherexpress ISA 16 BNC 5 Pack.....£375  
 INTEL Etherexpress ISA 16 RJ45 5 Pack.....£375  
 INTEL Etherexpress ISA Flash Combo 5 Pack.....£435

**NEC**  
 NEC Superscript 610 Plus 6ppm Laser.....£288  
 NEC Superscript 660 8ppm Laser.....£394  
 NEC Superscript 660i 6ppm Laser.....£545  
 NEC Superscript Colour 3000 1ppm Laser.....£658

**D Link**  
 D Link DE620CT Pocket Adapter BNC/TP.....£124  
 D Link DE650CT PCMCIA Ethernet TP.....£119  
 D Link DE220C Ethernet Card BNC.....£59  
 D Link DE220T Ethernet Card TP.....£59  
 D Link DE220CT Ethernet Card BNC/TP.....£79  
 D Link DE320CT MCA Ethernet Card BNC/TP.....£49  
 D Link DE400 EISA Enet Cd BNC/TP/AUL.....£138  
 D Link DE350CT PCI Ethernet Card BNC/TP.....£88  
 D Link DT220 Token Ring ISA.....£225  
 D Link DT320CT Token Ring MCA.....£225

**Ethernet Hubs**  
 CeLAN 8 Port TP Hub BNC or AUL.....£139  
 CeLAN 16 Port TP Hub BNC or AUL.....£279  
 D Link DE-1200 SNMP 12 Port RJ45.....£299  
 D Link DE-1600 SNMP 12 Port RJ45.....£499  
 SMC Tiger Hub TP 6 Port.....£149  
 SMC 3B12 12 Port Hub.....£498

**Repeaters**  
 D Link Repeater 2 Port BNC/AUL.....£325  
 D Link Repeater 4 Port BNC/AUL.....£379  
 D Link Repeater 8 Port BNC/AUL.....£434  
 Allied Telesis 2 Port Repeater.....£434  
 Allied Telesis 4 Port Repeater.....£529

**Transceivers**  
 Allied Telesis Micro Transceiver BNC/AUL.....£33  
 Allied Telesis Micro Transceiver UTP/AUL.....£33

**Print Servers**  
 Chase Research IOPRINT2 BNC 4 Port 2S 2P.....£489  
 Chase Research IOPRINT2 RC45 4 Ports 2S 2P.....£489  
 Chase Research IOPRINT jr RC45 Parallel.....£189  
 Chase Research IOPRINT jr BNC Parallel.....£189  
 Chase Research IOPRINT jr Combo Parallel.....£219

**Connectors**  
 BNC Crimp Plugs.....£1  
 BNC T-Connector.....£5  
 BNC Terminator.....£4  
 BNC In-Line Coupler.....£2  
 RJ45 Crimp Plug.....£1  
 Single BNC Outlet (FacePlate).....£3  
 Dual BNC Outlet (FacePlate).....£5  
 Dual RC45 Outlet (FacePlate).....£12  
 EAD Thinwire Tap Outlet.....£23  
 EAD Thinwire drop Lead 2M.....£25  
 EAD Thinwire drop Lead 5M.....£35

**Professional Tools**  
 BNC Crimp Tool.....£24  
 Ethernet Cable Stripper BNC.....£11  
 RJ45 Crimp Tool.....£74

**UPS Systems**  
 APC BK250-250 VA Backup.....£78  
 APC BK400-400 VA Backup.....£128  
 APC BK600-600 VA Backup.....£158

## MONITORS

14" GVC Colour SVGA N-I Low RadiationNI.....£149  
 15" GVC Digital Colour Monitor N-I MPRII.....£205  
 17" Smile Digital Colour Monitor L/R N-I.....£459

**CTX - one year warranty**  
 14" CTX 1481LR N-I MPRII.....£169  
 15" CTX 1585G N-I SVGA MPRII.....£234  
 17" CTX 1785GM SVGA MPRII 28 1024x768.....£449  
 17" CTX 1785GM SVGA MPRII 28 1280x1024.....£484  
 LMT 1000 16-Grey LCD VGA Screen 9.4".....£495  
 LMT 5020 4096 Col LCD VGA Screen 9.4".....£1989

**Hitachi**  
 Hitachi 15" 15MVX Value.....£245  
 Hitachi 17" 17MVX Value.....£468  
 Hitachi 17" 17MVX Plus.....£765  
 Hitachi 20" 20CM2036 1280 x 1024 NI 84 Hz.....£968  
 Hitachi 20" 20CM2038 1280 x 1024 NI 86 Hz.....£1129  
 Hitachi 21" 20CM2198 1280 x 1024 NI.....£1419  
 Hitachi 21" 20CM2199 1600 x 1280 NI 80 Hz.....£1959

**Iiyama (IDEK)**  
 15" Iiyama Vision Master FST MF-9115.....£258  
 17" Iiyama Vision Master FST MF-8617E.....£515

**FREE Mainland UK Delivery**

17" Iiyama Vision Master FST MF9117E.....£575  
 21" Iiyama Vision Master FST MF9121.....£1160  
 21" Iiyama Vision Master FST MF9121.....£1208  
 21" Iiyama Vision Master FST MF8621.....£1644

**Mitsubishi**  
 (MITS) 15" SD5520 Diamond Scan 15SF.....£338  
 (MITS) 17" FFY7705 Diamond Scan 17FS.....£594  
 (MITS) 17" FFG8705 Diamond Pro 17TX.....£919  
 (MITS) 21" THN9105 Diamond Pro 21TX.....£1295

**NEC**  
 NEC Multisync XV14 14" 1024 x 768.....£215  
 NEC Multisync XV15 15" 1024 x 768 80Hz.....£275  
 NEC Multisync XV17 17" 1024 x 768 80Hz.....£549  
 NEC Multisync XE15 15" 1024 x 768 80Hz.....£386  
 NEC Multisync XE17 17" 1024 x 768 80Hz.....£679  
 NEC Multisync XE21 21" 1024 x 768 75Hz.....£1139  
 NEC Multisync XP17 17" 1280 x 1024 76Hz.....£895  
 NEC Multisync XP21 21" 1600 x 1200 70Hz.....£1715

**Panasonic - 2 year warranty**  
 15" Panasonic (TX-11562) 1024 x 768 NI.....£314  
 17" Panasonic (TX-D1733) 1024 x 768 NI.....£465

17" Panasonic (TX-D1750) 1280 x 1024 NI.....£640  
 20" Panasonic (TX-D2032) 1280 x 1024 NI.....£998  
 21" Panasonic (TX-D2131) 1280 x 1024 NI.....£1348  
 1600 x 1280 max

**Philips - Built-in stereo for M/media App**  
 14" Philips Mono 14M.....£88  
 14" Philips Enhanced VGA Colour 14C.....£163  
 15" Philips Brilliance Autocolor 15B.....£245  
 15" Philips Brilliance Autocolor N-I 15A.....£274  
 17" Philips Autocolor 17A - Play & Play Compatibility.....£665  
 17" Philips Autocolor 17A.....£415

**Philips**  
 17" Philips Autocolor Colour 17B.....£524  
 17" Philips Trinitron Colour 17T Trinitron Tech.....£595  
 20" Philips Autocolor Colour 20C.....£770  
 20" Philips Trinitron Colour 20T Trinitron Tech.....£1295  
 21" Philips Autocolor Colour 21B.....£1349  
 21" Philips Brill. A/scan CyberScreen 21A.....£1748

## SONY

Sony 15" CPDSF1 1024 x 768 NI 25.....£284  
 Sony 17" GDM-17SE1 SVGA N-I.....£739  
 Sony 20" GDM20 SEV 1280 x 1024 N-I.....£1279  
 Sony 20" GDM20 SE1 1280 x 1024 N-I.....£1388  
 Sony CSS-B100 Computer Speaker System.....£64

## PRINTERS

**New all printers are supplied with free parallel cable - when paid for by Switch, Cash or Cheque.**

**Hewlett Packard - Deskjet**  
 HP Deskjet 600 (upgradeable to colour).....£206  
 HP Deskjet 660C.....£274  
 HP Deskjet 850C.....£330  
 HP Deskjet 1200C.....£619  
 HP Deskjet 1200C Postscript.....£965  
 HP Deskjet 1500C.....£819  
 HP Deskjet 1600CM.....£1219  
 HP Deskjet 320.....£165  
 HP Deskjet 340 & Sheetfeeder.....£178  
 HP Deskjet 340/600 Colour Kit.....£32

**Hewlett Packard - Laser Printer**  
 HP Laserjet 5P.....£574  
 HP Laserjet 5L.....£357  
 HP Laserjet 5MP.....£695  
 HP Laserjet 4 Plus.....£959  
 HP Laserjet 4M Plus.....£1249  
 HP Laserjet 4SI.....£2053  
 HP Laserjet 4SI MX.....£2924  
 HP Laserjet 4V A3 Laser Printer.....£1364  
 HP Laserjet 4MV A3 Postscript Laser Printer.....£1967  
 HP Colour Laserjet.....£4179

**Hewlett Packard - Paintjets**  
 HP Paintjets XL300.....£1584  
 HP Paintjets XL300 Postscript.....£2534

**HP Support Pack**  
 Support Pack Desktop/Deskwriter 540/600.....£38  
 Support Pack Deskjet Colour 650/850.....£63  
 Support Pack Mono Scanjet.....£85  
 Support Pack 1200C/PS/Jeis 1600CM 4L.....£98  
 Support Pack 5P/5MP Colour Scanjet.....£135  
 Support Pack HP4 + 4M.....£135  
 Support Pack 4V/4MV.....£225  
 Support Pack 4S/4MX.....£515  
 Support Pack Colour Laserjet.....£1280

**Epson**  
 Epson LX300 9 Pin Dot Matrix.....£92  
 Epson LX1050 9 Pin Dot Matrix.....£179  
 Epson FX870 9 Pin Dot Matrix.....£221  
 Epson FX1170 9 Pin Dot Matrix.....£297  
 Epson LQ100 24 Pin Dot Matrix.....£397  
 Epson LQ150 Monet 24 Pin Dot Matrix.....£112  
 Epson LQ300 24 Pin Dot Matrix.....£141  
 Epson LQ570+ 24 Pin Dot Matrix.....£209  
 Epson LQ1070+ 24 Pin Dot Matrix.....£291  
 Epson LQ870 24 Pin Dot Matrix.....£369  
 Epson LQ1170 24 Pin Dot Matrix.....£425  
 Epson Stylus 820.....£212  
 Epson Stylus 1000.....£325  
 Epson Stylus Colour II.....£329  
 Epson SQ870 Ink Jet Printer.....£435  
 Epson SQ1170 Ink Jet.....£590  
 Epson EPL-3000 4ppm Laser Printer.....£368  
 Epson EPL-5200 6ppm Laser Printer 600dpi.....£469  
 Epson EPL-9000 9ppm Laser Printer 600dpi.....£1180

**ALL PRINTERS SUPPLIED WITH FREE PARALLEL CABLE**

We guarantee you the rootiest - toothiest prices in this magazine!

We're from the deep south so you can be sure you'll get mighty fine hospitality.

Get next-day delivery on all items in stock at the ranch house.

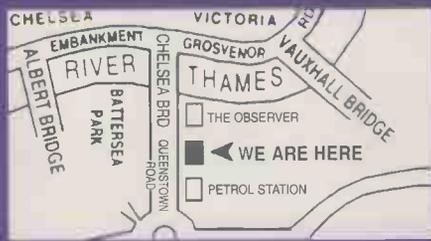
Call us if you don't see what you need.



All prices exclusive of VAT & delivery. All sales subject to standard WildWest terms and conditions E&OE.

# ESL

**HEAD OFFICE & SHOWROOM:**  
 342 Queenstown Road,  
 Battersea, London SW8 4NE  
 Tel: 0171 498 7816. Fax: 0171 498 3218



## ESL 486 VLB

- Vesa Local Bus motherboard
- Upgrade with ZIF socket
- Latest AMI WIN BIOS
- 256K cache memory
- 8MB SIMM Memory upgradable to 64MB
- Western Digital Enhance IDE hard drive
- 1.44MB Mitsubishi floppy drive
- VLB ENHANCE IDE controller card
- 2 serial, 1 parallel and 1 game port
- VLB 1MB Cirrus Logic 5429 (New)
- Desktop or Minitower case with 200w PSU Minitower
- 14" Samsung SVGA Syncmaster 3 LR monitor MPRII
- 102 key enhance UK Keyboard

### Upgrade options:

Extra 8MB RAM	£209
15" Samsung 15GL monitor	£90
15" Sony SFI monitor	£160
17" Samsung 17GLi monitor	£310
17" Idek Vision Master monitor	£360
Midi Tower case & 230W PSU	£23
Full Tower case & 230W PSU	£46
Cherry soft touch keyboard	£10
Fujitsu ergonomic keyboard click	£15
Microsoft natural keyboard	£49
Dos 6.22 & Windows 3.11 Workgroup	£59
MS Windows 95	£89
3 button mouse & mat	£10
Microsoft Mouse V2 2 button	£29
Fax modem US Robotics Sportster	£129



SYSTEM PRICE	540MB	650MB	850MB	1.2GB	1.6GB
486DX2/66MHZ INTEL	£709	£719	£739	£789	£869
486DX2/80MHZ AMD	£699	£709	£729	£779	£859
486DX4/100MHZ AMD	£709	£719	£739	£789	£869
486DX4/100MHZ INTEL	£739	£749	£769	£819	£899
486DX4/120MHZ AMD	£739	£749	£769	£819	£899

System with 8MB Simm RAM, 2 x fast serial and enhance parallel ports.  
 MS Windows 95 pre load @ £89

### Multimedia Upgrade Options:

1. **Mitsumi Quad Speed package:** £199  
 Sound Blaster 16; Mitsumi FX400 quad speed CD Drive; Speakers; MS Encarta 95.
2. **NEC/Toshiba package:** £289  
 Sound Blaster AWE 32; NEC/Toshiba quad speed CD Drive' 25W Speakers.
3. **Sound Blaster Multimedia Home CD:** £299  
 Sound Blaster 16 ASP Card; Quad speed CD Drive speakers; MS Works; MS Publisher; Encarta 95; Bookshelf 94; Ancient Lands; Dangerous Creatures; Scenes; Musical Instruments Cinemania 95; Golf; Syndicate; Ultima VIII Strike Commander; Wing Commander II.

### PENTIUM® PROCESSOR

- 75 MHz TRITON
- 90 MHz TRITON

- Intel Triton chipset
- 256K Pipeline Cache
- AMI Plug & Play BIOS
- 8MB Simm memory
- Western Digital enhance IDE
- 1.44MB Floppy drive
- On board PCI EIDE controller
- 2 fast serial 1 parallel ports
- IMB Cirrus Logic 5434
- Minitower & 200W PSU
- 14" Samsung SVGA monitor
- 102 key UK keyboard

### PENTIUM® PROCESSOR

- 90 MHz ENDEAVOR
- 100 MHz ENDEAVOR

- Intel Endeavor Motherboard
- 256K Cache memory
- Plug & Play BIOS
- 8MB Simm memory
- Western Digital IDE enhance
- 1.44MB Floppy drive
- PCI enhance IDE
- 2 serial 1 parallel 1 game
- 1MB Diamond Stealth 64D
- Built in Sound Blaster 16
- Quad speed CD ROM Mitsumi
- Minitower & 200W PSU
- 14" Samsung monitor
- 102 key UK keyboard
- 25W speakers

### PENTIUM® PROCESSOR

- 100 MHz ENDEAVOR
- 133 MHz ENDEAVOR

- Intel Endeavour Motherboard
- 256K Pipeline cache
- Plug & Play BIOS
- 16MB EDO RAM
- Western Digital IDE
- 1.44MB Floppy drive
- Built in Enhance IDE controller
- 2 fast serial + parallel port
- 2MB Matrox Millennium W RAM
- Built in Sound Blaster 16
- Minitower & 200W PSU
- 15" Samsung monitor
- Cherry soft touch keyboard

### NT WORKSTATION

- DUAL P100® PROCESSOR
- DUAL P120® PROCESSOR

- Intel Naptune chipset
- 512K Cache memory
- Support flash BIOS
- 32MB Simm RAM
- Built in PCI SCSI Controller
- 1.44MB Floppy drive
- EISA 3 Com 3C579 card
- 2 x fast serial & parallel port
- 2MB Diamond stealth 64 VRAM
- Quad speed CD ROM SCSI
- Minitower & 200W PSU
- 15" Samsung 15GL monitor
- Cherry soft touch keyboard

650MB £869 / £939	650MB £1149 / £1169	650MB £1459 / £1699	SCSI 520MB £2699 / £2999
850MB £889 / £959	850MB £1169 / £1189	850MB £1479 / £1719	SCSI 1GB £2799 / £3099
1.2GB £939 / £1009	1.2GB £1219 / £1239	1.2GB £1529 / £1769	SCSI 2 GB £3099 / £3399
1.6GB £1009 / £1079	1.6GB £1289 / £1309	1.6GB £1599 / £1839	SCSI 4GB £3299 / £3599

Warranty: All ESL systems are covered by 3 year Return to Base warranty; First year includes parts & labour; second and third years free labour. Optional on-site warranty available @ £35. 14 days money back guarantee. Free lifetime telephone support.

CALL ESL NOW ON 0171 498 7816

CALL ESL NOW ON 0171 498 7816

**MOTHERBOARDS**

**VESA LOCAL BUS MOTHERBOARD**  
**AMI WIN BIOS** with password, UMC/SIS/OPTI CHIPSSETS: 3 VESA LOCAL BUS slots + 3x16 bit + 1x8 bit slots; CPU upgradeable; Max. 64MB; ZIF Socket; 4 x 30pin + 2 x 72pin Simm Sockets; or 4 x 72pin Simm Sockets

486DX4/100MHz 256K Cache INTEL	£179
486DX2/66MHz 256K Cache AMD	£109
486DX2/80MHz 256K Cache AMD	£129
486DX4/100MHz 256K Cache AMD	£149
486DX4/120MHz 256K Cache AMD	£179

**INTEL PENTIUM® ZAPPA MOTHERBOARD TRITON CHIPSET**  
 Pentium 75MHz 256K... £299  
 Pentium 90MHz 256K... £349  
 Pentium 100MHz 256K... £369  
 Pentium 120MHz 256K... £489  
 Pentium 133MHz 256K... £459

**INTEL PENTIUM® ENDEAVOR MOTHERBOARD TRITON CHIPSET**  
 Genuine Intel motherboard: AMI Flash Bios; 256K Cache upgradeable to burst pipeline cache; on board enhance IDE FDD & 2 x fast serial 1P ports; on board Sound Blaster 16; Windows 95 Plug & Play ready. Options select 7

Pentium 90MHz	£429
Pentium 100MHz	£489
Pentium 120MHz	£619
Pentium 133MHz	£719
With Pipeline Cache on board	add £20

**INTEL TRITON CHIPSET PENTIUM MOTHERBOARD. AMI Flash Bios, plug & play ready. Triton chipset support burst pipeline cache, 3PCI + 4x16 bit slots, built in fast serial + parallel ports**

Pentium 75MHz	£279
Pentium 90MHz	£339
Pentium 100MHz	£409
Pentium 120MHz	£539
Pentium 133MHz	£639
With Pipeline Cache on board	add £20

**MOTHERBOARDS WITHOUT CPU**  
 VIB 486DX 256KB Cache 3 Vesa slots; 4x30 & 2x72 pin Simms... £69  
 PCI 486DX 256KB Cache with EIDE & FDD; fast serial & parallel... £99  
 Intel Pentium® Triton Motherboard... £149  
 Intel Pentium® Endeavour Motherboard... £239

**CPU**

Intel 80486 DX4/100MHz	£109
AMD 486 DX2/80 MHz	£69
AMD 486 DX4/100 MHz	£79
Pentium® 75 MHz	£139
Pentium® 90 MHz	£189
Pentium® 100 MHz	£209
Pentium® 120 MHz	£329
Pentium® 133 MHz	£449
Heat Sink and Fan for 486	£38
Heat Sink and Fan for Pentium	£15

**MEMORY MODULE**

Simms 1MBx9 70ns (3 chips)	£29	60ns £32
Simms 4MBx5 70ns	£99	60ns £109
Simms 4MB 72 pin	32 bit £95	36 bit £109
Simms 8MB 72pin	32 bit £189	36 bit £209
Simms 16MB 72pin	32 bit £309	36 bit £319
Simms 16MB 72pin 60ns	32 bit £319	
EDO 4MB 72pin	32 bit £119	
EDO 8MB 72pin	32 bit £219	

**FLOPPY DRIVES**

1.44MB 3.5" Mitsubishi Floppy Drive	£22
1.2MB 5.25" Panasonic/Mitsumi Floppy Drive	£36
5.25" & 3.5" Canon/TEAC Dual Floppy Drive	£85
3.5" to 5.25" adaptor Frame & Power converter	£5
Floppy Cable 5 heads	£4
3.5" disks HD03 preformatted 50	£20
HP Cartrids Traven 11000 Tape-streamer Internal	£139
longago Tape 700 680MB Tape-streamer External	£199

**HARD DRIVES**

**Western Digital Caviar Series 3.5" IDE 3 Year Manufacturer Warranty**  
 All Caviar series are Enhance IDE Drives

835MB AC2635 11ms 64K Cache	£119
850MB 10ms AC2850 64K Cache	£139
1.2GB AC31200 10ms 64K Cache	£189
1.6GB AC31600 10ms 64K Cache	£269
2GB new drive	£299

**Seagate 3.5" IDE 3 Year Manufacturer Warranty**

540MB ST3660A 12ms 256K Cache	£109
850MB ST3850 11ms 256K Cache	£139
1.2GB ST31270A 11ms 256K Cache	£179

**Micropolis 3.5" fast SCSI II 5 Year Manufacturer Warranty**

2GB M4221 8.5ms 512K Cache	£599
4GB M3243 8.5ms 512K Cache	£799
7GB M1911 12ms 512K Cache	£1449
2GB M4221 AV 8.5ms 512K Cache	£649
4GB M3243 AV 8.5ms 512K Cache	£849
7GB M1911 AV 12ms 512K Cache	£1499

**Fujitsu 3.5" fast SCSI II 2 Year Manufacturer Warranty**

520MB M26845 12ms 256K Cache	£139
1GB M16045 10ms 512K Cache	£219
4GB M29235 10ms 512K Cache	£569
4GB M29345 10ms 512K Cache	£769
HP 1GB SCSI	£289
HP 2GB SCSI	£499

**CONTROLLER CARDS**

I/O Card with 2 serial, 1 parallel, 1 game port	£10
IDE Card control 2 HDD 2 FDD with 25/1P/1G ports & cables	£15
16 bit IDE card control 2HDD 2FDD with 2 x 16550 UART 1P1G ports	£19
VIB Enhance IDE card control 2HDD 2FDD with 2 x 16550 UART 1P1G ports	£19
VIB Enhance IDE card control 4HDD 2FDD with 2 x 16550 UART 1P1G ports	£49
With Bios support mode 3, 4, 5	£95
Promise DC4030V VESA Local bus IDE Cache controller	£29
PCI IDE controller	£29

**SCSI CONTROLLER CARDS**

Adaptec 1542 Bareboard	£119
Adaptec 1542C ISA SCSI HDD & FDD Controller kit	£169
Adaptec 2942C VIB SCSI HDD & FDD Controller kit	£189
Adaptec 2940 PCI SCSI HDD & FDD controller kit	£209
Adaptec 2940 PCI SCSI HDD & FDD kit wide SCSI	£369
Adaptec 3940 PCI SCSI HDD & FDD kit dual channel	£179
Future Domain PC	£129
Corel SCSI software	£65
Est SCSI Cable 50-50 Centronics	£15
Est SCSI Cable Micro D-Micro D	£29

**DISPLAY CARDS**

Trident 8900D Chip with 1MB	£47
-----------------------------	-----

**VESA LOCAL BUS DISPLAY CARDS**  
 All support 16 million true colours

Cirrus Logic 5429 1MB	£49
Cirrus Logic 5429 2MB	£99
Diamond Stealth 64D Video 1MB DRAM	£129
Diamond Stealth 64D Video 2MB DRAM	£179
Diamond Stealth 64 Video 2MB VRAM (175Hz)	£199
Diamond Stealth 64 Video 2MB VRAM (220Hz)	£219
Diamond Stealth 64 Video 4MB VRAM	£349
MPCG adaptor board for Diamond	£189
MATRIX MGA Ultra Plus 2MB VRAM	£289

**PCI Graphic Accelerator**  
 Cirrus Logic 5434 1MB DRAM... £69  
 Diamond Stealth 64D 1MB DRAM... £99  
 Diamond Stealth 64D 2MB DRAM... £129  
 Diamond Stealth 64 Video 2MB VRAM... £219  
 Diamond Stealth 64 Video 4MB VRAM... £349  
 Matrix MGA Millennium 2MB VRAM upgradeable to 4MB... £219  
 Matrix MGA Millennium 4MB upgradeable to 8MB... £149  
 Matrix MGA Millennium 4MB VRAM upgradeable to 8MB... £329  
 Orchid Fahrenheit Pro 64 2MB... £249  
 Orchid Fahrenheit Pro 64 4MB... £349  
 Radiologic Graphics Star 500 1MB... £179  
 Radiologic Graphics Star 500 2MB... £189  
 Radiologic Graphics Star 700 2MB... £269  
 Radiologic Graphics Star 700 4MB... £389

**MONITORS**

14" Mono VGA monitor	£79
Samsung Syncmaster with 2 Year on-site maintenance	£159
14" Syncmaster 3 800 x 400	£159
14" Syncmaster 3NE 1024 x 768	£179
15" Syncmaster 15GLE 1024 x 768	£249
15" Syncmaster 15GL 1280 x 1024 new 1024 new 60Hz	£269
17" Syncmaster 17GL 1280 x 1024 or 60Hz	£219
17" Syncmaster 17GLS 1600 x 1200 or 60Hz	£569
20" Syncmaster 20GLS 1280 x 1024 or 76Hz	£899

**16k Monitor with 3 year return to Manufacturers warranty & on-site option**

15" Vision Master MF 8115 0.28mm 1024 x 768 75Hz	£279
17" Vision Master MF 8617E 0.25mm 1600 x 1200 69Hz	£516
17" Vision Master MF 9017E 0.25mm 1600 x 1200 72Hz	£582
21" Vision Master MF 8221E 0.27mm 1600 x 1200 75Hz	£1165
21" Vision Master MF 9021E 0.30mm 1600 x 1200 75Hz	£1246
3 year on-site warranty for 17"	£60
3 year on-site warranty for 21"	£70

**Nokia with 1 year return to base warranty**

17" 447V 1024 x 768 or 80Hz with 2W speakers	£479
17" 447X 1280 x 1024 or 76Hz	£649

**Sony with 1 Year return to base warranty**

15" 155F1 Trinitron	£309
17" SF1	£599
17" 17SE 1 Trinitron (New)	£819
20" 20SE 1 Trinitron	£1399

Anti Glare Screen Filter for 14" £15  
 Monitor extension cable... £10  
 Monitor splitter cable... £18

**SOUND CARDS**

Sound Blaster 16 value	£59
Sound Blaster 16 AWE 32	£169
Sound Blaster AWE 32 value	£129
Toshiba MAS202B quad speed with cables IDE	£39
NEC quad speed with cables IDE	£129
Gravis Ultrasound	£99
4W speakers	£16
15W speakers with AC adaptor	£216
25W speakers with AC adaptor	£229
80W speakers with adaptor	£49
AudioBlaster for CD ROM Drive	£19
Headphones	£8
Microphone	£10

**CD-ROM DRIVES**

Panasonic CR5628 dual speed with cables	£59
Mitsumi FX400D quad speed with cables IDE	£99
Toshiba MAS202B quad speed with cables IDE	£39
NEC quad speed with cables IDE	£129
Toshiba MW3601B quad speed internal SCSI	£219
Astech 6X speed IDE	£149
NEC & PLEX 6 speed internal SCSI	£279
TEAC CD56 6x speed IDE interface	£199
Sony CDU-765 quad speed internal SCSI	£159
Nakamichi MBR-77 CD Changer	£239
Pioneer DRM - 624X 6CD Jukebox quad speed	£499
Philips CDD 522 CD Writer	£1599
Panasonic PD Drive Quad CD & 650MB optical	£499
Panasonic PD Drive Internal Kit with SCSI controller	£549
Panasonic PD Drive External Kit with SCSI controller	£629
650MB 2 Year	£45

**MULTIMEDIA PACKAGE**

Sound Blaster Multimedia Home CD	£279
SB16 ASP Quad Speed Drive & speakers; 14 CD's	£279
Sound 16 bundle	£109
16 bit sound card, Double speed CD; speakers; Gravis	£179
Quad Speed CD Bundle	£179
SB16, Mitsumi, FX400, Encarta 95, Speakers 4W	£29
MS Encarta 95	£10
Gravis Encyclopedia	£20
Corel Draw V.3	£49
CD Bundle: MS Encarta 95; MS Works; Golf; Dangerous Creatures	£49
Hauptpage WinTV Celebrity card	£259

**FAX/MODEM**

Fax/Modem Int. 14400/14400 with software	£59
Fax/Modem/Voice 14400/14400 with software	£69
Fax/Modem card 14400/14400 with Winfax & DOS fax line B&B app	£79
US Robotics Sportster 14.4 + Fax Int	£109
US Robotics Sportster 14.4 + Fax Ext	£109
US Robotics Sportster 28800 Fax Ext	£169
US Robotics Sportster 28800 Int	£169
US Robotics Courier v34 + Fax Ext	£219
Motorola Internet solution 28800 Fax/modem ext	£169
Motorola 28800 Fax/modem ext	£169
US Robotics Winadon 28800 PCMCIA	£169
Modem cable 9.25 pin or 25-25 pin	£6

**TAPE STREAMERS**

HP Surestore 2000 2GB Int/Ext	£579/£679
HP Surestore 5000 2GB 16GB Int/Ext	£649/£769
HP Surestore 6000 4GB to 16GB Int/Ext	£799/£899
Ultra 4mm DAT	£12
longago Zip drive	£145
100MB disk	£15



**PSU'S & POWER SUPPLY UNITS**

Desktop & 200W PSU 2x1.5" 2x3.5"	£39
Deluxe Desktop & 200W PSU 3x1.5" 2x3.5" 1x3.5"HD	£49
Slimline & 230W PSU 2x5.25" 2x3.5"	£55
Mini tower & 200W PSU 2x5.25" 2x3.5" 1x3.5"HD	£39
Deluxe Minitorwer & 200W PSU 2x5.25" 2x3.5" 1x3.5"HD	£49
Mini tower & 200W PSU 3x5.25" 2x3.5" 1x3.5"HD, with door	£49
Mini tower & 200W PSU 3x5.25" 2x3.5" 1x3.5"HD	£59
Mini tower & 230W PSU 3x5.25" 2x3.5" 2x3.5"HD, with door	£79
Full tower & 230W PSU 6x5.25" 2x3.5" 2x3.5"HD, with door	£89
200W/230W/250W Power Supply Unit	£29/£35/£48
Extra Fan for cases	£8

**SOFTWARE**

MS Windows 95 upgrade	£69
MS Windows 95	£89
Microsoft DOS 6.2	£29
Microsoft Windows NT 3.5	£29
Microsoft DOS 6.2 & MS WINDOWS 3.11	£59
MS Office V4.3 PRO win	£429
MS Works win	£69
MS Office Pro for Windows 95	£439

**NETWORK**

NE2000 compatible Novell approved	£29
Longrange BNC/10 Base T	£29
1 COM 3C509	£59
3 COM 3C509 COMBO	£139
1 COM 3C589 PCMCIA	£59
3 COM 3C590 PCI	£59
SMC Elite Ultra 16	£49
SMC Elite Ultra 16 Combo	£59
D-Link DE-200	£49
D-Link DE-530 PCI	£89
Terminator	£2
Tipico	£2
Ethernet Cables	3M £5; 6M £8; 10M £10
RJ 45 cables	3M £5; 6M £12; 10M £17; 20M £25
Cables supplied at any length @ £1 per metre over 10m	
Network 3.12, Network 4.0	£oll
HUBS 8 RJ45 + 1BNC	£59
HUBS 12 RJ45 + 1BNC	£179
HUBS Stackable 12 RJ45 + 1BNC + 1AUI	£269

**KEYBOARDS**

102 key enhance click keyboard	£18
102 key enhance soft touch keyboard	£15
Fujitsu 102 key enhance ergonomic keyboard	£30
Cherry 102 key enhance membrane soft touch	£25
Microsoft natural keyboard	£64
Keyboard adaptor AT to PS/2 or PS/2 to AT	£5
Keyboard extension cable	£6
Quick Shut Game pad	£10

**MICE & JOY STICKS**

3 button mouse Microsoft compatible	£8
3 button mouse with mat MS compatible	£10
Logitech Pilot Mouse 3 button MS compatible	£19
Microsoft V.2 Mouse 2 button serial	£29
Warrior 5 joystick (analog PC joystick)	£19
Printer switch 2 to 1 manual	£12
Printer switch 2 to 1 auto	£22
Printer switch 4 to 1 manual	£22
Printer switch 4 to 1 auto	£39
Centronic to Centronic cable	£6
25-25pin printer cable	£6

**SCANNERS**

Trust Mono Scanner	£49
Trust Colour Scanner	£119
Logitech Scanman 256	£79
Logitech Scanman Model Colour 24 bit	£169
Logitech Easytouch Scanner	£109
HP Scanjet III AT	£259
HP Scanjet III AT	£259
HP Scanjet III C	£329
Epson GTX - 6500P parallel 600 dpi	£299
Epson GTX - 6500 S SCSI	£469
Epson GTX - 8500 P parallel 400 dpi	£459
Epson GTX - 8500 S SCSI 400 dpi	£579



**NOKIA 447V 17" MONITOR £479**

- \* 17" FLAT, SQUARE TUBE
- \* 0.28mm DOT PITCH
- \* 1024 x 768 at 80Hz
- \* DIGITAL CONTROLS
- \* INTEGRAL SPEAKERS
- \* POWER SAVING
- \* MPR II LOW RADIATION



**WINDOWS '95  
READY**  
ALL OUR  
MONITORS  
HAVE FLAT AND  
FULL DISPLAY  
SCREENS  
14" - 1024x768  
15" - 1280x1024

- TAG'S 10 COMMITMENTS**
- 1 30 Day money back guarantee
  - 2 FREE configuration advice and system configurations
  - 3 Guaranteed 24 hour burn-in tests on all systems
  - 4 FREE lifetime labour
  - 5 FREE lifetime telephone support
  - 6 FREE 2 year warranty with FREE loan equipment
  - 7 GUARANTEED compatibility
  - 8 GUARANTEED repairs within 72 hours
  - 9 GUARANTEED highest quality components
  - 10 GUARANTEED excellent value for money

The closer you look the better it gets

**DESIGNED TO BE SUPERIOR**

You need X-ray vision to see under the skin of a TAG system

Only then can you see that the TAG range uses the highest performing components, chosen after long term testing and proven use.

Each component is combined within a fully integrated system that ensures maximum performance with longer life and outstanding reliability.

**TAG'S EXPERTISE**

There is a perfect solution for virtually any computing need, from our 3 ranges.

Or our engineers can custom build systems for specialised solutions.



**TAG PC  
TECHNOLOGY**

**0181 803 7770**

**TAG NETWORKS**

TAG networks use exactly the same top quality components as in our standard systems.

**TAG STATION**



**TAG 3 USER**

3 x TAGNET Workstations	3 x Windows for workgroups
486 DX4-100	3.11 & DOS 6.22
8Mb RAM	Installation for above system £500
850Mb hard drive	Includes travel within the M25 area,
14" SVGA colour monitor	all cabling sockets etc.

**£2550**

**TAG SERVER**



**TAG 5 USER**

1 x TAGNET Fileserver	5 x TAGNET Workstations
P5-90	486 DX4-100
16Mb RAM	8Mb RAM
1.3Gb IDE hard drive	850Mb hard drive
14" SVGA colour monitor	14" SVGA
PCI Ethernet card	6 x DOS 6.22 & Windows 3.11
Full tower case	Installation for above system £750
1Gb tape streamer	Includes travel within the M25 area,
Quad speed CD-ROM	all cabling sockets etc.
Novell 4.1.5 user	

**£6395**

**TAG 10 USER**

1 x TAGNET Fileserver	10 x TAGNET Workstations
P5-100	486 DX4-100
16Mb RAM	8Mb RAM
2.1Gb SCSI hard drive	850Mb hard drive
2Gb DAT drive	14" SVGA
Quad speed CD-ROM	10 x DOS 6.22 & Windows 3.11
PCI Ethernet card	Installation for above system £995
Novell 4.1.10 user	Includes travel within the M25 area,
Full tower case	all cabling sockets etc.
14" SVGA colour monitor	

**£11150**

**CHOSEN BY DISCERNING ORGANISATIONS**

TAG's client list bears equally close examination and includes - BBC, Railtrack, Metropolitan Police, General Motors, plus Hospitals, Universities, Embassies, Government Departments and companies large and small.

**TAG MAKE REPLACING SYSTEMS EASIER**

TAG offer a unique solution, buying back your old system for cash, or put it through our renowned auction company, to get the best deal.

**TAG'S COMMITMENT**

TAG's 'SATISFACTION CHARTER' of 10 commitments demonstrate our commitment to providing the best performing, most reliable systems, backed by the finest technical support.

**TAG BASE**



All TAGBASE systems come complete with fully documented WINDOWS 95 or IBM OS/2 WARP V3 with windows, and INTERNET READY with FREE software and connection

**486DX4-100**

- Intel® 486DX4-100MHz processor
- 4 PCI & 4 ISA slots (1shared)
- Energy Star compliant power saving features
- P24T Pentium™ upgrade socket
- SIS Chip set
- 8k internal and 256k external cache
- 4Mb RAM expandable to 64Mb
- 3.5" diskette drive
- 850Mb 11ms enhanced IDE hard drive
- Diamond Stealth 1Mb PCI graphics accelerator card
- 1 parallel port, 2 serial (16650 UART) ports
- 14" 28DP NI MPR-II colour SVGA display
- Enhanced keyboard & MS compatible mouse
- Available in desktop or mini tower case

**£720**

**P5-75**

- Intel Pentium™ 75MHz processor
- PCI (75MHz to 200MHz) mother board
- 4 PCI & 4 ISA slots (1shared)
- Energy Star compliant power saving features
- Plug & play BIOS for easy upgradeability
- Intel Triton chip set
- 16k internal and 256k external cache
- 8Mb RAM expandable to 128Mb
- 3.5" diskette drive
- 850Mb 10ms enhanced IDE hard drive
- Diamond Stealth 1Mb PCI graphics accelerator card
- 1 parallel port, 2 serial (16650 UART) ports
- 14" 28DP NI MPR-II colour SVGA display
- Enhanced keyboard & MS compatible mouse
- Available in desktop or mini tower case

**£949**

**P5-90**

As P5-75 but with Intel Pentium™ 90MHz processor

**£999**

**TAG UPGRADE OPTIONS**

ALL TAG UPGRADES ARE FITTED FREE

**STORAGE**

Upgrade from 850Mb to 1.3Gb EIDE hard drive	£59
Upgrade from 850Mb to 2.1Gb fast SCSI II, inc. controller	£439
Upgrade from 1.3Gb to 2.1Gb fast SCSI II, inc. controller	£390
800Mb internal Conner Travan 800 tape streamer kit with software	£155
2Gb internal 4mm DAT tape streamer kit	£549

**MEMORY**

Memory per 4Mb	£105
EDO memory per 4Mb	£135
Memory per 8Mb	£199
Upgrade from 1Mb Diamond Stealth to 2Mb Diamond Stealth	£59
Upgrade from 1Mb Diamond Stealth to 4Mb Diamond Stealth	£270
Upgrade from 2Mb Diamond Stealth to 4Mb Diamond Stealth	£215

ALL PENTIUM MODELS UPGRADEABLE TO PIPELINE BURST MODE CACHE

**MONITORS**

Upgrade from 14" to 15" TAGVIEW Digital Control	£89
Upgrade from 14" to 17" GLI .28 dot pitch SAMSUNG FST	£320
Upgrade from 14" to 17" GLSi .26 dot pitch SAMSUNG FST	£420
Upgrade from 15" to 17" GLI .28 dot pitch SAMSUNG FST	£235
Upgrade from 15" to 17" GLSi .26 dot pitch SAMSUNG FST	£335

**PRINTERS**

Hewlett Packard LaserJet 5P	£599
Hewlett Packard LaserJet 4 Plus	£999
Hewlett Packard DeskJet 600	£229
Hewlett Packard DeskJet 660C	£299
Hewlett Packard DeskJet 850C	£359

# TAG MEDIA



pentium®  
PROCESSOR



All TAGMEDIA systems come complete with fully documented WINDOWS 95 or IBM OS/2 WARP V3 with windows, and INTERNET READY with FREE software and connection

## 486DX4-100

- Intel® 486DX4-100MHz processor
- 4 PCI & 4 ISA slots (1shared)
- Energy Star compliant power saving features
- P24T Pentium™ upgrade socket
- SIS Chip set
- 8k internal and 256k external cache
- 8Mb RAM expandable to 64Mb
- 3.5" diskette drive
- 850Mb 11ms enhanced IDE hard drive
- Diamond Stealth 1Mb PCI graphics accelerator card
- 1 parallel port, 2 serial (16650 UART) ports
- 14" .28DP NI MPR-II colour SVGA display
- Quad speed internal CD-ROM drive
- Sound Pro 16 sound card (Creative Labs chip set)
- Yamaha YST-M5 powered Hi-Fi speakers
- MPC-2 Compatible
- Enhanced keyboard & MS compatible mouse
- Available in desktop or mini tower case
- **FREE Microsoft Encarta 95, microphones & earphones**

£1049

## PS-75

- Intel Pentium™ 75MHz processor
- PCI (75MHz to 200MHz) mother board
- 4 PCI & 4 ISA slots (1shared)
- Energy Star compliant power saving features
- Plug & play BIOS for easy upgradeability
- Intel Triton chip set
- 16k internal and 256k external cache
- 8Mb RAM expandable to 128Mb
- 3.5" diskette drive
- 850Mb 10ms enhanced IDE hard drive
- Diamond Stealth 1Mb PCI graphics accelerator card
- 1 parallel port, 2 serial (16650 UART) ports
- 15" .28DP NI MPR-II colour SVGA display
- Quad speed internal CD-ROM drive
- Sound Pro 16 sound card (Creative Labs chip set)
- Yamaha YST-M5 powered Hi-Fi speakers
- Microphones & earphones
- MPC-2 Compatible
- Enhanced keyboard & MS compatible mouse
- Available in desktop or mini tower case
- **FREE Microsoft Encarta 95, microphones & earphones**

£1249

## PS-100

As P5-75 but with Intel Pentium™ 100MHz processor

£1349

## MULTIMEDIA

Creative Labs, soundblaster AWE 32 £149

Sound Pro 16 (Creative Labs chip set) £59

### TAG QUAD SPEED MULTIMEDIA KIT:

• Sound pro 16-card • Quad speed CD-ROM

• Yamaha YST-M5 • Encarta 95 £229

### DIAMOND 8X MULTIMEDIA KIT:

8 speed CD-ROM drive, 1.2Mb/sec transfer rate, <240ms access time 256k buffer, MPC 3

16 Bit wave table sound card plug & play ready, 3-D sound, fullysound blaster compatible, IDE connector

Yamaha YST-M5 Hi-Fi speakers

Software bundle, Myst, Magic Carpet, SimCity 2000, Rebel Assault, Comptons Interactive Encyclopaedia 1996

Includes Quick Start Video tape £479

## FAX/MODEMS

Internal 14.4 voice fax/modem with comms & fax software £79

28.8 Internal Fax modem £129

# TAG PRO

Picture shows the full tower case available as an optional extra



All TAGPRO systems come complete with fully documented WINDOWS 95 or IBM OS/2 WARP V3 with windows, and INTERNET READY with FREE software and connection

## PS-100

- Intel Pentium™ 100MHz processor
- PCI (75MHz to 200MHz) mother board
- 4 PCI & 4 ISA slots (1shared)
- Energy Star compliant power saving features
- Plug & play BIOS for easy upgradeability
- Intel Triton chip set
- 16k internal and 256k external cache
- 16Mb EDO RAM expandable to 128Mb
- 3.5" diskette drive
- 850Mb 10ms enhanced IDE hard drive
- Diamond Stealth PCI 2Mb Video DRAM graphics accelerator card
- 1 parallel port, 2 serial (16650 UART) ports
- 15" .28DP NI MPR-II colour SVGA display
- Quad speed internal CD-ROM drive
- Enhanced keyboard & MS ergonomic mouse
- Available in desktop or mini tower case

£1599

## PS-120

- As P5-100 but with
- Intel Pentium™ 120MHz processor
- 16k internal cache and 256k Pipe Line Burst Mode cache
- 1.3Gb 10ms Enhanced IDE hard drive

£1749

## PS-133

- Intel Pentium™ 133MHz processor
- PCI (75MHz to 200MHz) mother board
- 4 PCI & 4 ISA slots (1 shared)
- Energy Star compliant power saving features
- Plug & play BIOS for easy upgradeability
- Intel Triton chip set
- 16k internal cache and 256k Pipe Line Burst Mode cache
- 16Mb EDO RAM expandable to 128Mb
- 3.5" diskette drive
- 1.3Gb 10ms enhanced IDE hard drive
- Diamond Stealth PCI 2Mb Video DRAM graphics accelerator card
- 1 parallel port, 2 serial (16650 UART) ports
- 15" .28DP NI MPR-II colour SVGA display
- Quad speed internal CD-ROM drive
- Enhanced keyboard & MS ergonomic mouse
- Available in desktop or mini tower case

£1899

## PS-133 S

- As P5-133 but with
- Diamond Stealth PCI 4Mb Video DRAM graphics accelerator card
- 2.1Gb 9ms fast SCSI II hard drive
- 17" .28DP Samsung FST colour SVGA display
- Eight speed internal CD-ROM drive

£3099

## MISCELLANEOUS

Upgrade from desktop or mini tower to full tower case with 250W power supply £49

Microsoft ergonomic serial mouse £19

NE-2000 compatible combo network card £29

PCI ethernet combo card £79

## SOFTWARE

Microsoft Encarta (CD) £29

Microsoft Home Entertainment pack:

• MS Works 3.0 (CD) • MS Encarta 95 (CD) • MS Golf (CD) • MS Entertainment Pack (3.5") • MS Sampler (CD) • MS Dangerous Creatures (CD) • MS Scenes (3.5") £69

Novell Perfect Office V3 (CD) £109

## ATTENTION TO DETAIL

Every member of the sales team is a knowledgeable professional who has been trained to listen to what you want, and offer you what you need.

The production and testing process is taken just as seriously - with rigorous quality control and pre-delivery testing on each TAG system shipped.

## AFTER SALES - always there

TAG's commitment to customer satisfaction continues with telephone support engineers always on hand to give support through the lifetime of your system.

The 2 year warranty guarantees to turn any system round in 72 hours, or provide a loan system free of charge.

3 years back to base extended warranty giving you complete peace of mind for 5 years for only £149



## NETWORKING

TAG Network specialists advise on enhancing your existing network or designing and installing the latest, fastest set-ups available.

## INTERNET READY

All TAG PC's are supplied with FREE Internet Software and Connection.

## INSTALLATION without interruption

Our specialist installation team will keep disruption to a minimum. Included in the installation process is a complete back-up of your old system, permanent deletion of any sensitive information and restoration of your essential data onto your new TAG system. Only when you are thoroughly satisfied with your new system is the installation complete.



WHAT PERSONAL COMPUTER

Personal Computer World

PC Direct

"TAG system scored top marks for value for money."

"TAG monitor achieved excellent results in our test. Undoubtedly the best monitor in this round up."

"An attractive prospect, competently put together with a good level of performance."

TAG ORDER LINE  
0181 803 7770



ALL MAJOR

CREDIT

CARDS

ACCEPTED

and trade

accounts

opened

TAG PC TECHNOLOGY

## SHOWROOM OPENING TIMES

9am - 6.30 pm MON to FRI 10am - 4pm SAT

FAX ORDERLINE 0181 345 5358  
TECHNICAL SUPPORT 0181 807 3970

TAG PC TECHNOLOGY LTD,  
Toaken House, Pegamoid Road, Edmonton,  
London N18 2NJ

# PRO-TEKNOLOGY (UK)

...SUPPLIERS OF QUALITY COMPUTERS & PERIPHERALS

SALES DIRECTLINE

# 01438 361212

IF YOU DON'T SEE WHAT YOU NEED...CALL!

CALL OUR SALES DIRECTLINE NOW!! 01438 361212

## CONNER

See Page 2 **Enhanced - IDE** For NEW PRODUCTS

CFS540A	545Mb	256K	12ms	£107
CFA1275A	1.2Gb	256K	10ms	£183

### FAST SCSI - 2

CP1080	1.08Gb	512K	9ms	£265
CFP2107	2.1Gb	512K	9ms	£499
CFP2105	2.1Gb	512K	11ms	£499

## MICROPOLIS

### FAST SCSI - 2

MIC4221	2.1Gb	512K	8.5ms	£599
MIC3243	4.3Gb	512K	8ms	£749
MIC1991	9.0Gb	512K	11ms	£1399

### AUDIO VISUAL DRIVES

MIC4221AV	2.1Gb	512K	8.5ms	£665
MIC3243AV	4.3Gb	512K	8.5ms	£869
MIC1991AV	9.0Gb	1.0Mb	11ms	£1499

## WESTERN DIGITAL

### Enhanced-IDE

AC2540	540Mb	128K	11ms	£114
AC2635	635Mb	128K	11ms	£116
AC2850	850Mb	128K	10ms	£135
AC31200	1.2Gb	256K	10ms	£208

\*ALL DRIVES SUPPLIED WITH DISK MANAGER & DISK ROCKET

## Seagate

ST3660A	545Mb	128k	14ms	£109
ST5850A	855Mb	256K	11ms	£139
ST31220A	1.2Gb	256K	12ms	£179
ST31230N	1.05Gb	512K	9ms	£299

ST15150N BARRACUDA	4.0Gb	£999
ST410800N ELITE 9	9.0Gb	£1599

**IOMEGA** ZIP DRIVE

ZIP DRIVE IS FOUR DRIVES IN ONE: PARALLEL & SCSI OPTIONS AVAILABLE

**FREE MEDIA WITH 1st ORDER**

**£139**

Use It at the Office, on the Road, Anywhere...

**NEW!!**

## HP SURESTORE

<b>HEWLETT PACKARD</b>	2.0Gb Internal	<b>£589</b>
SS 2000 - 4mm DDS1	2Gb	Int £589 Ext £689
SS 5000 - 4mm DDS1	4/8Gb	£669 £769
SS 6000 - 4mm DDS2	4/16Gb	£789 £889

**CHEYENNE** APC5010 Windows

**£89**

3 Year Warranty Option

### CD WRITER

**NEW!!** **HEWLETT PACKARD**

HP SURESTORE CD WRITER DUAL SPEED INTERNAL. COMPLETE INCAT EASY-CD INCAT AUDIO COPY ALCHEMY PERSONAL DATA-BASE. SCSI CARD.

**£799**

THE SIMPLEST WAY TO MAKE CD'S

# HARD DRIVES

UK'S PREMIER RESELLER OF HARD DRIVES



## SANTA'S SPECIALS...

850Mb HARD DRIVES **£129**

1.0Gb HARD DRIVES **£169**

ALL PC MEMORY FOR LESS

4Mb 72 Pin MEMORY **£ 99**

ORDER NOW!! LIMITED OFFERS!!

## ACCESSORIES

CABLES	CONTROLLERS
Dual Dalsey Cable £10	IDE Super I/O 2HDD, 2FDD, 2Ser £19
SCSI Centronics Cable £20	IDE ADP60 HDD £34
MicroD-Centronics Ext £39	IDE ADP60F HDD/FDD £38
Power Splitter Cable £ 5	SCSI Adaptec 1515 Kit £59
SCSI Terminator £20	SCSI Adaptec 1542 Kit £165
MicroD Terminator £29	SCSI Adaptec 2940 Kit £189

## REMOVABLE HARD DRIVES

SYDOS WORKS LIKE A FIXED DISK DRIVE YET OFFERS UNLIMITED CAPACITY PLUS ALL THE ADDITIONAL FEATURES OF REMOVABLE MEDIA

#Unlimited Capacity  
#Data Security  
#High Speed Backup  
#Fault Tolerance  
#Internal & External Units

Type	Interface	Capacity	Int	Ext	Each	5 Pack
SyQuest 3.5"	SCSI/IDE	105Mb	£137	£237	£37	£180
SyQuest 3.5"	SCSI/IDE	270Mb	£249	£349	£42	£200
SyQuest 5.25"	SCSI	88Mb	£169	£269	£35	£169
SyQuest 5.25"	SCSI	200Mb	£259	£359	£52	£259
EASY 135	SCSI/IDE	135Mb	NEW PRODUCT - CALL NOW!			

## TAPE STREAMERS

**MicroSolutions**

**Backpack Family**

Microsolutions, Leaders of Parallel Port Technology. This Unit Requires No Hardware Installation, Simply Plug & Play Portable

**FREE SOFTWARE!**

EXTERNAL

Backpack 800 800Mb **£299**

Travan 1000 800Mb **£129**

**IOMEGA**

**NEW RANGE!!**

**TRAVAN**

800Mb Internal **£129**

TRAVAN 800Mb Internal £129  
IOMEGA DITTO 800Mb Parallel £209  
IOMEGA 1.7Gb Tape Internal £199  
TRAVAN 3.2Gb Internal £249  
TRAVAN 3.2Gb External £329  
IOMEGA Tape Accelerator Card £ 47  
Media £ 17

## Quantum

**Enhanced-IDE**

FIREBALL	540Mb	256K	11ms	£119
TRAILBLAZER	850Mb	256K	11ms	£119
FIREBALL	1.0Gb	256K	11ms	£119

**FAST SCSI - 2**

CAPELLA	2.0Gb	256K	11ms	£599
ATLAS	2.0Gb	256K	11ms	£599
GRAND PRIX	4.0Gb	256K	11ms	£899



**Enhanced-IDE**

ALLADIN	540Mb	512K	9ms	£119
---------	-------	------	-----	------

**FAST SCSI - 2**

PEGASUS	1.05Gb	512K	9ms	£119
ULTRASTAR	2.0Gb	512K	8ms	£719
ULTRASTAR	4.0Gb	512K	9ms	£1219

## Maxtor

**AUDIO VISUAL DRIVES**

7540AV	540Mb	256K	12ms	£119
7850AV	850Mb	256K	10ms	£119
71260A	1.08Gb	256K	10ms	£119

## NOTEBOOK DRIVES

**2.5" LAPTOP IDE DRIVES**

ST9300AG	262Mb	Seagate	£119
ST9385AG	341Mb	Seagate	£209
ST9550AG	455Mb	Seagate	£269
ST9655AG	520Mb	Seagate	£309
MK1924FC	532Mb	Toshiba	£259
GT540A	540Mb	IBM Thinkpad	£569
GT810A	810Mb	IBM Thinkpad	£779



## OPTICAL STORAGE

**FUJITSU** 230Mb IN **£339**

**SPECIAL OFFER**

FUJITSU M2512A

230Mb	<b>MEDIA FROM £19</b>	Int £339	Ext £439
650Mb		£649	£749
1.3Gb		£1289	£1389

**EXABYTE**

EXB2501C	1.2Gb	£499	£599
EXB4200	2.0Gb	£699	£799
EXB4200C	2.4Gb	£749	£849
EXB8205XL	3.57Gb	£999	£1029
EXB8205XL	7/14Gb	£1399	£1499

**WANGTEK** 525Mb **£369**

5150ES	250Mb	£299	£399
5525ES	525Mb	£369	£469
51000ES	1.0Gb	£475	£575

ALL PRODUCTS FACTORY NEW & CARRY MANUFACTURER WARRANTIES

Open **SUNDAYS** For Your Convenience  
Sales Lines Open **7 DAYS!**  
8.30am until late

SOUTHERN SALES  
Niall House, 23/26 Boulton Rd  
Pin Green Industrial Estate  
Stevenage SG1 4QX  
**(01438) 361212**  
24 Hour Fax (01438) 360646  
Order Line

MAJOR SUPPLIERS TO:  
GOVERNMENT BODIES  
EDUCATIONAL ESTABLISHMENTS  
HEALTH AUTHORITIES &  
CORPORATE ORGANISATIONS

ALL PRICES EX VAT & DELIVERY AT £12

SCOTLAND & NORTHERN SALES  
Eldon House, 66 Townshead  
Kirkcubright  
Glasgow G66 1NZ  
**(0141 775 1333)**  
24 Hour Fax (0141) 775 2333  
Order Line

ORDER DIRECT (NORTH) 10 LINES

0141 775 1333

PRO-TEKNOLOGY (UK)

IF YOU DON'T SEE WHAT YOU NEED...CALL!

...SUPPLIERS OF QUALITY COMPUTERS & PERIPHERALS

BUY WITH CONFIDENCE FROM UK'S LEADING PC MANUFACTURER

Why PRO?

- ▶ 100% Compatible and Fully Upgradeable
- ▶ We Fulfill Contracts From £1000 To £1,000,000
- ▶ Free Lifetime Technical Support
- ▶ The Leader In Customer Satisfaction
- ▶ YES! - 5 Year Warranty ...



- BEST VALUE, SERVICE AND SELECTION** ✓
  - TENDERS AND OFFICIAL ORDERS WELCOME** ✓
  - YOU ORDER - WE ACTION** ✓
  - LIFETIME TECHNICAL SUPPORT** ✓
  - EXPERIENCE PROTEKNOLOGY** ✓
- We are sure that you'll be satisfied and come back again

486 100

PENTIUM 100 PCI

PENTIUM 75 PCI

DX4 FAMILY PC

- ▶ Intel DX4-100 Processor
- ▶ 4Mb Ram (72 Pin Module)
- ▶ 540Mb 11ms IDE Hard Drive With Enhanced IDE Interface
- ▶ 256K External Cache
- ▶ 3.5" Diskette Drive
- ▶ 1Mb Vesa Local Bus Graphics Card
- ▶ 3 ISA, 3VLB Expansion Slots
- ▶ 14" SVGA Non-Interlaced Monitor
- ▶ Mini Tower Or Desk Top Style
- ▶ MS-DOS 6.22, WFWG 3.11
- ▶ 5 Year Warranty



£599

MULTIMEDIA UPGRADE

- Quad Speed CD ROM
- 16 Bit Sound Card
- Speakers **£159**

P5-100 PRO

- ▶ Intel 100Mhz Pentium Processor
- ▶ 8Mb EDO RAM
- ▶ 1.2Gb 11ms EIDE Hard Drive
- ▶ Quad Speed CD ROM Drive
- ▶ 3.5" Diskette Drive
- ▶ 2Mb DRAM Diamond Stealth
- ▶ PCI Graphics - High Refresh
- ▶ 16 Bit Stereo Sound Card
- ▶ 100% Soundblaster Compatible
- ▶ 15" SVGA Non-Interlaced Monitor
- ▶ Mini Tower Or Desktop Style
- ▶ MS-DOS 6.22, WFWG 3.11
- ▶ 5 Year Warranty



£1199

PRINTERS

- Hewlett Packard Deskjet 600 **£229**
- Hewlett Packard Deskjet 660C **£329**

P5-75 PRO

- ▶ Intel 75Mhz Pentium Processor
- ▶ 8Mb EDO RAM
- ▶ 850Mb 11ms IDE Hard Drive With Enhanced IDE Interface
- ▶ 4 PCI & 4 ISA Expansion Slots
- ▶ 3.5 Diskette Drive
- ▶ 1Mb DRAM Diamond Stealth
- ▶ PCI Graphics Card - High Refresh
- ▶ 256Kb Pipeline Burst Cache
- ▶ 14" SVGA Non-Interlaced Monitor
- ▶ Mini Tower Or Desktop Style
- ▶ MS-DOS 6.22, WFWG 3.11
- ▶ 5 Year Warranty

£899

COMMUNICATION UPGRADE

- Internet Ready
- Ready Installed
- 28.8 Modem **£199**

FREE WITH ALL PENTIUM 75 SYSTEMS!!

Encarta 95, Dangerous Creatures, MS Works, MS Golf PLUS

2 More MS Software On CD!!

ALL PRO SYSTEMS ARE ENGINEERED WITH THE LATEST TECHNOLOGY AT AN AFFORDABLE PRICE. DESIGNED FOR DEPENDABILITY AND PERFORMANCE. PRO SYSTEMS PROVIDE YOU WITH BRAND NAME COMPONENTS YOU CAN TRUST. FOR YEARS WE HAVE BEEN BUILDING TOP QUALITY SYSTEMS FOR SUCCESSFUL COMPANIES, GOVERNMENT BODIES, STUDENTS & FAMILIES ALIKE.

All Prices Exclusive of VAT @ 17.5% And Delivery @ £12. Prices And Specifications Subject To Change Without Prior Notice. All Trade Marks Are Of Their Respective Owners. 10% Restocking Fee Applies To Return Of Non-Faulty Goods E & OE



COME VISIT OUR NEW BIGGER COMPUTER SUPERSTORE AT STEVENAGE OPEN 7 DAYS

SOUTHERN SALES Niall House, 23/26 Boulton Rd Pin Green Industrial Estate Stevenage SG1 4QX (01438) 361212 24 Hour Fax (01438) 360646 Order Line

- HOW TO ORDER
- 1 PHONE YOUR REGIONAL SALES OFFICE
  - 2 FAX US YOUR ORDER
  - 3 SEND US YOUR ORDER
  - 4 VISIT OUR SHOWROOM

SCOTLAND & NORTHERN SALES Eldon House, 66 Townshead Kirkintilloch Glasgow G66 1NZ (0141 775 1333) 24 Hour Fax (0141) 775 2333 Order Line



# RAM



## 72 PIN

### 32 BIT (Non Parity)

1 x 32 (4Mb) 70ns	£ 97.00
2 x 32 (8Mb) 70ns	£195.00
4 x 32 (16Mb) 70ns	£349.00
8 x 32 (32Mb) 70ns	£695.00

### 36 BIT (With Parity)

1 x 36 (4Mb) 70ns	£ 115.00
2 x 36 (8Mb) 70ns	£220.00
4 x 36 (16Mb) 70ns	£375.00
8 x 36 (32Mb) 70ns	£789.00

## 30 PIN

256 x 9 (256K) 70ns	£ 10.00
1 x 9 (1Mb) 3 Chip 70ns	£ 27.50
1 x 9 (1Mb) 9 Chip 70ns	£ 30.00
4 x 9 (4Mb) 3 Chip 70ns	£ 99.00
4 x 9 (4Mb) 3 Chip 70ns	£105.00
16 x 9 (16Mb) 70ns	£ Call

## EDO RAM

£Call



*In the unlikely event that the memory we supply is not compatible with your PC, we will swapout/replace free of charge*

### Motherboards

DX2/66 VL, 256K, ZIFF	£115.00
DX4/100 VL, 256K, ZIFF	£149.00
PCI EIDE on board 256K	
DX2/66	£130.00
DX4/100	£169.00

### Pentium Power

Intel Triton Chipset. Supports EDO RAM.  
Pipeline burst cache. Upgradeable to P200.  
2 x Fast Serial. 1 x Fast Parallel.

P75	£299.00	P120	£499.00
P90	£389.00	P133	£599.00
P100	£429.00		

### EIDE HARD DISK DRIVES

540Mb QUANTUM FIREBALL	£115.00
850Mb QUANTUM TRAILBLAZER	£139.00
1Gb QUANTUM FIREBALL	£175.00
1.6Gb WESTERN DIGITAL	£CALL

### SCSI HARD DISK DRIVES

1Gb QUANTUM FIREBALL	£235.00
2Gb QUANTUM ATLAS	£589.00
4Gb QUANTUM GRAND PRIX	£829.00
9Gb MICROPOLIS M1991	£1579.00

SCHOOLS, COLLEGES, UNIVERSITIES, PLEASE CALL FOR QUANTITY PRICES.  
LOCAL AUTHORITIES, GOVERNMENT DEPT. ENQUIRIES WELCOME.  
NEXT DAY DELIVERY £6.00 up to 5kgs. NEXT DAY DELIVERY £7.00 over 5kgs.  
OPEN MONDAY - SATURDAY

ALL PRICES EXCLUDE VAT

# SALES HOTLINE: 01371 831159

★ All Major Credit Cards Accepted ★

TEC COMPUTERS LTD, YARDLEY'S, NEW BIGGEN STREET, THAXTED, ESSEX CM6 2QR

## IYAMA



### Vision Master 17 (MF-8617E)

17" FST monitor, 0.26mm dot pitch,  
up to 1280x1024 (27-86kHz) £516.00

**Vision Master Pro 17 (MT-9017E)** 17" DiamondTRON, 0.25mm mask pitch up to 1600 x 1200 (27-92KHz) £582.00

**Vision Master 21 (MT-9121)** 21" DiamondTRON, up to 1600 x 1200 (24.8-92KHz) £1293.00

**Vision Master 15 (MF-8115)** 15" FST monitor, 0.28mm mask pitch, up to 1024 x 768 (30 - 65KHz) £279.00

**Vision Master 21 (MF-8221E)** 21" FST monitor, 0.22mm dot pitch, up to 1600x1200 @ 75Hz (27-94KHz) £1165.00

**Vision Master Pro 21 (MT-9021E)** 21" Diamond TRON, 0.30mm mask pitch, up to 1600x1200 @ 75Hz (27-94KHz) £1246.00

**FREE ON SITE WARRANTY INCLUDED  
ON ALL IYAMA MONITORS**

## HERCULES



### GRAPHITE TERMINATOR PROFESSIONAL

Based on S3's new Vision968 ● 64-Bit graphics engine  
● Up to 1600 x 1200 @ 256 colours: 1280 x 1024 @ 16.7 million colours 75Hz ● VL or PCI bus versions

#### GRAPHITE TERMINATOR PROFESSIONAL

4Mb VRAM S3 968 VL or PCI £349.00  
2Mb VRAM S3 96 VL or PCI £239.00  
2Mb Upgrade £145.00

#### GRAPHITE TERMINATOR 64/DRAM

2Mb DRAM S3 Trio 64 VL or PCI £138.00

#### DYNAMITE POWER

2Mb DRAM ET4000 W32p VL or PCI £148.00  
1Mb DRAM ET4000 W32p VL £119.00

#### DYNAMITE PRO

2Mb DRAM ET4000 W32i ISA £148.00  
1Mb DRAM ET4000 W32i ISA £119.00

#### STINGRAY Pro/Video

1Mb DRAM ARK1000PV PCI £81.00

#### STINGRAY PRO

1Mb DRAM ARK1000PV £71.00



### HERCULES STINGRAY 64/Video

● VRAM Performance at a DRAM price with video acceleration ●

2Mb EDO DRAM ARK2000PV PCI £139.00  
1Mb EDO DRAM ARK2000PV PCI £99.00  
1Mb upgrade £48.00

## SHOPPING LIST

### NEC

SuperscriptColor 3000 £659.00  
"Dye-sub, A4 colour printer - photographic quality"

### SHARP

QA1750 16.7M colour computer & video panel £3395.00  
QA1500 1.7M colour computer & video panel with PCM-CIA & sound £2495.00  
QA1400 1.7M colour computer & video panel £2335.00  
QA1100 1.7M colour computer panel £1950.00  
QA350 512 colour computer panel £1270.00  
QA75A 16 grey scale computer panel £999.00  
XG3850E 16.7M colour computer & video projector £6745.00

XG3780E 16.7M colour compact computer & video projector £4495.00

XV3300S 16.7M colour video projector with Stripe Pixel Arrangement £3415.00

XV350H 16.7M colour video projector £3415.00

XV370P 16.7M colour portable video projector £2065.00

XV315P compact multi-system LCD video projector £1380.00

### MITSUBISHI

PCP Personal Colour Printer £468.00

CP-J10 Colour ink-jet printer £249.00

Diamond TRON 21TX monitor 20" FST monitor, up to 1280x1024, 0.30mm mask pitch, (30-93 KHz) £1299.00

Diamond Pro 20X 20" FST monitor, up to 1280x1024, 0.28mm dot pitch, (30-82khz) £1035.00

Diamond Pro 17TX 17" DiamondTRON monitor, up to 1280x1024, 0.25mm mask pitch, (30-86khz) £755.00

Diamond Pro 15FS 15" FST monitor, up to 1024x768, 0.28mm dot pitch, (31.5-64KHz) £299.00

Diamond Pro 37 presentation monitor £6995.00

Diamond Scan 33 presentation monitor £3295.00

Diamond Pro 29 presentation monitor £3495.00

### ADOBE

Photoshop 3.0 ●

**SPECIAL OFFER £350**

### SONY

Multiscan 20SH 20" Trinitron up to 1600 x 1200 0.25mm mask pitch, (30-107khz) £1895.00

Multiscan 20SE1T 20" Trinitron up to 1280 x 1024, 0.30mm mask pitch, (28-85khz) £1405.00

Multiscan 20SE1VT 20" Trinitron up to 1152 x 870, 0.30mm mask pitch (31.5-75KHz) £1395.00

Multiscan 17SE1T 17" Trinitron up to 1280 x 1024, 0.25mm mask pitch (31-82khz) £819.00

Multiscan 17SF1 17" Trinitron up to 1024 x 768, 0.25mm mask pitch (31-64khz) £559.00

Multiscan 15SF1 15" Trinitron up to 1024 x 768, 0.25mm mask pitch (31-64khz) £315.00

### THE GRAPHICS DIRECT SERVICE

WE ONLY SELL WHAT WE HAVE THOROUGHLY TESTED

93% CALLS ANSWERED WITHIN 10 SECONDS

WE GIVE EXPERT ADVICE AND SUPPORT

0% INTEREST FREE CREDIT AVAILABLE ON ANY ORDER OF OVER £500 INC. VAT (SUBJECT TO STATUS)

ALL ADD IN BOARDS MAY BE EXCHANGED OR RETURNED WITHIN 30 DAYS \*

WE HOLD OVER £200,000 WORTH OF STOCK FOR NEXT DAY DELIVERY.

1 & 3 YEARS ON-SITE MONITOR WARRANTY AVAILABLE

FREE DELIVERY TO UK MAINLAND ADDRESSES

\* Due to copyright law we cannot accept opened software for return.

## STB



### VELOCITY 64V

MPEG Video Playback ● Plug and Play

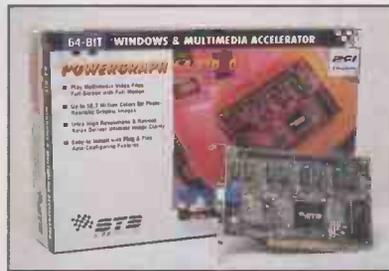
● S3 968 chipset ● up to 1280 x 1024 @ 24-bit

#### VELOCITY 64V

4Mb EDO RAM S3 968 PCI or VL £325.00

2Mb EDO RAM S3 968 PCI or VL £225.00

2Mb memory upgrade £125.00



### NEW POWERGRAPH 64 VIDEO

● Fastest graphics plus MPEG hardware Playback

● S3 Trio 64+V chipset ● 64 Bit EDO RAM

NEW 2Mb EDO RAM S3 Trio 64+V PCI or VL £150.00

NEW 1Mb EDO RAM S3 Trio 64+V PCI or VL £120.00

NEW MPEG decode module £149.00

MPEG decode module + 2Mb Powergraph 64 video £275.00

Horizon Video 1Mb DRAM Cirrus 5440 PCI bus £129.00

Horizon 64 2Mb DRAM Sierra Falcon 64-bit PCI £125.00

Horizon 64 1Mb DRAM £79.00

### NITRO 64

2Mb DRAM Cirrus 5434 PCI or ISA £139.00

1Mb DRAM Cirrus 5434 ISA £95.00

### MVP-2x - Dual screen Windows

1Mb DRAM ET4000 W32P ISA £875.00

1Mb DRAM ET4000 W32P PCI £875.00

2Mb DRAM £1029.00

### MVP-4Xi - 4 screen Windows

1Mb DRAM ET4000 W32P ISA £1310.00

**SEE NEXT PAGES FOR  
"MULTIMEDIA DIRECT"  
AND A GREAT  
NEW COMPETITION**

## GRAPHICS DIRECT

GRAPHICS DIRECT

13 Colthrop Way,

Thatcham, Berkshire RG19 4LW

Tel: 01635 873000 Fax: 01635 868188

Manchester office: 0161 237 5152



# CALL 01635-873000 NOW

All prices exclude VAT. E&OE. Prices and specifications subject to change without notice. Sony and Trinitron are registered trademarks of the Sony Corporation, Japan. All trademarks acknowledged.

# GRAPHICS DIRECT PRESENTS

## MATROX

### Introducing the new MGA Millennium from Matrox!

Integrating Windows, digital video, and 3D acceleration onto a single high speed chip, the Matrox MGA Millennium marks a new milestone in desktop graphics. It teams the award winning MGA 64-bit graphics processor with new dual-ported Windows-RAM for unprecedented speed under Windows 95 and other PC operating systems.

To take advantage of MGA Millennium's powerful video, 3D and DOS performance, we have thrown in a number of multimedia titles absolutely free! They include 3D/FX by Asymmetric Design - a drag and drop 3D software for Windows Papyrus, NASCAR racing simulation game, and CompCore SoftPEG, MPEG player under Windows. 2Mb or 4Mb can be upgraded to 4 or 8MB of Window RAM.

#### MGA Millennium Features include:

- Real-time rendering of full-screen, full-motion 3D graphics
- 220mhz DAC for refresh rates up to 85Hz at 1600 x 1200
- 32-bit BGA core for fast DOS performance
- Ultra high, 1600 x 1200 24-bit resolution
- Broadcast quality full-screen video at 30 fps
- Memory upgradable to 8Mb



**MGA MILLENNIUM**

#### MGA MILLENNIUM

4Mb WRAM	1600 x 1200 @ 65K colours	PCI	£325.00
2Mb WRAM	1152 x 882 @ 65K colours	PCI	£225.00
2Mb Upgrade			£125.00
4Mb Upgrade			£233.00
6Mb Upgrade			£332.00

#### IMPRESSION PLUS 220 (Upgradable to 4Mb)

2Mb VRAM	1600 x 1200 @ 85Hz	ISA	£325.00
2Mb Upgrade			£175.00

## SIGMA DESIGN



**REAL MAGIC PRODUCER** - Create your own MPEG videos and video CD's with the world's first complete MPEG encoding and editing system. Complete with Truespace 1.0 and Adobe Premiere 4.0

Real Magic	£3495.00
Real Magic Lite	£289.00
Real Magic Lite	£199.00

## MICROPOLIS

### AV HARD DRIVES

1991AV	9Gb internal SCSI	£1545.00
3243AV	4Gb internal SCSI	£870.00
4221AV	2Gb internal SCSI	£665.00
MD-9GB AV	9Gb SCSI external	£1895.00
MD-4GB AV	4Gb SCSI external	£1075.00
MD-2GB AV	2Gb SCSI external	£795.00

## FAST MULTIMEDIA



### MOVIE MACHINE II

- Linear and non-linear video editing ● S-VHS in and out
- Plug in MPEG and MJPEG extension modules
- TV-Tuner and Teletext on board £499.00



**MOVIE MACHINE II POWER PACK** Movie Machine II with MPEG & MJPEG Extensions £999.00

**M-JPEG Extension** with Xing CD & Premier 4.0 LE. £299.00

**M-PEG Extension** £249.00

### FP/S 60

- \* High-quality M-JPEG \* Full-screen overlay up to 1280 x 1024
- \* Editing preview on PC monitors via overlay \* Complete with Premier 4.0 LE & Xing CD \* S-Video in/out \* Studio quality (4:2:2, 24-bit True colour) £499.00

**FP/S 60 MPEG Extension** £249.00

**MOVIE MACHINE PRO** Top quality video mixing and editing at a bargain price £299.00

**MOVIE MACHINE** £199.00

**AVIATOR** captures AVI movies and full screen 24-bit stills £199.00

**MJPEG OPTION + XING CD + PREMIERE 1.1 + Animator Pro** £299.00

**VIDEO MACHINE LITE** Professional S-VHS editing on a PC! £1995.00

**SCREEN MACHINE II** ISA Bus - the best video capture board £Call



## VITEC



**VIDEO NT** - Incredibly low cost MPEG-1 capture. Awarded best Multimedia hardware product Comdex Fall. £349.00

**DRT1** - High Performance, low cost MPEG-1 audio & video decoder for TV playback £450.00

**MM1** - MPEG-1 and JPEG-1 like decoder for kiosk £695.00

**MPEG MAKER** - Turn your AVI into a full MPEG-1 file £135.00

**RT10-1** - Real-time MPEG-1 encoding processor £11900.00

**VIDEO CLIP MPEG** - The world's first non-linear software editor for MS Windows, MPEG 1 system, video and audio layers £350.00

## MIRO

### NEW - miroCONNECT 34 Office

It's a Windows 95 all in one ISA card. It's a 28,800 modem. It's a high-speed fax. It's a telephone answering machine. It's a voice mailbox. It's a sound card. It's an integrated word processor, personal organiser and spreadsheet. It's the miroCONNECT 34 Office, and it's only £249.00



### miroVIDEO DC20

PCI Video capture

Professional 768 x 576 S-Video disk editing system with MJPEG compression. £750.00



### miroVIDEO 20TD live!

Video capture, AVI acceleration, TV and graphics board all in one! PCI or VL 2Mb £325.00



### NEW - miroVIDEO DC1 Plus

Hard disk video editing with MJPEG compression. ISA, with Adobe Premiere L.E, Photoshop L.E and full version of Asymetrix 3D/FX £299.00

#### miroVIDEO

12PD	2Mb DRAM + VideoStudio)	VL or PCI	£139.00
12PD	1Mb DRAM + VideoStudio)	VL or PCI	£99.00

#### miroSOUND

PCM20 Radio	- all-in-one audio system & music workstation	£200.00
PCM12	- music centre for DOS & Windows	£145.00
PCM1pro	- professional Wavetable card	£135.00
PCM10	- Wavetable card for Windows	£85.00
FM10	- perfect sound for games	£65.00

#### miroCRYSTAL

20SD Twin	2Mb DRAM	2 x S3 864	VL or PCI	£550.00
40SV	4Mb VRAM	S3 964	PCI only	£360.00
20SV	2Mb VRAM	S3 964	VL or PCI	£200.00
20SD	2Mb DRAM	S3 864	VL or PCI	£145.00
22SD	2Mb DRAM	S3 Trio64	PCI only	£139.00
12SD	1Mb DRAM	S3 Trio32	VL or PCI	£82.00

#### miroMEDIA Bose RM

BOSE RoomMate computer speakers with PCM10 £425.00



# MULTIMEDIA DIRECT

PC VIDEO TRAINING COURSES NOW AVAILABLE NOW CALL FOR DETAILS

## CD RECORDERS

★★★★★ Double speed CD recorder from under £1000 ★★★★★



### PINNACLE

- RCD-1000 PCA - External, with SCSI controller £1214.00
- RCD-1000 PC - External, no controller £1184.00
- RCD-1000 PCAI - Internal, with SCSI controller £1184.00
- RCD-1000 PCI - Internal, no controller £985.00

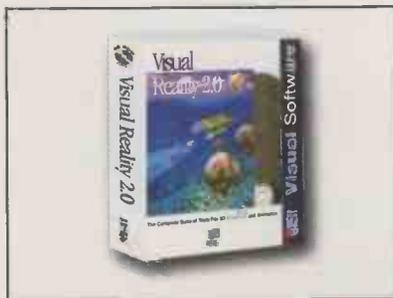
### SONY

- Spressa external CD recorder £1529.00
- Spressa internal CD recorder £1375.00

## VISUAL SOFTWARE

**VISUAL REALITY 2.0** - A new standard in 3D graphics and animation - Windows 95 enhanced eg. faster on 486, longfile names support, Win 32S

The latest release of the leading 3D graphics and animation package, **Visual Reality 2.0** adds a new **Universal Animation System** - quite literally anything can be animated cameras, objects, lights, materials and more - all with just a few button clicks. Objects can be twisted and stretched, and even morphed in 3D, video's can be played in the background or projected to create animation to broadcast quality and beyond. And for the 3D expert user the advanced "Channels' Editor" provides the highest level of animation control. Visual Reality 2.0 includes a state of the art 3D modeller Visual Model, including new "Munge" facilities - which provide a powerful set of 3D deformation tools, including 3D - envelope, push, pull, twist, stretch and melt and even morphing between shapes, as well as traditional 3D modelling. Visual Model's unlimited "undo" features frees your creativity by allowing you to experiment with your designs. Visual Font is the most powerful 3D text building system yet created, including automatic 3D bevels, bending of text along a 3D path, and real-time solid shape preview. Data from popular drawing and CAD packages can also be imported, rendered and animated. All of this functionality is complimented by over 2Gb of 3D data including, 500 3D objects for business use, 1500 textures, 9 3D virtual worlds including *The Northern Castle, Pacific Beaches, Orbit City and Jurassic Adventure*, 10 3D scenic UniSpheres, 100 AVI video clips from a Hollywood film library, 100 high resolution still background images. Visual Reality 2.0 is supplied on a 7 CD set. The Price includes access to Visual Software's free technical support hotline.



**VISUAL REALITY**  
Visual Reality 2.0 £199.00

- Simply 3D £49.00
- Simply 3D Super Pack £75.00
- Double Vision £35.00
- Visual Reality version 1.5 £106.00
- Textures for Professionals £69.00
- Simply Scenes GED format Volumes 1 to 5 £39.00
- Simply Scenes 3DS format Volumes 2 to 5 £99.00

### VISUAL REALITY 1.5 BUNDLE

Visual Reality Version 1.5 available at special price of £79.00 with any FAST, MIRO or MATROX product.

## SHOPPING LIST

- CSD760MK** Multimedia kit including ATAPI drive, CDU76E CD-ROM, 16-bit Soundblaster, SRS PC50 speakers, 3 x CD titles & 4X Navigator £250.00
- CDU-76S** Quad-Speed CD-ROM £155.00
- CDU55E** Special price double speed CD ROM £95.00
- MDH-10** MD data portable drive with remote control headphones £475.00

- CSS-B100T** Speaker System £59.00
- SRS-PC91** 2x10W Desktop PC Speakers £110.00
- SRS-PC50** 2x2.5W Display Mount PC Speakers £69.00
- SRS-PC40** 2x3W Desktop PC Speakers £49.00
- SRS-PC30** 2x1.5W Display Mount PC Speakers £49.00
- SRS-PC20** 2x1W Desktop PC Speakers £29.00

### PINNACLE

- Sierra 1.3Gb MO drive include**
- 1.3Gb PCA/1520 - External, with Adaptec controller £1495.00
- 1.3 Gb PC - External, no controller £1390.00
- 1.3Gb PCAI - Internal with Adaptec controller £1475.00
- 1.3Gb PCI - Internal, no controller £1364.00
- Tahoe 3.5" portable 230Mb Optical drive**
- 230 PCT with Trantor connector £695.00
- 230 PCA/1520 with Adaptec controller £695.00
- 230PC No controller £595.00
- 230 PCAI Internal with Adaptec £649.00
- 230PCI Internal, no controller £549.00

### MASTERCLASS

- The award winning multimedia authoring tool
- Masterclass Professional V3.0 £995.00
- Masterclass Personal Edition £395.00

### TRUESPACE

- TrueSpace V.2.0 £375.00
- TrueSpace V.1.0 £156.00

### XING

- Xing CD MPEG S/W encoder £399.00

### ITERATED SYSTEMS

- Images Incorporated 4.0 £99.00
- Upgrade to Images Incorporated 4.0 £69.00
- The Fractal Starter Kit £1995.00
- FTC III compression card £995.00

### GOLD DISK

- Turn two hours of video tape into 30 minutes of entertainment:
- Video Director 2 £79.00
- Video Director 1 £42.54

TECH-TEASER No.2

Multimedia Direco continues the fabulous new competition that gives you the chance to gain a further discount of 5% against any add-in card of your choice from our extensive range. Simply phone us on 01635 873000 and tell us the correct answer to the "Tech-Teaser" below.

Closing date - 30th November 1995

■ CD-ROM COMPATIBILITY IS DEFINED BY DIFFERENT COLOUR BOOK STANDARDS. WHICH COLOUR IS CD?

WIN A FAST MOVIE MACHINE II or a MATROX MGA MILLENNIUM BOARD.

Next month we will be printing a third tech-teaser question. Send us the correct answers to all three teasers together with your own teaser or puzzle to enter our Christmas draw for a FREE MOVIE MACHINE II or MILLENNIUM. Call for an entry form NOW.

## THE MULTI MEDIA DIRECT SERVICE

WE ONLY SELL WHAT WE HAVE THOROUGHLY TESTED

93% CALLS ANSWERED WITHIN 10 SECONDS

WE GIVE EXPERT ADVICE AND SUPPORT

0% INTEREST FREE CREDIT AVAILABLE ON ANY ORDER OF OVER £500 INC. VAT (SUBJECT TO STATUS)

WE HOLD OVER £200,000 WORTH OF STOCK FOR NEXT DAY DELIVERY

ALL ADD IN BOARDS MAY BE EXCHANGED OR RETURNED WITHIN 30 DAYS\*

1 & 3 YEARS ON-SITE MONITOR WARRANTY AVAILABLE

FREE DELIVERY TO UK MAINLAND ADDRESSES

\*Due to copyright law we cannot accept opened software for return.

## TELEPHONE LINES OPEN

MON - FRI 09.00 - 18.00

CALL NOW TO PLACE YOUR ORDER



MULTIMEDIA DIRECT  
13 Colthrop Way,  
Thatcham, Berkshire RG19 4LW  
Tel: 01635 873000 Fax: 01635 868188  
Manchester office: 0161 237 5152

MULTIMEDIA

CALL 01635-873000

All prices exclude VAT. E&OE. Prices and specifications subject to change without notice. Sony and Trinitron are registered trademarks of the Sony Corporation, Japan. All trademarks acknowledged.



# CORPORATE SOFTWARE

WE ARE THE FASTEST GROWING CORPORATE SUPPLIERS OFFERING THE ULTIMATE STANDARDS IN SERVICE AND SUPPORT. CALL OUR CORPORATE CARE TEAM FOR DETAILS.

## ACCOUNTS

Quicktax Return 95.....	£28	Tax Calc.....	£29
Quickbooks 3.0.....	£87		
Quick Invoice Win.....	£36		
Quicken V 6.0 DOS.....	£24		
Quicken V 3.0 WIN.....	£32		
Quicken V 3.0 Upgrade.....	£21		
Quicken Home Inventory.....	£23		
Quicken UK Deluxe Bus Pack.....	£47		
Quicken UK Dx Home Pack.....	£47		
MS Money 3.0.....	£29		
Sage Business Park.....	£147		
Sage Moneywise V 2.0.....	£22		
Sage Instant Accounting Win.....	£97		
Tas Books.....	£79		
Tas Payroll Dos.....	£79		
Tas Books II.....	£589		
Tas Books II Multi User.....	£899		
GST Business Expenses.....	£20		
GST Motoring Expenses.....	£9		
GST Purchasing Manager.....	£20		
RMG Business Plan Builder.....	£85		

## SAGE STG

+2 Accountant+ Win V 3.0.....	£270
+2 Accountant V3.0.....	£199
+2 Book Keeper 2.0 Win.....	£83
+2 Fin Cont V 3.0 Win.....	£389
Accountant+ Lan V 3.0 Win.....	£465
Accountant+ Lan V 7.0 Dos.....	£399
Accountant V 7.0 Dos.....	£189
Accountant Lan V 7.0 Dos.....	£299
Accountant+ V 7.0 Dos.....	£243
Book Keeper V 7.0 Dos.....	£55
Fin Cont Lan V 7.0 Dos.....	£499
Fin Cont Lan V 2.0 Win.....	£549
Fin Cont V 7.0 Dos.....	£319
Job Costing Dos.....	£132
Job Costing Lan Dos.....	£167
PAYROLL V 2.0 Win.....	£129
Payroll II V 4.32 Dos.....	£129
Payroll II Lan Dos.....	£165

## CLIP ART IMAGES & SOUND CLIPS

Corell Artshow V 3.0 CD Rom.....	£27
Corell Artshow V 4.0 CD Rom.....	£24
Corell Artshow V 5.0 CD Rom.....	£24
Corell Gallery CD Rom.....	£25
Corell Pro Photo CD.....	£15
MS Soundbits MGM Movies.....	£14
MS Soundbits Flintstones.....	£14
MS Soundbits Music Clips.....	£14
WP Edu Clip Art.....	£44
WP Holiday Clip Art.....	£41
WP Mainstreet Home Clip Art.....	£20
WP Mainstreet Kids Clip Art.....	£20
WP Mainstreet Office Clip Art.....	£20
GSP Clipart Gallery.....	£20
GSP Clipart Portfolio.....	£20
GSP Star 1500 Photos.....	£27
GSP Star 1000 Fonts.....	£27
GSP Star 5000 Clipart.....	£27
GSP Headline Fonts.....	£25
GSP Designer Fonts.....	£25
GSP Kids Fonts.....	£20
Corel Pro Photos.....	£15

## OPERATING SYSTEMS

Win 95 Upgrade CD Rom.....	£59
MS Win 95 Upgrade.....	£59
MS Win 95 Dos Upgrade.....	£127
MS Plus.....	£29
MS Dos 6.22 Oem.....	£39
MS Dos 6.22 Upgrade.....	£34
MS Win 3.11.....	£54
MS Windows for Workgroups.....	£85
Workgroups add on pack.....	£39
MS Win NT 3.51 Server.....	£399
Win NT 3.51 Workstation.....	£189
OS/2 Warp.....	£49
OS/2 Warp CD Rom.....	£45
Novell DR Dos V7.....	£49
Lotus Notesuite 3.2.....	£669
Notesuite Starter pack Win.....	£585

## DESKTOP PUBLISHING

Aldus Pagemaker 6.0.....	£379
Aldus Pagemaker 5.0.....	£359

Aldus Pagemaker Classic.....	£52
Corell Ventura 4.2 Win.....	£110
Corell Ventura 5.0 CD Rom.....	£239
Corell Ventura 5.0 Dual.....	£279
MS Publisher 2.0.....	£62
Serif Page Plus 3.0 Win.....	£43
Quark Express Win.....	£569
GSP Pressworks 2.....	£29
GSP Pressworks 2 Powerpack.....	£56
Pagemaker 5 user pack.....	£1375
Page Plus Publishing Suite.....	£79
Softkey Publisher.....	£35
Spinnaker 1st Publisher Win.....	£69
Spinnaker 1st Publisher Dos.....	£35
Corell Ventura 5.0 Upgrade.....	£115
Ventura 5.0 CD Rom U/gde.....	£69
MS Publisher 95.....	£69

## CAD

Autocad LT Win.....	£399
Autosketch V 3.0 Dos.....	£57
Autosketch V 2.0 Win.....	£129
Generic Cad V 6.1 Dos.....	£305
FC 3D Design & Floorplan.....	£118
Fastcad Cadvance Win.....	£355
Fastcad Easy/Cad V 2.0.....	£75
FC 3D Design & Estimator.....	£89
IMSI TurboCAD II Win.....	£53
IMSI TurboCAD V 3.2 Dos.....	£53
IMSI TurboCAD Pro Win.....	£149
Softkey 3D Design Dos.....	£29
Softkey Cad Win.....	£29
Xcad 3.0 Win.....	£368
RMG Drafax CAD 2.1.....	£49
RMG Drafax CAD Pro.....	£149
Drafax Cad Ultra 4.1 Dos.....	£129
Drafax Electrical Library.....	£118

## COMMUNICATIONS

Proconum Plus Dos.....	£54
Proconum Plus Win.....	£55
Proconum Plus II Win.....	£69
Crosstalk XVI 3.71 Dos.....	£79
Crosstalk V 2.1 Win.....	£69
Delrina Dos Fax Pro V 2.0.....	£37
Delrina Win Fax Pro 4.0.....	£55
Win Fax Pro 4.0 Upgrade.....	£33
Carbon Copy Plus 6.1 Dos.....	£73
Carbon Copy 2.0 Win.....	£80

Laplink Dos.....	£59
Laplink Win.....	£79
WP Mainstreet Exp fax Plus.....	£33
PC Anywhere 5.0 Dos.....	£85
PC Anywhere 5.0 Host Dos.....	£57
PC Anywhere 2.0 Win.....	£89
PC Anywhere 2.0 Win Rem.....	£67
RemoteControl Pro.....	£89
Compuserve Value Pack.....	£19
Lotus CC Fax 1.2.....	£1049
DataTalk 4.....	£73
Delrina WinComm Pro.....	£54
Hayes Smartcomm.....	£46
Reachout Host/View Win.....	£79
Stac Reachout Host Win.....	£59

## WORD PROCESSING

MS Word 6.0 Win.....	£209
MS Word 6.0 Dos.....	£149
Wordperfect 5.1+.....	£189
Wordperfect 5.2.....	£210
Wordperfect 6.1A Win.....	£189
Wordperfect 6.0B Dos.....	£189
Lotus Ami Pro 3.1.....	£89
Wordstar 7.0 Dos.....	£189
WP Letter Perfect.....	£29
WP Grammatik Win.....	£28
WP Grammatik Dos.....	£28
Licenses Available.....	£Call
Wordstar Win 2.0.....	£29
CA Textor.....	£49
MS Word 6.0 Upgrade.....	£85
MS Word 6.0 CCP Upgrade.....	£120
Wordperfect 6.1 Upgrade.....	£75
Wordperfect 6.1 CCP Upgrade.....	£95
Wordperfect 6.0 Upgrade.....	£79
Wordpct 6.0 CCP Upgrade.....	£110

**Softram** £45

**TURNPIKE** £49

## LANGUAGES & DEVELOPEMENT TOOLS

Borland C++ 4.5 CD Rom.....	£199
Borland C++ 4.5.....	£199
Borland Delphi.....	£149
Borland Delphi Rad pack.....	£125
Turbo Pascal with objects.....	£149
Turbo C++ 3.0 Dos.....	£49
Turbo C++ WinVis Edition.....	£59
Turbo C++ 4.5 Win CD.....	£67
Turbo Pascal 7.0 Dos.....	£55
Turbo Pascal 1.5 Win.....	£60
MS Fortran Compiler/Win/Dos.....	£79
MS Macro Assembler.....	£89
MS Visual Basic Std Dos.....	£69
MS Visual Basic Std Win.....	£69
MS Visual Basic Pro Dos.....	£189
MS Visual Basic Pro Win.....	£189
MS C++ 1.52.....	£75
Delphi Client Server.....	£685
Delphi CCP Upgrade.....	£125
CA Visual Objects.....	£429
Visual C++ 2.0 CD Rom.....	£225

## INTEGRATED PACKAGES

Lotus Smartsuite 3.0.....	£275
MS Office 4.2 CD Rom.....	£245
MS Office 4.2.....	£305
Office 4.2 CCP Upgrade.....	£245
MS Office 4.2 Upgrade.....	£195
MS Office 4.3 Pro.....	£395
Office 4.3 Pro CD Rom.....	£345
Office 4.3 Comp Upgrade.....	£299
MS Office 4.3 Upgrade.....	£235
MS Works Win.....	£79
MS Works Dos.....	£79
Novell Perfect Office.....	£279
WP Works.....	£54
Licenses Available.....	£Call
Aldus PC Collection.....	£795
Symantec Q&A Win.....	£121
Symantec Q&A Dos.....	£215
WP Works & Quickfax.....	£59

Official Government, PLC and health authority orders accepted.

Computech carries a wide range of products in stock allowing quick next day delivery throughout the UK and if required same day delivery within the London & Hertfordshire region.

Visit our friendly showroom at 468 St. Albans Road in Watford. Opening hours: 8.30am until 6.00pm Mon to Fri and 9.00 until 5.00pm on Saturday.

If your ideal machine is not covered in our listing call our friendly sales staff to find out the amazing prices which we can offer. All are machines are covered with a 1 Year Back to Base Warranty and life time Technical Support.

QUALITY SYSTEMS AT AFFORDABLE PRICES

## MULTIMEDIA SYSTEMS

### DX4 100

- 486 DX4 100
- 256K Cache
- PCI Motherboard With Mode 4 EIDE
- 3.5" Floppy Drive
- 8 MB Ram
- 540 Hard Disk
- 1 Meg PCI graphics card
- Sound Blaster 16
- NEC 4x CD Rom
- Speakers & Microphone
- Keyboard & MS Compatible Mouse
- 14" SVGA Monitor .28 Dot Pitch
- Desktop or Minitower

£1099

### PENTIUM 75

- Pentium 75
- 256K Cache
- PCI Motherboard With Mode 4 EIDE
- 3.5" Floppy Drive
- 8 MB Ram
- 540 Hard Disk
- 1 Meg PCI graphics card
- Sound Blaster 16
- NEC 4x CD Rom
- Speakers & Microphone
- Keyboard & MS Compatible Mouse
- 14" SVGA Monitor .28 Dot Pitch
- Desktop or Minitower

£1299

### PENTIUM 90

- Pentium 90
- 256K Cache
- PCI Motherboard With Mode 4 EIDE
- 3.5" Floppy Drive
- 8 MB Ram
- 540 Hard Disk
- 1 Meg PCI graphics card
- Sound Blaster 16
- NEC 4x CD Rom
- Speakers & Microphone
- Keyboard & MS Compatible Mouse
- 14" SVGA Monitor .28 Dot Pitch
- Desktop or Minitower

£1345

### PENTIUM 100

- Pentium 100
- 256K Cache
- PCI Motherboard With Mode 4 EIDE
- 3.5" Floppy Drive
- 8 MB Ram
- 540 Hard Disk
- 1 Meg PCI graphics card
- Sound Blaster 16
- NEC 4x CD Rom
- Speakers & Microphone
- Keyboard & MS Compatible Mouse
- 14" SVGA Monitor .28 Dot Pitch
- Desktop or Minitower

£1399



"GREAT VALUE FOR MONEY"

PC Home Sept '95

All Computech Multimedia Systems come with a choice of Windows 95 or Dos 6.22 & Win 3.11. Many Packages are offered at discount price when purchased with the system to allow you to start off with a system that fills your specific needs and still maintains excellent value for money.

CONSTANTLY UPGRADED PRODUCT RANGE CALL TODAY FOR LATEST ADDITIONS

# SALES HOTLINE 01923 224440

All prices, specifications and offers subject to change without prior notice. E&OE All prices exclude VAT (17.5%).

# COMPUTECH

## COMPUTER SERVICES

468 St Albans Road  
Watford  
Hertfordshire  
WD2 5QU  
TEL: 01923 224440  
FAX: 01923 468480  
Tech Support 01923 226724



### LAPTOPS

### DISCOVER THE POWER WITH OUR CHOICE OF LAPTOPS

#### AST ASCENTIA NOTE BOOKS

PROCESSORS	RAM	H DISK	DISPLAY	PRICE
700N4/33M9 486SX 33	4MB	120MB	MONO	£889
700N4/33CS9486SX 33	4MB	340MB	DUAL	£1275
800N4/33CS9 486SX 33	4MB	250MB	DUAL	£1545
800N4/33CS9 486SX 33	4MB	340MB	DUAL	£1625
800N4/50CS9 486DX2 50	4MB	250MB	DUAL	£1789
800N4/50CS9 486DX2 50	4MB	340MB	DUAL	£1875
900N4/50CS10 486DX2 50	4MB	340MB	DUAL	£1955
900N4/50CT9 486DX2 50	4MB	340MB	TFT	£2885
900N4/75CS10 486DX4 75	8MB	340MB	DUAL	£2465
900N4/75CT10 486DX4 75	8MB	510MB	TFT	£3395

#### COMPAQ 400

PROCESSOR	RAM	H DISK	DISPLAY	PRICE
400 486DX2 40	4MB	170MB	MONO	£1275
400C 486DX2 40	4MB	250MB	STN	£1695
400CX 486DX2 40	4MB	250MB	TFT	£2215

#### TI-TRAVELMATE

PROCESSOR	RAM	DISK	DISPLAY	PRICE
T14000M DX4 75	4MB	455MB	Dual Scan	£1589
T14000M DX4 75	4MB	340MB	TFT	£1789
T14000M DX4 75	4MB	455MB	TFT	£2075
T14000M DX4 100	4MB	525MB	TFT	£2475
T15000 P75	8MB	500MB	Dual Scan	£2989
T15000 P75	8MB	722MB	TFT	£3375

#### CTX LAPTOPS

PROCESSOR	RAM	H DISK	DISPLAY	PRICE
NAUD40 486SX 33	4MB	260MB	STN	£1529
NAUD40 486DX2 50	4MB	260MB	STN	£1709
NAUD40 486DX2 50	4MB	340MB	STN	£1799
NAUD40 486DX4 75	4MB	340MB	STN	£1979
NAUD40 486DX4 100	4MB	340MB	STN	£2069
NAUD40 486DX2 50	4MB	260MB	TFT	£2199
NAUD40 486DX4 75	4MB	340MB	TFT	£2599
NAUD40 486DX4 100	4MB	340MB	TFT	£2699

#### TOSHIBA NOTE BOOKS

PROCESSOR	RAM	H DISK	DISPLAY	PRICE
T1910CS 486SX 33	4MB	200MB	STN	£1855
T1950CT 486DX2 40	4MB	200MB	TFT	£1865
T1950CT 486DX2 40	4MB	320MB	TFT	£1995
T2400CS 486DX2 50	4MB	250MB	STN	£1865
T2450CT 486DX4 75	8MB	500MB	TFT	£2460
T400CS 486DX4 75	8MB	810MB	STN	£2420
T400CDT 486DX4 75	8MB	810MB	STN	£3135
T4850CT 486DX4 75	8MB	500MB	TFT	£2965
T4900CT PENT 75	8MB	500MB	TFT	£3075
T6600C 486DX2 66	8MB	510MB	TFT	£3380
610CT P90	8MB	720MB	TFT	£3015
4000M 486DX2 50	4MB	340MB	DUAL	£1485
4000M 486DX2 50	4MB	455MB	TFT	£1485
4000M 486DX4 75	4MB	455MB	DUAL	£1785
4000M 486DX4 75	4MB	340MB	TFT	£1785
4000M 486DX4 75	4MB	455MB	TFT	£1785
4000M 486DX4 100	4MB	520MB	TFT	£2485

5000M PENTIUM 75	8MB	500MB	DUAL	£2989
5000M PENTIUM 75	8MB	722MB	TFT	£3375

#### CANON PRINTBOOKS

PROCESSOR	RAM	H DISK	DISPLAY	PRICE
BN32486SL2 50	4MB	260MB	STN	£2875
BN100C486SX 25	4MB	120MB	STN	£1495
BN100C486SX 25	4MB	200MB	STN	£1885
BN120C486SX 33	4MB	200MB	STN	£1925

#### UPGRADES & ACCESSORIES

Targus Carry Case.....	£28
<b>TOSHIBA MEMORY UPGRADES</b>	
4MB.....	£169
8MB.....	£298
16MB.....	£519
8MB EDO.....	£418
16MB EDO.....	£800



COMPUTECH ALSO OFFERS A LARGE RANGE OF ACCESSORIES AND UPGRADES ON THESE AND MANY OTHER LAPTOP RANGES. CALL OUR SALES STAFF FOR FULL DETAILS OF THE RANGES AND UP TO DATE PRICING.

### PRINTERS

### OUTSTANDING PERFORMANCE, EXCEPTIONAL VALUE



#### LASER PRINTERS

Brother HL630 6ppm.....	£329
Brother HL660 6ppm.....	£464
Brother HL1260 12 ppm.....	£920
Canon LBP430W 4ppm.....	£365
Canon LBP1260 12ppm.....	£910
Epson EPL3000 4ppm.....	£385
Epson EPL5200+ 5ppm.....	£470
Epson EPL9000 A3 8ppm.....	£1195
Epson EPL9000 PS A3 8ppm.....	£1365
HP LJ 5L 4ppm.....	£395
HP LJ4MV 16ppm.....	£1985
HP LJ4V 16ppm.....	£1368
HP LJ4+ 12ppm.....	£985
HP LJ4M+ 12ppm.....	£1295
HP LJ4Si 16ppm.....	£2967
HP LJ4SiMX 16ppm.....	£2965
HP LJ5P 6ppm.....	£585
HP LJ5MP 6ppm.....	£735
HP LJ Colour 8ppm.....	£4195
MT 1900S 5ppm.....	£347
NEC Superscript 610+ 6ppm.....	£293
NEC Superscript 600 6ppm.....	£445
NEC Superscript 6601 6ppm.....	£565
NEC S/S Colour 3000 6ppm.....	£660
OKI OL400 EX 4ppm.....	£275
OKI OL410 EX 4ppm.....	£385

OKI OL810 EX 8ppm.....	£645
Panasonic KXP4430 5ppm.....	£515
Panasonic KXP4440 10ppm.....	£699
Panasonic KXP6100 5ppm.....	£275
Panasonic KXP6150 6ppm.....	£325
Star Wintype 4000 4ppm.....	£295
Star Wintype 800c 4ppm.....	£595
Kyocera FS400 SB 4ppm.....	£405
Kyocera FS400 DB 4ppm.....	£549

#### INKJET PRINTERS

Canon BJ30 80col.....	£145
Canon BJ200ex 80col.....	£173
Canon BJ230 132col.....	£239
Canon BJ300 80col.....	£347
Canon BJ330 132col.....	£395
Canon BJC70 80col.....	£220
Canon BJC600e 80col.....	£335
Canon BJC800 132col.....	£1065
Canon BJC820 132col.....	£1280
Canon BJC4000 80col.....	£232
Epson Stylus 1000 132col.....	£320
Epson Stylus Colour 80col.....	£325
Stylus Colour Pro A4 80col.....	£Call
Stylus Colour Pro XL 132col.....	£Call
HP DJ340 80col.....	£169
HP DJ600 80col.....	£225
HP DJ660C 80col.....	£309



HP DJ850C 80col.....	£369
HP DJ1200c 80col.....	£635
HP DJ1200CPS 80col.....	£985
Lexmark 150C 80 col.....	£289
HP DJ1600C 80col.....	£839
HP PJ XL300 80col.....	£1599
OKI OJ300 80 col.....	£225
Star SJ144 80col.....	£185
Star Wintype 800C 80col.....	£599

#### 9 PIN DOT MATRIX PRINTERS

Epson LX300 80col.....	£98
Epson LX1050 132col.....	£187
Epson LX870 80col.....	£245
Epson FX1170 132col.....	£287
Epson DFX5000 132col.....	£1185
OKI ML321 80col.....	£359
OKI ML520 132 col.....	£352
OKI ML521 132col.....	£389
Panasonic KXP1150 80col.....	£94
Panasonic KXP3969 80col.....	£295
Star LC15 132col.....	£195

#### 24 PIN DOT MATRIX PRINTERS

Epson LQ300 80col.....	£149
Epson LQ570+ 80col.....	£215
Epson LQ870 80col.....	£379
Epson LQ1070 132col.....	£300
Epson LQ1170 132col.....	£439
Epson DLQ3000 132col.....	£799
NEC P2Q 80col.....	£98
NEC P3Q 132col.....	£175

#### SHEET FEEDERS

Canon BJ10.....	£40
Canon BJ300.....	£86
Canon BJ330.....	£96
Epson LX400.....	£69
Epson LQ570+.....	£49
HP DJ320.....	£49
Panasonic 1170/1180.....	£59
Panasonic 1124/2124.....	£79
Panasonic KXP2135.....	£33
Star LC100.....	£69
Star LC24-20.....	£69
Star LC200/LC24-200.....	£69

#### HP SUPPORT PACKS

DJ Mono 1 year on-site.....	£35
DJ Mono 3 year on-site.....	£43
DJ Colour 1 year on-site.....	£47
DJ Colour 3 year on-site.....	£69
LJ 5L/DJ1200/DJ1600 1 yr on-site.....	£79
LJ 5L/DJ1200/DJ1600 3 yr on-site.....	£95
LJ 4+/4M+ 1 year on-site.....	£139
LJ 4+/4M+ 3 year on-site.....	£165
LJ 4V/4MV 3 year on-site.....	£205
LJ 5P/5MP 3 year on-site.....	£135

A full range of cables, accessories & consumables are available call now for prices

COMPUTECH LEADING THE WAY INTO A NEW ERA

# SALES HOTLINE

# 01923 224440

All prices, specifications and offers subject to change without prior notice. E&OE  
All prices exclude VAT (17.5%).

# PERIPHERALS

EXTENSIVE RANGE AVAILABLE FROM STOCK

## PROCESSORS

<b>AMD</b>	
DX2 66	£59
DX4 80	£69
DX4 100	£89
<b>CYRIX</b>	
DX2 66	£59
DX4 100	£89
<b>INTEL</b>	
DX2 66	£99
DX4 100	£119
P75	£159
P90	£235
P100	£249
P120	£415
P133	£535
486 Heatsink & fan	£9
Pentium Heatsink & Fan	£12



£159

## MODEMS

14400 Fax/Modem Int.	£69
14400 Fax/Modem Ext.	£89
14400 Voice Fax/Modem Int.	£89
28800 Fax/Modem Int.	£119
28800 Fax/Modem Ext.	£139
<b>US ROBOTICS</b>	
14400 Sportster Int.	£139
14400 Sportster Ext.	£139
28,800 Sportster Int.	£189
28,800 Sportster Ext.	£189
28,800 Courier	£259
28,800 Worldport PCMCIA	£219
<b>MOTOROLA</b>	
3400 Online	£159
3400 Internet Solutions Pack	£165

## NETWORKING

<b>HUBS</b>	
8 port hub	£125
9 port hub	£149
12 port hub	£209
16 port hub	£259
16 port stackable hub	£269
32 port stackable hub	£455
2 way repeater	£179
4 way repeater	£289
<b>NETWORK CARDS</b>	
NE2000 card	£29
SMC 10 base 2 card	£65
SMC 10 base T card	£65
SMC combo cards	£95
3 com 10 base 2 card	£79
3 com 10 base T card	£79
3 com combo card	£99
A full range of cabling, tools and accessories are available call for details.	

## POINTER DEVICES

Supermouse II	£7
Mitsumi Serial Mouse	£7
MS Mouse	£34
MS Home Mouse	£24
Logitech Pilot PS/2	£19
Logitech Serial	£19
Logitech Cordless	£55

## CONTROLLER CARDS

ISA Multi I/O	£9
ISA Enhanced IDE Mode 4	£17
VLB Multi I/O	£12
VLB Enhanced IDE Mode 4	£19
2 Port Serial Parallel	£14
2 Port Serial	£10

## KEYBOARDS

102 Key Standard	£14
102 Key Mitsumi	£14
102 Key Cherry	£24
Windows 95 Keyboard	£29
MS Natural Keyboard	£59

## FLOPPY DRIVES

1.44 MB Mitsumi 3.5"	£23
1.44 MB Sony 3.5"	£25
1.2 MB Mitsumi 5.25"	£39

## MEMORY

1 meg 30 pin 70 n/s	£27
4 meg 30 pin 70 n/s	£109
4 meg 72 pin 70 n/s	£119
4 meg 72 pin 70 n/s Parity	£129
8 meg 72 pin 70 n/s	£229
8 meg 72 pin 70 n/s Parity	£235
16 meg 72 pin 60 n/s Parity	£375
32 Meg 72 pin 60 n/s Parity	£949
4 meg 72 pin EDO ram	£139
8 meg 72 pin EDO ram	£245



## MONITORS

Proview 14" 39 SVGA	£159
Proview 14" 28 SVGA	£169
CTX 14" SVGA	£179
CTX 15" SVGA	£299
CTX 17" SVGA	£499
Samsung 14" 39	£169
Samsung 14" 28	£179
Samsung 15"	£299
Samsung 17"	£499
Samsung 20"	£999
NECXV14	£235
NECXV15	£325
NECXE15	£435
NECXV17	£599
NECXE17N	£725
NECXP17	£975
NECXE21	£1225
NECXEP21	£1745
Taxan EV400LR	£186
Taxan EV410LR	£195
Taxan EV788LR	£215
Taxan 789LR	£255
Taxan Ergo 580LR	£292
Taxan Ergo 885LR	£624
Taxan Ergo 880LR	£520
Taxan Ergo 895LR	£835
Taxan Ergo 1080LR	£909
Taxan Ergo 2100LR	£1565
Taxan Ultra 1095LR	£1499
Philips 14M	£169
Philips 15B	£259
Philips 17C	£429
Philips 20C	£840
Philips 20T	£1315
Philips 21A	£CALL
Sony 15SF	£299
Sony CPD1730	£595
Sony GDM17SE1	£825
Sony GDM20SE1VT	£1315

## UPS

<b>American Power Conversion</b>	
SU250	£169
SU600	£210
SU900	£369
SU1250	£510
SU2000	£910
BK250	£83
BK 400	£115
BK600	£159
BK900	£275
BK1250	£349

## HARD DRIVES

<b>CONNER</b>	
425 MB IDE	£110
540 MB IDE	£120
635 MB IDE	£129
850 MB IDE	£139
1200 MB IDE	£199
540 MB SCSI II	£149
1080 MB SCSI II	£325
2000 MB SCSI II	£559
4000 MB SCSI II	£879
<b>QUANTUM</b>	
540 MB IDE	£129
730 MB IDE	£169
1200 MB IDE	£199
<b>SEAGATE</b>	
428 MB IDE	£119
545 MB IDE	£129
850 MB IDE	£149
528 MB SCSI II	£149
1050 MB SCSI II	£329
2100 MB SCSI II	£549
4000 MB SCSI II	£1049
9090 MB SCSI II	£1699
<b>FUJITSU</b>	
545 MB IDE	£119
545 MB SCSI II	£199
1090 MB SCSI II	£325
2017 MB SCSI II	£759
4350 MB SCSI II	£799
<b>HEWLETT PACKARD</b>	
1000 MB SCSI II	£319
2000 MB SCSI II	£599
<b>WESTERN DIGITAL</b>	
540 MB IDE	£129
635 MB IDE	£139
850 MB IDE	£149
1000 MB IDE	£189
1200 MB IDE	£199

## OPTICAL DRIVES

21 MB Omega Floptical Drive Kit	£259
21MB Disks	£18
Omega Zip Drive	£Call

## SPEAKERS

Labtec CS150	£17
Soundbeat QS820	£13
Creative Pro Digital	£33
ZYFI Pro 13W	£19
Trust 25W	£24
Trust 80W	£39
Trust 120W	£49
QS817P	£9

## INTELOVERDRIVE CHIPS

486DX2 66	£119
486DX4 75	£155
486DX4 100	£179

BRING LIFE TO YOUR OLD MACHINE WITH OUR HUGE RANGE OF HARDWARE UPGRADES



£129

## CD ROM DRIVES

Creative Home CD 4x	£289
Mitsumi 3X	£119
Mitsumi 4X	£129
Panasonic CR562B	£69
Panasonic CR652B & cont	£79
Creative 563	£109
NEC 3XE	£309
NEC 3X1	£229
NEC 3XP	£249
NEC 4XE	£388
NEC 4X1	£272
NEC 4XP	£509
Sony 3DU33A	£99



£109

## GRAPHICS CARDS

256K VGA	£20
512K VGA	£27
1 MEG SVGA ISA	£44
1 MEG S3 SVGA VLB	£69

## CIRRUS LOGIC

1MB 5424	£55
1MB 5426	£59
1MB 5428	£64
1MB 5434	£79
2MB 5434	£99

## DIAMOND

Speedstar Pro 1MB ISA	£94
Speedstar Pro 2MB ISA	£149
Stealth 64 1MB DRAM VLB	£102
Stealth 64 1MB DRAM PCI	£102
Stealth 64 2MB DRAM VLB	£139
Stealth 64 2MB DRAM PCI	£139
Stealth 64 2MB VRAM VLB	£249
Stealth 64 2MB VRAM PCI	£249
Stealth 64 4MB VRAM VLB	£359
Stealth 64 4MB VRAM PCI	£359

## ORCHID

Kelvin 64 1MB ISA	£109
Kelvin 64 1MB VLB	£109
Kelvin 64 1MB PCI	£109
Kelvin 64 2MB ISA	£142
Kelvin 64 2MB VLB	£142
Kelvin 64 2MB PCI	£142

## SCSI CONTROLLERS

Adaptec 1510	£55
Adaptec 1542 (BARE)	£129
Adaptec 1542	£174
Adaptec 2842	£189
Adaptec 2940	£239
Promise DC2040	£149

## MULTI MEDIA VIDEO PRODUCTS

Canon Ion RC260	£475
Canon RC260	£250
Camera Only	£250
Canon RC560	£1995
Ion Camera	£2495
Canon RC560 PC Kit	£184
Creative SE Video Blaster	£240
Creative FS2000	£172
Creative Video Spigot	£109
Creative TV Coder	£279
Diamond Videostar	£289
WIN TV Celebrity	£199
WIN TV Cinema	£339
Intel Smart Video Recorder	£382
Logitech Fotoman Plus	£169
Videologic Captivator	£189
Videologic Captivator Plus	£189
928 Movie ISA/VLB	£249
928 Movie & Sound	£229
ISA/VLB	£429
Videologic MPEG Player	£329
Videologic MPEG & 928	£219
Videologic PCI Movie	£219
Videologic Captivator Pro	£219

## SCANNERS

<b>UMAX</b>	
Vista T630	£349
Vista 58	£549
UC1260	£769
Page Office	£289
HP Scanjet 4C	£669
<b>EPSON</b>	
GTX 6500 SCSI	£465
GTX 8500 SCSI	£565
GTX 8000 SCSI	£675
<b>LOGITECH</b>	
Scanman 24	£165

Scanman Easytouch	£103
Scanman Powerpage	£295
Scanman 256	£75
Scanman 32	£60

## CYRIX UPGRADES

386SX16/20 - 486SX40	£29
386SX25 - 486SX50	£39
386DX16/20 - 486DX40	£139
386DX25 - 486DX50	£159
386DX33 - 486DX66	£189

## CASES WITH PSU

Desktop 200v	£39
Mini Tower 200v	£39
Mini Tower 230v	£45
Midi Tower 230v	£49
Full Tower 230v	£79
Multimedia 230v	£99

## TAPE BACKUP

Col Jumbo 350 Int	£112
Col Jumbo 700 Int	£163
Col Tracker 350 Ext	£179
Col Tracker 700 Ext	£229
IOMEGA 250 Int	£110
IOMEGA 700 Int	£265
IOMEGA 700 Ext	£339
DC2120 Tapes	£11
Conner 2 Gig Dat Int	£639
Conner 8 Gig Dat Int	£689
Wangtek 500 SCSI Int	£399
Wangtek 500 SCSI Ext	£539
Wangtek I Gig Int SCSI	£499
HP 2 Gig 35470	£599
HP 8 Gig 35480A	£699
2 Gig Dat Tapes	£13

## MOTHERBOARDS

486 256k cache/3 PCI	£95
4 ISA EIDE cont	£95
486 256k/cache/3 VLB	£95
4 ISA	£79
486 256k cache	£89
PCI/2 VLB/3 ISA	£89
Pentium 256k/3 PCI	£139
5 ISA/EIDE cont	£139
Pentium 256k/Triton	£159
3 PCI/5 ISA/EIDE cont	£159
Pentium Pipeline burst cache	£249
Triton/3 PCI/5	£249
ISA/EIDE cont	£249



£289

## SOUND CARDS

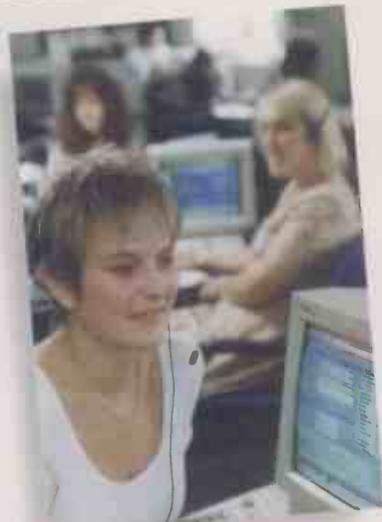
<b>CREATIVE</b>	
SB Pro Value	£52
SB 16 Value	£69
SB 16 Multi CD	£90
SB 16 Multi CD ASAP	£119
SB 16 SCSI II	£115
SB 16 SCSI II ADSP	£139
SB AWE 32	£179
Midi Kit	£49
<b>GRAVIS</b>	
Ultra Sound	£98
Ultra Souynd Max	£143
Midi Kit	£39
Portable Sound Plus	£125
Orchid Sound Wave 16EZ	£75
Orchid Game Wave	£84
Orchid Sound Wave 32	£129
Orchid Sound Wave 32 SCSI	£163

CONSTANTLY UPGRADED PRODUCT RANGE CALL TODAY FOR LATEST ADDITIONS

SALES HOTLINE 0192



# A perfect balance



Telesales Department

## ESTABLISHED 12 YEARS

Evesham Micros has been established for 12 years and now has four operating locations with a total annual turnover exceeding £45 million. It has risen to a position of strength in the computer market, with sustained growth and a secure financial status.

## PCDMA

We are a founder member of the Personal Computer Direct Marketers Association; a collaboration of manufacturers who adhere to a professional code of practice. This assures you of our pledge to provide a high standard of service. Additionally, the Payment Protection Plan provides peace of mind if you pay by cheque.



## READY TO RUN

All systems are fully formatted and pre-installed with DOS and Windows. We also include the original installation disks and manuals, plus our own PC manual and easy-to-follow guide to Windows. A mouse is also included. Any peripherals and upgrades you buy with your PC will, wherever possible, be fully configured and tested.

## DYNAMIC BURN-IN

A rigorous burn-in procedure repeatedly tests all key components. Only after passing this and a final QC inspection do we ship the goods.

## Our recipe for customer satisfaction

### READY TO SHIP

We endeavour to build and despatch all orders as quickly as possible. To this end, we try to maintain a buffer stock of popular configurations which can be either shipped immediately or purchased from one of our showrooms. These models are highlighted in the pricing information. Custom and other configurations are built to customer order and take a little longer, but "Ready to ship" we aim to despatch as quickly as possible. If you contact us we will give you a realistic estimate of the current delivery situation.

### NO CHARGE UNTIL SHIPMENT

If you pay by credit card, payment is not processed until the goods are shipped. Beware of suppliers who charge your credit card weeks before they ship your order!

### INSTALLATION/TRAINING

We can now offer a personal installation and training option for your new Vale PC. One of our local installers will deliver the PC to your premises or home, set it up for you and include a period of familiarisation training. This option costs £50.00<sup>vat</sup>. More in-depth training can be negotiated directly with the installer.

### ON-SITE MAINTENANCE

All PCs (except the *Voyager* notebooks) based on the UK mainland, plus the Isle of Wight, Northern Ireland and the Republic of Ireland have the benefit of on-site maintenance for the first year, covering both parts and labour. The length of cover can be extended to 2 or 3 years if desired (see the "Options" section of each page for price details).



### 30 DAY MONEY BACK GUARANTEE

We are so confident that you will be delighted with your Vale PC that should you, for any reason at all, be unhappy with your purchase, we will COLLECT it and refund your money in full. You will NOT pay any carriage or restocking charges (UK mainland only).

### LIFETIME WARRANTY

We also offer a lifetime warranty on labour, so if a problem arises at anytime in the future you will only pay for the parts necessary to repair it.

### LIFETIME TECHNICAL SUPPORT

As an owner, you will be privileged with access to our exclusive VALE HOTLINE telephone support number. Our award winning staff are both friendly and knowledgeable and have a full individual record of your system. Lines open 9am until 5-30pm Monday to Friday, and 10am until 4pm Saturday. To further improve our support service we have now installed a bulletin board for Vale customers offering latest drivers and technical information.



### NO DEPOSIT PERSONAL FINANCE

Available with all purchases over £1000, subject to status.



Designed for

### WINDOWS 95

Your Vale PC will have your choice of either Windows 3.11 or Windows 95 installed at no extra cost.



### NET ACCESS

With our special Internet access package, reaching a whole world of information from your Vale PC is very easy. Please see the Platinum page.



### SOFTWARE PROTECTION

For your peace of mind all Vale PCs are thoroughly virus checked and have Iris Anti-virus software installed.



## COMPUTERWEEKLY

Best "Product knowledge of Sales Staff" - Evesham Micros Corporate Sales. This was the verdict of nearly 2000 users in the Computer Weekly / KEW Associates 'Quality of IT Suppliers 1995' survey.

In the 1993 'PC Direct HITS AWARDS' we won both "Customer Service Excellence" and "Service and Support Excellence" categories as voted by their readers. In 1994 we did it again winning the prestigious "Service Excellence" award. We are especially proud of all these accolades as they were nominated by readers who have actually dealt with our company. They also voted us their favourite supplier for several other products highlighted throughout our pages.



## The proof of the pudding!

The readers of 'Personal Computer World' have voted us "Best Hardware Supplier". We were also runner up for "Best After Sales Service" and "Best Telephone Support".



For the last 2 years Evesham Micros have swept the board when it comes to Service Awards. Our efforts to provide the best possible service have once again been rewarded - the readers of 'Computer Shopper' magazine have voted Evesham Micros "Best Customer Liaison" for 1994.







# Popular PCI

Designed for  
 Each system includes your choice of Windows 3.11 or Windows 95 at no extra cost.  
 Microsoft Windows 95

## The Vale Popular – a quality conscious computer at a budget conscious price.

Don't be fooled by the competitive price, this is NOT a cheap PC. It offers a fully implemented PCI solution with 8Mb RAM (essential for modern applications and Windows 95) and support for Plug and Play. The motherboard is a bang up to date integrated design that incorporates a fast PCI hard disk controller, a ZIF socket for processor upgrades and 256kb cache RAM coupled with the latest energy saving technology. The Vale Viewsonic 14ES monitor is non-interlaced in all modes including 1024x768. More importantly it is able to display SVGA mode (800x600) at 72Hz refresh rate which is flicker free and does so while using the

full screen area (most budget monitors shipped with low cost systems have a huge border which uses up a large percentage of total screen area). It meets the stringent MPR II safety requirements as well as surpassing the EPA Energy Star power saving standard, so you can be assured of a relaxing flicker-free display that is kind to your eyes. The 1Mb Diamond Stealth SE PCI video card bestows the Popular with astonishingly fast video performance for such a moderately priced computer (see the graph on the Platinum page).



- ◆ Integrated motherboard with Flash BIOS
- ◆ ZIF socket for processor upgrades, including Pentium OverDrive®
- ◆ On-board fast PCI IDE hard disk controller
- ◆ 8Mb RAM (expandable to 128Mb)
- ◆ 256kb external processor cache
- ◆ 2xPCI, 1xPCI/16-bit & 3x16-bit expansion slots
- ◆ 1 EPP parallel port and 2 serial ports with 16550 UART
- ◆ 1Mb Diamond Stealth SE PCI video card
- ◆ 14" fully non-interlaced MPR II monitor (0.28mm dot pitch)
- ◆ 3.5" 1.44Mb Floppy Disk Drive
- ◆ TÜV approved power supply with low noise fan
- ◆ EPA Energy Star compliant
- ◆ Choice of desktop or mini-tower case
- ◆ Full-tower case available at extra cost
- ◆ Mitsumi mouse and 102-key keyboard

- ◆ Includes Iris Anti-virus software (3 month license), and your choice of either Windows95, or MS-DOS 6.22 and Windows for Workgroups 3.11. Full manuals and disks supplied
- ◆ "Introduction to Windows" manual supplied
- ◆ 30 day moneyback guarantee
- ◆ 1 year On-Site Maintenance for parts and labour
- ◆ Lifetime technical support hotline
- ◆ Lifetime labour warranty

POPULAR MODELS			
486dx2+66	Standard	MEDIA 96	Lotus Office 96
528Mb	£849+VAT	£999+VAT	£1039+VAT
1Gb	£909+VAT	£1059+VAT	£1099+VAT
486dx4+100	Standard	MEDIA 96	Lotus Office 96
528Mb	£899+VAT	£1049+VAT	£1089+VAT
1Gb	£959+VAT	£1109+VAT	£1149+VAT

Prices highlighted in yellow indicate "Ready to Ship" models which we try to keep in stock for immediate despatch. Multimedia models feature double speed CD-ROM drives (see below).

### POPULAR OPTIONS

- 16Mb RAM instead of standard 8Mb .....£180.00 +VAT
  - Fully non-interlaced 15" monitor (as Vale Platinum) ..£79.00 +VAT
  - Quad speed CD-ROM drive .....£90.00 +VAT
  - Internal High Density 5.25" 1.2Mb Drive.....£49.00 +VAT
  - Full-tower case.....£50.00 +VAT
  - Installation/training service .....£50.00 +VAT
  - Second year on-site maintenance.....£69.00 +VAT
  - Second and third year on-site maintenance.....£149.00 +VAT
- PLEASE SEE THE PLATINUM PAGE FOR VALE ACCESSORIES



A Vale Popular Media 96 PC

**NO DEPOSIT PERSONAL FINANCE**  
 Example: Popular 486dx2+66/528Mb Media 96 PC (Cash price £1173.83 inc VAT)  
**£41.95 inc VAT** per month. No deposit.  
 36 monthly payments.  
 APR 18.5%. Total payable £1510.20 inc VAT.

FULL SCREEN DISPLAY IN ALL MODES

**DIAMOND MULTIMEDIA Stealth SE 1Mb video card**  
 See the Platinum page for details

## Premier PCI

Upgrade any Popular model to a top specification 486 with class beating credentials for £150+VAT. These models feature the following enhancements:

- ◆ 15" FST microprocessor controlled non-interlaced 0.28mm dot pitch monitor (as Vale Platinum)
- ◆ 2Mb Diamond Stealth 64DRAM 64-bit PCI video card
- ◆ 102-key tactile keyboard ◆ Logitech Mouse

"ready to ship" models

486dx2+66/528Mb Microsoft Media 96 PC @ £1149+VAT  
 486dx2+66/528Mb Lotus Multimedia Office 96 PC @ £1189+VAT

### January 1995

In a group test with PCs from Compaq, Elonex & Hewlett Packard. "Without hesitation we recommend the Vale Premier from this group." Vale Premier Media '95 PC

### March 1995

"When you take into consideration the price and the one year on-site warranty, the Vale offers excellent value for money." Vale Premier



- ◆ Works 3 (for Windows 3.1) or Works 4 (for Windows95) – your choice
- ◆ Money 3
- ◆ Encarta 95
- ◆ Fine Artist
- ◆ Explorapedia
- ◆ Dinosaurs
- ◆ Golf
- ◆ Scenes
- ◆ Windows Entertainment Pack
- ◆ Fury 3 (trial version)



### TWO GREAT MULTIMEDIA OFFERS AVAILABLE WITH ANY VALE PC:

Like the Vale PCs they are fitted to, our multimedia kits are quality conscious!! We definitely do NOT offer any old CD-ROM drive along with a so called "compatible" sound card, a pair of nasty cheap speakers and some end of line software.

- ◆ Choice of Panasonic double speed or Toshiba quad speed CD-ROM drive;
- ◆ Genuine Creative Labs SoundBlaster 16 sound card for great sound and total compatibility;
- ◆ ZyFi2 amplified stereo speaker system for crystal clear audio;
- ◆ Choice of Microsoft Media 96 software or Lotus Multimedia Office 96.



CALL US NOW ON (01386) 765500 • Evesham Micros





# Platinum PCI

## Vale Platinum... the Editors' Choice - twice!

Five 1995 magazine accolades already - stunning success for a stunning performer.

A true giant killing act, the Vale Platinum range has already received five magazine accolades this year including the highly prestigious PC Magazine "Editors' Choice" on two occasions!! This is no mean feat; both times computers from 30 different manufacturers, including the giants of the industry, were compared and examined in minute detail. The only computer to earn the title "Editors' Choice" was the Vale Platinum. At our attractive prices there is no need to compromise.

- ◆ Pentium® processor, upgradeable via Intel socket 5
- ◆ Integrated motherboard with 2x PCI, 1xPCI/16-bit & 3x16-bit expansion slots
- ◆ Fast PCI enhanced IDE mode 4 hard disk controller and drive (528Mb mode 3)
- ◆ 256kb external CPU write-back cache
- ◆ 8Mb RAM (expandable to 128Mb)
- ◆ Support for EDO RAM ◆ Flash BIOS
- ◆ EPP and ECP capable printer port
- ◆ Two 16550 compatible UART driven high speed serial ports
- ◆ Diamond Stealth 64DRAM 2Mb 64-bit video card
- ◆ 15" FST microprocessor controlled non-interlaced monitor
- ◆ Multimedia models include Toshiba quad speed CD-ROM
- ◆ Full Microsoft Windows 95 'plug and play' support
- ◆ Latest Windows keyboard
- ◆ Microsoft mouse
- ◆ 3.5" 1.44Mb Floppy Disk Drive
- ◆ TÜV approved Power Supply with low noise fan
- ◆ CPU cooling fan
- ◆ EPA Energy Star compliant
- ◆ Includes Iris Anti-virus software (3 month license), and your choice of either Windows95, or MS-DOS 6.22 and Windows for Workgroups 3.11. Full disks and manuals supplied
- ◆ "Introduction to Windows" manual supplied
- ◆ Choice of desktop or mini-tower case
- ◆ Full-tower case available at extra cost
- ◆ 1 year On-Site Maintenance (next working day response) for parts and labour
- ◆ Lifetime technical support hotline
- ◆ Lifetime labour warranty
- ◆ 30 day moneyback guarantee

### PLATINUM MODELS

PENTIUM 75	Standard	EDO '96	Lotus Office 96
528Mb	£1149 +VAT	£1359 +VAT	£1399 +VAT
1Gb	£1209 +VAT	£1419 +VAT	£1459 +VAT
PENTIUM 90	Standard	EDO '96	Lotus Office 96
1Gb	£1299 +VAT	£1509 +VAT	£1549 +VAT
2Gb	£1489 +VAT	£1699 +VAT	£1739 +VAT
PENTIUM 120	Standard	EDO '96	Lotus Office 96
1Gb	£1399 +VAT	£1609 +VAT	£1649 +VAT
2Gb	£1589 +VAT	£1799 +VAT	£1839 +VAT

**PENTIUM 133** Add £130 +VAT to the price of P120 models  
 Prices highlighted in yellow indicate "Ready to Ship" models which we try to keep in stock for immediate despatch. Multimedia models feature quad speed CD-ROM drives (see pages 3&4).

### PLATINUM OPTIONS

Upgrade to 16Mb RAM (Platinum)	£180.00 +VAT
Upgrade to 32Mb RAM (Platinum)	£600.00 +VAT
Upgrade to 32Mb EDO RAM (Triton)	£440.00 +VAT
Upgrade to 512kb Pipeline-Burst cache (Triton)	£90.00 +VAT
1Gb SCSI hard disk instead of 1Gb IDE	£229.00 +VAT
2Gb SCSI hard disk instead of 2Gb IDE	£430.00 +VAT
Upgrade to Diamond Stealth 64VideoRAM card (2Mb)	£65.00 +VAT
Stealth 64VideoRAM upgrade to 4Mb	£130.00 +VAT
Diamond Motion Video Player accessory for Stealth 64VideoRAM (gives MPEG decoding and includes upgrade to 4Mb)	£249.00 +VAT
Quad speed CD-ROM drive	£90.00 +VAT
Internal high density 5.25" 1.2Mb Drive	£49.00 +VAT
Full-Tower case	£50.00 +VAT
Installation/training service	£50.00 +VAT
Second year on-site maintenance	£69.00 +VAT
Second and third year on-site maintenance	£149.00 +VAT

## Why Diamond Video Cards ?

The highly acclaimed Stealth range has won many press accolades including the coveted PC Magazine "Editors Choice". Now a new range of stealth cards is available, giving a wide choice of graphics performance. They are all based around S3 chipsets for superb Windows acceleration as well as class leading DOS performance, and come with the renowned InControl Tools utility for setting up the Windows environment. Remember that Diamond are continually striving to optimise the performance and compatibility of their video cards; and you therefore have the assurance that driver support is ongoing.

**STEALTH SE** (Vale Popular and Prestige). The latest addition to the range continues the tradition of delivering the best price/performance available. It displays 24-bit True Colour at 640x480.

**STEALTH 64DRAM** (Vale Premier and Platinum). The Stealth 64DRAM is the world's fastest DRAM accelerator, its S3 Vision864 controller setting a new standard in affordable 64-bit graphics performance. Supplied with full AutoCAD drivers.

**STEALTH 64VideoRAM** (Vale Platinum Triton P120/133). The new Stealth 64VideoRAM is the ultimate graphics and video accelerator. It is supplied with full AutoCAD drivers and its 2Mb high speed VRAM can be expanded to 4Mb, giving 24-bit colour at 1280x1024! It has driver support for all popular video formats, including MPEG - you can scale video playback up to full screen, or view video clips in full-motion (up to 30 fps). The optional Motion Video Player accessory provides hardware MPEG decoding, allowing full-screen full-motion video, as well as accepting video input from camcorder, VCR, laserdisk etc.



Source: PC Labs Winmark 3.1. The figures represent megapixels per second over a variety of Windows related tasks. Last two figures produced on a Vale Pentium P90, all others on a Vale 486sx2-66. Figures vary with processor type.



## To get these...



"the Evesham Vale Platinum delivers excellent performance, a good feature set and an affordable price - a combination which is the hallmark of a PC Magazine Editors' Choice. In a market where compromise is all too common, the Evesham Vale Platinum is a winner." January 1995 Vale Platinum P90



"The combination of an excellent multimedia platform and high all-round DOS and Windows performance, at a good price, makes the Vale Pentium an excellent multimedia PC, and a worthy Editors' Choice" May 1995 Vale Platinum P90

January 1995  
 Vale Platinum  
 P90 Media  
 '95 PC



## ...you need these

A high performance system that is a pleasure to use demands the finest components. We carefully select from the established leaders in their field:



Motherboard



Micro-Star International  
 Motherboard



Processor



Hard disk



### Monitor

The Vale EcoScan 15 that is supplied with the Premier and Platinum ranges is a superb quality micro-processor controlled 15" monitor. It's dark non-glare FST screen with 'Edge-to-Edge' display gives as much as 30% greater useable picture area than most 14" models. Complete control over all display adjustments is obtained via an ingeniously simple digital push button system, with on-screen representation of the settings. As it complies with the stringent Swedish MPR II safety standards and can display up to 1024x768 at a flicker-free 72Hz refresh rate it is especially kind to your eyes.



### NO DEPOSIT PERSONAL FINANCE

Example: Buy the Platinum P90/1Gb Lotus Multimedia Office 96 PC (Cash price £1820.08 inc VAT).

**£65.04 inc VAT per month.**

No deposit. 36 monthly payments.  
 APR 18.5%. Total payable £2341.44 inc VAT.



- 15" Idek iiyama SVGA colour (up to 65kHz scan, 1280x1024 max) .....£50.00 +VAT
- 17" Vale EcoScan17 SVGA colour - illustrated (up to 65kHz scan, 1280x1024 max) .....£200.00 +VAT
- 17" Panasonic TX-D1732 SVGA colour .....£299.00 +VAT
- 17" Idek iiyama Vision Master SVGA colour PC Magazine "Editors Choice" April 1995 .....£320.00 +VAT
- 20" Tatung SVGA .....£699.00 +VAT
- 21" Idek iiyama SVGA colour (up to 92kHz scan, 1600x1200 max) .....£1050.00 +VAT

Evesham Micros • CALL US NOW ON (01386) 765500 • Evesham Micros

# Vale Platinum Triton PCI

## Vale Platinum Triton: The Hyper-formance Pentium® family

Intel's new Triton chipset unleashes the full potential of the Pentium processor family. Their engineers have been able to introduce several new technical advances that other manufacturers are currently unable to offer. In order to capitalise on these benefits and offer the ultimate quality we are using Intel's own Advanced Endeavour motherboard. The performance advantage achieved by fitting the latest high speed EDO-RAM and Pipeline-Burst Cache is very significant, as demonstrated in the accompanying graphs. As with every Vale computer we have paid great attention to detail in component selection, convincing us that Pound for Pound we doubt it is possible to build a better PC.



"The Platinum took the top spot in our performance tests. The Diamond Stealth video system had a chance to show its true colours...Not only is the Platinum a top class machine, it's also good value for money." *February 1995 Vale Platinum P90*

"Attention to detail made this machine a good all-rounder. Expensive but well specified, and a lightning performer too." *November 1995 Vale Platinum Triton P90*



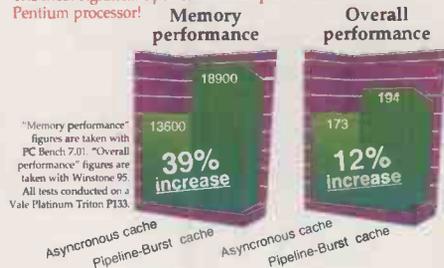
### The Platinum Triton offers the following enhancements over the award winning standard model:

- ◆ Genuine Intel Advanced Endeavour motherboard manufactured in Europe
- ◆ Intel socket 7 for processor upgrades
- ◆ 3x PCI, 1xPCI/16-bit & 2x16-bit expansion slots
- ◆ 256k Pipeline-Burst cache
- ◆ 16Mb Extended-Data-Out (EDO) RAM
- ◆ Support for Native Signal Processing
- ◆ Enhanced IDE mode 4 hard disk controller and drive
- ◆ Integrated sound using the Creative Labs Vibra 16 chipset
- ◆ P120 & P133 models are fitted with Diamond Stealth 64VideoVRAM 2Mb 64-bit video card



### THE CASE FOR PIPELINE-BURST CACHE:

The most significant performance improvement since the Pentium processor!



Designed for



Microsoft Windows 95  
Each system includes your choice of Windows 3.11 or Windows 95 at no extra cost.



"Not only is it pleasantly curved and delightful to type on, but it's also the only one sporting the three extra keys that first appeared on the Microsoft keyboard..." *PC Pro, November 1995*

...and our legendary reputation for **SERVICE & SUPPORT**

### PLATINUM TRITON MODELS

PENTIUM 90	Standard	EDO 96	Lotus Office 96
1Gb	£1649+VAT	£1799+VAT	£1839+VAT
2Gb	£1839+VAT	£1989+VAT	£2029+VAT
PENTIUM 120	Standard	EDO 96	Lotus Office 96
1Gb	£1799+VAT	£1949+VAT	£1989+VAT
2Gb	£1989+VAT	£2139+VAT	£2179+VAT

PENTIUM 133 Add £130+VAT to the price of P120 models  
Prices highlighted in yellow indicate "Ready to Ship" models which we try to keep in stock for immediate despatch. Multimedia models feature quad speed CD-ROM drives (see pages 3&4).



A Vale Platinum Triton PC with optional CD-ROM drive

# Vale PC Accessories

## INTERNET ACCESS

This package is the affordable way to enhance your PC with communications ability. Send and receive faxes, and access online information services and the Internet. Apart from your PC and a phone socket, everything you need is included:

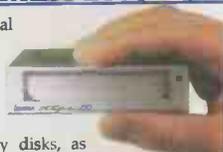
- Pace FAX/modem: either MobiFax 144 (V32bis: 14400bps) or Linnet 34fx (V34bis: 28800bps modem, 14400bps FAX)
- Software to access Internet facilities
- 21 days free subscription to an internet service provider
- "The Net" guide book
- FAX software

V32bis package .....£90+VAT  
V34bis package .....£195+VAT



## TAPE STREAMER BACKUP

Regular backups are essential to ensure the safety of your data; why not take the advantage of having a tape streamer fitted into your Vale? It is more economical than using multiple floppy disks, as well as being faster and far more convenient. Quoted capacities are with compression software (supplied). All units are supplied with full backup software.



IOMEGA 800Mb £129+VAT  
IOMEGA 3.2Gb £225+VAT  
Tapes for above .....£29 + VAT

## MICROSOFT OFFICE 95

- ◆ MS Word
- ◆ MS Excel
- ◆ MS Schedule+
- ◆ MS Powerpoint
- ◆ MS Access (Office professional only)



Special offer with any Vale PC:  
OFFICE 95 STANDARD £179+VAT  
OFFICE 95 PROFESSIONAL £249+VAT

Evesham Micros • (01386) 765500 • Evesham Micros



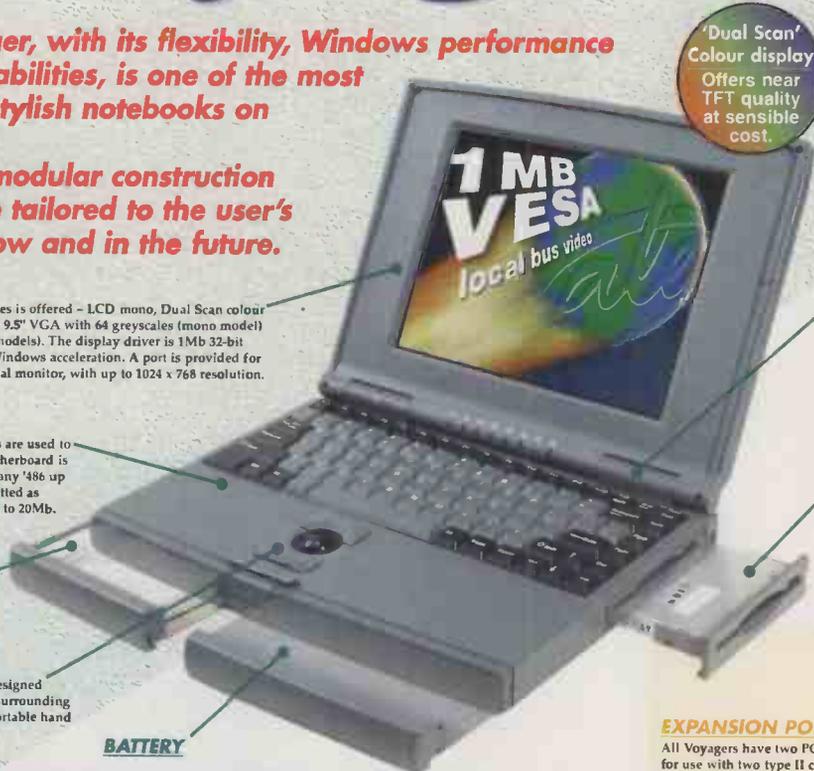
# Voyager



"It's toughness, excellent performance and good display make it a machine that we must honour with the PC today best buy award."  
 Vale Voyager 486dx2+66  
 Dual Scan Colour

**The Vale Voyager, with its flexibility, Windows performance and sound capabilities, is one of the most powerful and stylish notebooks on the market.**

**Its completely modular construction enables it to be tailored to the user's exact needs, now and in the future.**



**'Dual Scan' Colour display**  
 Offers near TFT quality at sensible cost.



A Vale Voyager with the supplied carrying pouch

### DISPLAY

A choice of display types is offered - LCD mono, Dual Scan colour and TFT colour. All are 9.5" VGA with 64 greyscales (mono model) or 256 colours (colour models). The display driver is 1Mb 32-bit VESA local bus with Windows acceleration. A port is provided for connection to an external monitor, with up to 1024 x 768 resolution.

### CPU & RAM

Low power consumption CPUs are used to maximize battery life. The motherboard is CPU upgradeable, supporting any 486 up to the DX4-100. 4Mb RAM is fitted as standard, and can be upgraded to 20Mb.

### HARD DISK

The hard disk is removable, offering the ultimate in upgradeability and data security.

### TRACKBALL

A 19mm ergonomically designed trackball is built-in. The surrounding surface makes for a comfortable hand rest whilst typing.

### BATTERY

### BUILT-IN AUDIO

The Voyager has a built-in microphone and speaker, with digitized audio recording/playback capability. A Yamaha music chipset (SoundBlaster and Windows Sound System compatible) allows for sound generation. There are sockets for external speakers and microphone. With this audio performance, the addition of a CD-ROM drive makes the Voyager truly 'Multimedia ready'.

### 3.5" FLOPPY DRIVE

Designed for



Each system includes your choice of Windows 3.11 or Windows 95 at no extra cost.

## VOYAGER

### EXPANSION PORTS

All Voyagers have two PCMCIA ports for use with two type II cards or one type III card. Rear panel connectors include serial port; EPP parallel port; SVGA monitor; and PS/2 mouse, keyboard or keypad. A further port enables fast connection to a docking station.

### QUALITY & STYLE

Voyager notebooks measure 286 x 226mm. The Voyager is just 34mm thick and weighs 2.4kg (mono model), while the Voyager II colour models are 49mm and 2.9kg. The quality of fit and finish is amongst the best we have ever seen.

### WARRANTY

Voyagers feature 12 months 'return to base' warranty covering parts, with a lifetime warranty on labour.

### RAM UPGRADES

Make the most of the power of your notebook by specifying extra RAM - up to 20Mb for the Voyager or up to 40Mb for the Voyager II.



### PCMCIA MODEMS

A FAX/modem is the gateway to a world of communications, whether sending and receiving faxes or connecting to the internet information superhighway.



### Monochrome

	<b>250MB</b>	<b>528MB</b>
486dx2+66	£899 <sup>+VAT</sup>	£999 <sup>+VAT</sup>
486dx4+75	£949 <sup>+VAT</sup>	£1049 <sup>+VAT</sup>
486dx4+100	£979 <sup>+VAT</sup>	£1079 <sup>+VAT</sup>

### Dual Scan Colour

	<b>250MB</b>	<b>528MB</b>
486dx2+66	£1269 <sup>+VAT</sup>	£1369 <sup>+VAT</sup>
486dx4+75	£1319 <sup>+VAT</sup>	£1419 <sup>+VAT</sup>
486dx4+100	£1349 <sup>+VAT</sup>	£1449 <sup>+VAT</sup>

### TFT Colour

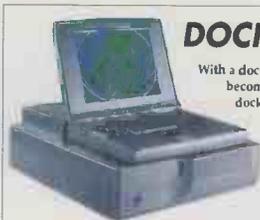
	<b>250MB</b>	<b>528MB</b>
486dx2+66	£1689 <sup>+VAT</sup>	£1789 <sup>+VAT</sup>
486dx4+75	£1739 <sup>+VAT</sup>	£1839 <sup>+VAT</sup>
486dx4+100	£1769 <sup>+VAT</sup>	£1869 <sup>+VAT</sup>

### VOYAGER OPTIONS

Additional primary NiMH battery.....	£89 <sup>+VAT</sup>
Upgrade from 4Mb to 8Mb RAM .....	£169 <sup>+VAT</sup>
Upgrade from 4Mb to 12Mb RAM .....	£299 <sup>+VAT</sup>
Upgrade from 4Mb to 20Mb RAM .....	£499 <sup>+VAT</sup>
Docking station .....	£349 <sup>+VAT</sup>
Cigar lighter adaptor .....	£49 <sup>+VAT</sup>
Additional PSU .....	£49 <sup>+VAT</sup>

### DOCKING STATION

With a docking station on your desk the Voyager becomes a true "desktop replacement". The docking station has two drive bays (1x3.5" & 1x5.25"), three ISA expansion slots (2x full length & 1x 1/2 length), as well as permanent ports for monitor, keyboard, PS/2 mouse, serial, parallel, speaker, microphone and audio line-in.

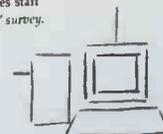


## Corporate and Network Sales



Established for over 12 years, Evesham Micros has gained consistent industry recognition for its quality of product and service and has a proven track record of supplying some of the country's leading organisations - a wide spectrum of businesses, government bodies and educational establishments. Each of our branches have dedicated account managers ready to support all your I.T. needs; indeed they have been awarded best "Product knowledge of Sales Staff" by nearly 2000 users in the Computer Weekly/KEW Associates 'Quality of IT Suppliers 1995' survey. Whether your needs are large or small, they are ready to discuss your requirements and advise on the ideal solution - we can offer PCs for Windows applications or CAD/CAM, right through to complete network solutions. We are able to react quickly to the market, therefore we can offer your company the latest technology at competitive prices.

**COMPUTERWEEKLY**  
 Best "Product knowledge of sales staff"  
 in 'Quality of IT Suppliers 1995' survey.



### Network Solutions

Whatever your networking requirement, we can provide the complete solution. From a simple two user peer to peer system to a Wide Area Network, we can install and support the entire installation - from initial concept to user training. All our installations are supervised by a Novell Certified Network Engineer, thus assuring our clients of the very best in networking expertise. Why not contact our Corporate Sales staff at your nearest Evesham Micros branch to discuss your requirements.

**Microsoft**  
 SOLUTION PROVIDER  
 Authorized by Microsoft



### 5 Station Solution



**£4999<sup>00+VAT</sup>**  
 Not including cabling and installation

- 1 Fileserver:**
  - ♦ Vale Pentium P90 Fileserver (as right)
- 4 Workstations:**
  - ♦ 4x Vale Popular 486DX2+66
  - ♦ 528Mb hard disk
  - ♦ Ethernet card suitable for 10Base2 or 10BaseT

We fully appreciate that no two network requirements are exactly the same. While the above is an example of one of our solutions, we will be delighted to quote for your individual needs.



# Voyager II PCI

With Pentium® processor performance, PCI bus colour graphics, built-in 16-bit sound, and the option of an internal CD-ROM drive, the Voyager II notebook takes multimedia applications in it's stride.



Removable battery.



Upgradeable hard disk.

### DISPLAY

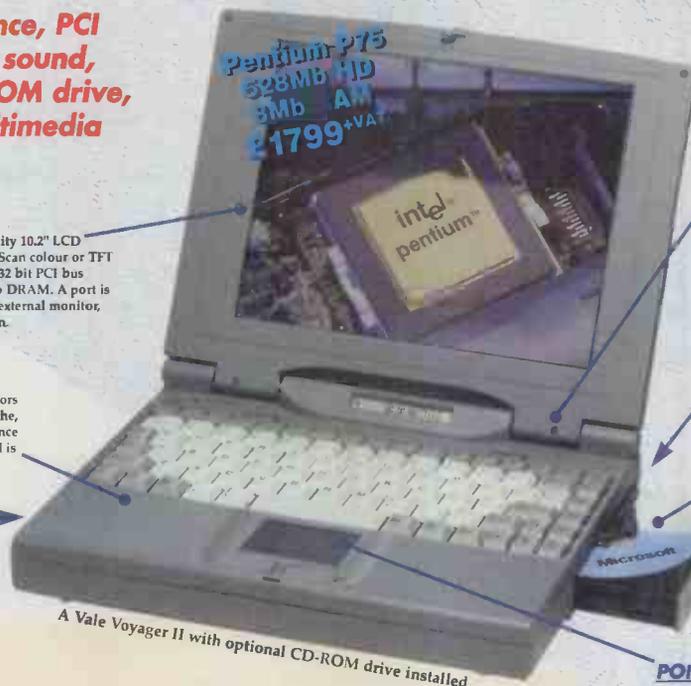
The Voyager II has a high quality 10.2" LCD display, with a choice of Dual Scan colour or TFT colour. The display driver is a 32 bit PCI bus Windows accelerator with 1Mb DRAM. A port is provided for connection to an external monitor, with up to 1024 x 768 resolution.

### CPU, CACHE & RAM

Designed to use 33V Pentium processors and fitted with 256k asynchronous cache, the Voyager II offers superb performance with maximum battery life. 8Mb RAM is fitted, and can be upgraded to a maximum of 40Mb.

### HARD DISK

The enhanced IDE hard disk is driven by a PCI local bus controller, and can be removed for upgrading.



### BUILT-IN AUDIO

The Voyager II really is multimedia ready. It has a 16 bit stereo sound card built in, together with stereo speakers. This can easily be expanded via the jacks for external speakers and microphones.

### 3.5" FLOPPY DRIVE

The built in floppy drive slides out to allow fitment of the optional CD-ROM drive.

### CD-ROM DRIVE

The optional double speed CD-ROM drive replaces the floppy drive to make the Voyager II a self contained multimedia workstation. An external floppy drive is available for simultaneous use with the CD-ROM drive.

### POINTPAD™

The built in Pointpad™, with palm rest, controls the cursor effortlessly and accurately.

## FEATURES

### KEYBOARD

Voyagers use full function 86-key keyboards. Unlike many notebooks, they have a good solid feel.

### BATTERY

Voyagers use NiMH batteries for fast recharging and long life: up to 3-4 hours use with the Voyager 486DX2-66 mono model, and 2 hours with the Voyager II colour models. They can be easily

removed and replaced by a second unit. Extensive power management features include doze, sleep and 'suspend to disk' modes. The latter quickly saves your working environment to disk when the lid is closed, allowing you to re-load it later.

### DOS & WINDOWS

Voyagers are supplied with your choice of either Windows95, or MS-DOS 6.22 and Windows 3.11, installed and ready to run.

## ACCESSORIES

- PCMCIA V34 bis FAX/Modem.....£199+VAT
- PCMCIA Ethernet card.....£139+VAT
- External keyboard.....£29+VAT
- Soundplus speakers/microphone/earphones system...£19+VAT
- ZyFi2 amplified speakers.....£29+VAT
- Total care warranty.....£see panel

## TOTAL CARE WARRANTY

Our optional "Total Care" package replaces the existing warranty with 2 year care. If your Voyager should need attention during this period we will collect it and return it to you when repaired. Typical turn-around is 3 working days. This cover is just 12.5% of the cost of the notebook (without accessories) - for example, £112.38+VAT for the 486DX2-66/250Mb mono model.

## CARRYING CASES

### VALE CARRY CASE £30.00+VAT

A versatile, padded case with carrying handle and detachable shoulder strap. Ideal for protecting your Voyager "out in the field".



### EXECUTIVE CASE £59.00+VAT

- Computer compartment (16.5" x 10.5" x 2.5")
- Cellular 'phone and power supply pockets
- Diskette and file pockets, pen and business card holders



Combining modern design with classic styling

### TECHNOLOGY CASE £39.00+VAT

- Computer compartment (15.5" x 10.5" x 3.5")
- Printer/FAX compartment (12.75" x 9" x 2")
- Cellular 'phone and power supply pockets
- Diskette and file pockets, pen and business card holders



## Dual Scan Colour

Pentium P75	528MB £1799+VAT	1GB £2119+VAT
Pentium P90	£1889+VAT	£2209+VAT

## TFT Colour

Pentium P75	528MB £2219+VAT	1GB £2539+VAT
Pentium P90	£2309+VAT	£2629+VAT

## VOYAGER II OPTIONS

- Internal double speed CD-ROM drive.....£179+VAT
- External 3.5" floppy drive (parallel port)....£69+VAT
- Additional primary NiMH battery.....£59+VAT
- Upgrade from 8Mb to 16Mb RAM.....£299+VAT
- Upgrade from 8Mb to 24Mb RAM.....£499+VAT
- Cigar lighter adaptor.....£49+VAT
- Additional PSU.....£49+VAT

## The Vale Fileserver

This is just an example of the type of fileserver we can supply. We will be happy to quote for your individual requirements.

- ◆ 90MHz Pentium® processor
- ◆ 1Gb SCSI hard disk with PCI controller
- ◆ 8Mb RAM
- ◆ 256kb cache
- ◆ 1Mb PCI video
- ◆ 14" SVGA monitor
- ◆ 32-bit PCI ethernet card

UPGRADES ARE AVAILABLE FOR, PROCESSOR, HARD DISK, RAM, DAT INSTALLATION, CD-ROM ETC. PLEASE CALL FOR DETAILS.

With the full-tower case (see first page):

**£1649+VAT**

With the purpose designed case (illustrated) featuring redundant PSU system:

**£1949+VAT**

A Vale Fileserver with the purpose designed case.



## Vale Advanced NT Fileserver

Microsoft NT Advanced Server provides a highly secure environment for networks with workstations running Windows 3.x or Windows 95. The Vale Advanced NT Fileserver is designed to provide a complete solution for those moving to this operating system.

- ◆ Intel Advanced Endeavour motherboard with Triton chipset
- ◆ 133MHz Pentium® processor
- ◆ 2Gb SCSI hard disk with Adaptec 2940 PCI controller
- ◆ 32Mb EDO RAM
- ◆ 256kb Pipeline-Burst cache
- ◆ 1Mb PCI video
- ◆ 14" SVGA monitor
- ◆ 32-bit PCI ethernet card
- ◆ Quad speed CD-ROM drive
- ◆ Microsoft NT Advanced Server software

With the full-tower case:

**£3999+VAT**

With the dedicated fileserver case:

**£4299+VAT**

## BUSINESS FINANCE

We offer very flexible leasing agreements to limited companies, government and educational establishments. For example: Lease the Vale Fileserver (standard case)

for **£58.37+VAT** per month.

3 year term, payable quarterly. Full written details are available on request.



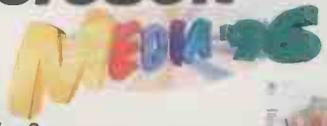
Evesham Micros ● (01386) 765500 ● Evesham Micros ● (01386) 765500 ● Evesham Micros ● (01386) 765500 ● Evesham Micros

Evesham Micros • CALL US NOW ON (01386) 765500 • Evesham Micros

# TWO GREAT MULTIMEDIA BUNDLES

OFFERED WITH A VARIETY OF PACKS

## Microsoft



- ◆ Works 3 (for Windows 3.1) or Works 4 (for Windows 95) - Your choice please specify which
- ◆ Money 3
- ◆ Encarta 95
- ◆ Fine Artist
- ◆ Explorapedia
- ◆ Dinosaurs
- ◆ Golf
- ◆ Scenes
- ◆ Fury 3 (trial version)
- ◆ Windows Entertainment Pack



### Lotus Suite:

- Lotus 1-2-3
- Lotus Word Pro
- Lotus Approach
- Lotus Freelance Graphics
- Lotus Organizer

### Productivity Software:

- Quicken 3, CorelDraw! 4, Sage Moneywise

### Top Games Titles:

- Superoice, Dragon Lore, MegaRace, Theme Park, FIFA International Soccer

### Grolier Encyclopaedia:

- Software Toolworks Grolier Encyclopaedia for 1995 - version 7

## Lotus Office 96



Upgrade speakers in any pack to ZyFi 2 PROs for a surcharge of £20+VAT.

**Plus:** Professor Windows, Professor Training Suite, Professor Multimedia; Typing Tutor; Pilot Multimedia including 'Interlude' and 'Get Organized'

See the CD-ROM drives (below and right) for details of the complete packs. When ordering please quote pack number. We recommend a minimum 486sx333 system for these packs. Please note that bundled versions of software and sound cards are not full retail packs, and the software features on-line documentation.

## PANASONIC DOUBLE SPEED CD-ROM DRIVE



CR-562/563 Double Speed, multi-session drive

limited offer at only **£39.00+VAT**

Includes cables and driver software

- Double speed 300kb/sec data transfer rate
- Multi-session mechanism - compatible with Kodak Photo CD Standard
- Motorised loading tray - no need for a caddy
- High speed 320ms access
- White book (CDi) compatible for video CDs
- MPC compatible ○ Mounts in 5.25" drive bay
- Output from audio CDs via headphone socket
- Requires SoundBlaster or compatible card with Panasonic CD interface

- 1E** £49.00+VAT CR-562/3 with AT-bus driver card
- 1F** £75.00+VAT CR-562/3 bundled with Soundplus 16 card
- 1B** £90.00+VAT CR-562/3 with genuine SoundBlaster 16 card
- 1C** £110.00+VAT CR-562/3 with genuine S/Blaster 16 ASP card

- ### Microsoft Media 96
- 7C** £136.00+VAT CR-562/3 with Media 96 pack, ZyFi2 speakers and Soundplus 16 card
  - 7A** £150.00+VAT CR-562/3 with Media 96 pack, ZyFi2 speakers & genuine SoundBlaster 16
  - 7B** £170.00+VAT CR-562/3 with Media 96 pack, ZyFi2 speakers & genuine SoundBlaster 16 ASP

- ### Lotus Office 96
- 9C** £176.00+VAT CR-562/3 + Lotus Multimedia Office 96, ZyFi2 speakers and Soundplus 16
  - 9A** £190.00+VAT CR-562/3 + Lotus Multimedia, ZyFi2 speakers & genuine SoundBlaster 16
  - 9B** £210.00+VAT CR-562/3 + Lotus Multimedia, ZyFi2 speakers & genuine SoundBlaster 16 ASP

## TOSHIBA QUAD SPEED IDE CD-ROM DRIVE

TOSHIBA XM-5302B ENHANCED IDE DRIVE



### WHY SETTLE FOR LESS!!

With 4x speed and the latest enhanced IDE interface this drive has the performance to cope with the most demanding multimedia applications.

- Enhanced IDE ATAPI interface
- Quad speed 600kb/sec sustained data transfer rate
- Super fast 190ms access
- Output from audio CDs via headphone socket
- Multi-session drive - compatible with Kodak Photo CD
- MPC and White Book (CDi) compatible



"The Vale Pentium's Toshiba XM-5302B ATAPI CD-ROM drive is among the fastest and most modern you can buy". PC Magazine May 1995

### Microsoft Media 96

- 5A** £210.00+VAT XM-5302B with Media 96 pack, ZyFi 2 speakers and SoundBlaster 16 card
- 5B** £275.00+VAT XM-5302B with Media 96 pack, ZyFi 2s and SoundBlaster AWE32 value
- 5C** £340.00+VAT XM-5302B with Media 96 pack, ZyFi 2s and SoundBlaster AWE32

### Lotus Office 96

- 6A** £250.00+VAT XM-5302B with Lotus Multimedia Office 96, ZyFi 2s and S/Blaster 16
- 6B** £315.00+VAT XM-5302B with Lotus Multimedia Office 96, ZyFi 2s and AWE32 value
- 6C** £380.00+VAT XM-5302B with Lotus Multimedia Office 96, ZyFi 2s and AWE32

**SPECIAL OFFER! - LIMITED STOCKS** "Software Toolworks Grolier Encyclopaedia for 1994 - Version 6" with any of our multimedia packs for only... **£10+VAT**

## TEAC SIX SPEED IDE CD-ROM DRIVE

**6X speed - for only £179+VAT!**

You can now afford the performance you have been dreaming about.



- 8A** £179.00+VAT  
CD-56E with AT-Bus driver card
- 8B** £219.00+VAT  
CD-56E with genuine SoundBlaster 16 card
- 8C** £284.00+VAT  
CD-56E with genuine SoundBlaster AWE32 value
- 8D** £349.00+VAT  
CD-56E with genuine SoundBlaster AWE32

- Enhanced IDE ATAPI interface
- Six speed 900kb/sec sustained data transfer rate
- Super fast 139ms access
- Plug and Play compliant
- Output from audio CDs via headphone socket
- Multi-session drive - compatible with Kodak Photo CD
- MPC and White Book (CDi) compatible



### FX2000 Joystick £19.00+VAT



This recent addition to the highly acclaimed range of Suncom joysticks brings further advances in comfort and control. The pistol grip can be easily rotated to give perfect orientation for left or right handed use, while the unique "V" designed top fire button allows lightning fast response.

**SPECIAL OFFER**  
Includes F15 III on CD

Switchable autofire, throttle control and suction feet complete the package. Requires game port.



### Multi-System £69.00+VAT



**EVERYTHING YOU COULD WANT FROM A JOYSTICK.**

The Multi-System is three control systems in one. The sturdy base sits securely on your desktop with suction feet, and provides a neatly weighted steering wheel for driving games. The wheel un-clips to reveal bars which twist into position for either an aircraft yoke or bike handle bars. Whichever you use there are control buttons at your fingertips, and an aircraft throttle paddle. The foot mounted pedal box gives you throttle and brake controls. Multi-System has a port for a second joystick. Requires game port.

It's a car!



It's a bike!

It's a plane!

Microsoft



- 11A** £280.00+VAT CD-56E with Media 96 pack, ZyFi 2 speakers and genuine SB 16 card
- 11B** £345.00+VAT CD-56E with Media 96 pack, ZyFi 2s and SoundBlaster AWE32 value
- 11C** £410.00+VAT CD-56E with Media 96 pack, ZyFi 2s and SoundBlaster AWE32

## Lotus Office 96

- 10A** £320.00+VAT CD-56E + Lotus Multimedia Office 96, ZyFi 2s and genuine S/Blaster 16
- 10B** £385.00+VAT CD-56E + Lotus Multimedia Office 96, ZyFi 2s and S/Blaster AWE32 value
- 10C** £450.00+VAT CD-56E + Lotus Multimedia Office 96, ZyFi 2s and S/Blaster AWE32

## CREATIVE CREATIVE LABS, INC.

- SoundBlaster 16 Value pack ..... £67.00+VAT  
with IDE CD-ROM interface
- SoundBlaster 16 MCD card ..... £99.00+VAT  
with Panasonic/Sony/Mitsumi CD-ROM interfaces
- SoundBlaster AWE32 Value card ..... £112.00+VAT  
Integrated design combining SB16 with WaveBlaster, bringing the power of Advanced WavEffects Synthesis. Has IDE CD-ROM interface and 512kb RAM (not upgradeable) for sampling.

## PC SOUND PACKS

### SOUNDPLUS 16 CARD Incredible value...£39.99+VAT

A 16-bit stereo sound card, compatible with the SoundBlaster and SoundBlaster Pro, as well as the Windows Sound System, MPU-401 and AdLib standards. It provides CD-ROM Interfaces for Panasonic, Sony, Mitsumi and IDE CD-ROM drives, has a MIDI Interface/joystick port, and also interfaces for microphone, speakers, audio in/out, and wave table synthesizer. The high specification includes 48kHz stereo sampling rate, a 20 voice FM music synthesizer, and a 4 Watt per channel stereo power amplifier.

**3H** £74.99+VAT Soundplus 16 with QS-123 joystick, ZyFi 2 speakers and Monkey Island 2

**3F** £109.00+VAT S/Blaster 16 ASP with QS-123 joystick, ZyFi 2 speakers and Monkey Island 2

Upgrade to ZyFi 2 PROs for a supplement of £20+VAT.

## ZYFI 2 SPEAKERS

THE NEW ZYFI 2 ACTIVE POWER AMPLIFIED STEREO SPEAKERS OFFER THE VERY BEST IN SOUND REPRODUCTION - IDEAL FOR ALL SOUND CARDS AND MULTIMEDIA SYSTEMS!

Feature built-in power amplifier with separate L/R volume controls and tone control. Magnetically shielded.



March 1995

"Sound quality is splendid and a great improvement over the originals - stereo comes across well and the sound is crisp. You can get a fair amount of bass too... ZyFi2s are definitely a sound investment."



Only £29.00+VAT

6 Watts RMS per channel



March 1995 "If you've invested in a decent sound card, then you've got to get some serious amplification to do it justice, and these are the boys to add a bit of oomph to your PC, especially if you plan to play some audio CDs or are serious about games."

PC Zone, April 1995: Rating 9/10. "Excellent value for money."



Only £49.00+VAT

18 Watts RMS per channel

SoundBlaster AWE32 card ..... £169.00+VAT  
As above but with Advanced Signal Processing chip, and 512kb RAM (upgradeable to 28Mb with SIMMs).

MIDI Kit ..... £59.00+VAT

VideoBlaster SE ..... £189.00+VAT  
The ultimate in video versatility for multimedia computing.

TV Coder ..... £129.00+VAT  
VGA to Video encoder. Transfer your PC creations and manipulations back to video.



## ZYFI COMPACT

Experience great audio reproduction from your PC Sound Card with ZY-Fi Compact Speakers - the discrete and economical way to give your PC great sound.

- Built-in Stereo Power Amplifier
- 16 Watts PMPO (4 Watts RMS)
- Active or Passive use
- 3" Full Range Cone
- Magnetically Shielded
- Volume Control
- Bass Booster
- Treble Booster

2 Watts RMS per channel



Only £12.00+VAT

## VIRTUAL PILOT PRO £72.00+VAT



The VIRTUAL PILOT PRO has all the best features of the award winning VIRTUAL PILOT. It adds four extra fire buttons and two four-way switches for unrivalled control in all combat and simulation games. Requires game port.

## PRO PEDALS £75.00+VAT



Featuring dual operating modes for forward and back rudder motion, as well as pivot movement for driving games, the CH Products PRO PEDALS provide gamers with the most realistic flying and driving experience. They also include aircraft style toe-brakes, and independent accelerator and brake controls. They are designed to work with all CH Products joysticks and yokes, and are built with rugged components to withstand the toughest competitor. Requires game port.

## GAME PORT 2000 £12.50+VAT

Game port card for any of these joysticks and yokes. Works with any clock speed. Particularly recommended for 486sx2-66 and Pentium systems.

## ZYFI 2 PRO SPEAKERS

The latest addition to the serious multimedia system must be our ZYFI 2 PRO Active speaker system.

With a PMPO of 60 Watts per channel and an amplifier with a true 18 Watts RMS per channel rating, the PROs deliver a rich dynamic sound. They feature separate volume, bass and treble controls, and are magnetically shielded. Speaker size 14x23x15cm.



March 1995 "If you've invested in a decent sound card, then you've got to get some serious amplification to do it justice, and these are the boys to add a bit of oomph to your PC, especially if you plan to play some audio CDs or are serious about games."

PC Zone, April 1995: Rating 9/10. "Excellent value for money."



Only £49.00+VAT

18 Watts RMS per channel

Evesham Micros (01386) 765500 Evesham Micros (01386) 765500 Evesham Micros (01386) 765500

Evesham Micros • CALL US NOW ON (01386) 765500 • Evesham Micros

## UPGRADES & ACCESSORIES

### PROCESSORS



486dx2-66 .....	£39.00 <sup>+VAT</sup>
486dx4-100 .....	£89.00 <sup>+VAT</sup>
Motherboard support for 3.3V required.	
Pentium P75 .....	£130.00 <sup>+VAT</sup>
Pentium P90 .....	£210.00 <sup>+VAT</sup>
Pentium P120 .....	£310.00 <sup>+VAT</sup>
Pentium P133 .....	£440.00 <sup>+VAT</sup>
Heatsink and fan recommended for all above processors.	
CPU Heatsink .....	£3.00 <sup>+VAT</sup>
486 fan & heatsink .....	£10.00 <sup>+VAT</sup>
Pentium fan & h/sink .....	£9.00 <sup>+VAT</sup>

### MEMORY SIMMS

1Mb 30-pin SIMM (3 chip) 70ns .....	£34.00 <sup>+VAT</sup>
4Mb 30-pin SIMM (3 chip) 70ns .....	£135.00 <sup>+VAT</sup>
4Mb 72-pin SIMM 70ns 32-bit .....	£105.00 <sup>+VAT</sup>
8Mb 72-pin SIMM 70ns 32-bit .....	£205.00 <sup>+VAT</sup>
16Mb 72-pin SIMM 70ns 32-bit .....	£360.00 <sup>+VAT</sup>
EDO RAM: 4Mb 72-pin SIMM 70ns 32-bit .....	£125.00 <sup>+VAT</sup>
EDO RAM: 8Mb 72-pin SIMM 70ns 32-bit .....	£215.00 <sup>+VAT</sup>
EDO RAM: 16Mb 72-pin SIMM 70ns 32-bit .....	£440.00 <sup>+VAT</sup>



### PCI MOTHERBOARDS



**SPECIAL PRICES**

**Our bulk purchase of motherboards allows us to offer you these special prices...**

#### 486 UP TO DX4-100 (TYPE 7) ..... £85.00<sup>+VAT</sup>

- Will accept most 486 CPUs up to DX4-100 • 3xPCI local bus slots
- 4xISA slots • ZIF socket • P24T upgradeable • 256kb Cache
- On-board PCI IDE hard disk controller • 2x 16550 compatible UART driven high speed serial ports • EPP and ECP compatible parallel port
- Accepts 72-pin SIMMs.

Type 7 board with 486dx2+66 processor.....£119.00<sup>+VAT</sup>

Type 7 board with 486dx4+100 processor...£169.00<sup>+VAT</sup>

**NB - all board + CPU offers include heatsink and fan.**

#### Pentium (TYPE 6) ..... £139.00<sup>+VAT</sup>

- 2xPCI local bus slots • 1xPCI/ISA bus slot • 3xISA slots • ZIF socket • 256kb Cache • On-board PCI IDE hard disk controller
- 2x 16550 compatible UART driven high speed serial ports • EPP and ECP compatible parallel port • Accepts 72-pin SIMMs.

Type 6 board with P75 processor .....£265.00<sup>+VAT</sup>

Type 6 board with P90 processor .....£345.00<sup>+VAT</sup>

Type 6 board with P120 processor .....£445.00<sup>+VAT</sup>

**NB - all board + CPU offers include heatsink and fan.**

#### Triton FOR PENTIUM CPUs (TYPE 8) £219.00<sup>+VAT</sup>

- Intel Advanced Endeavour board with Triton chipset • 3xPCI local bus slots • 1xPCI/ISA bus slot • 2xISA slots • ZIF socket
- 256kb Asynchronous Cache • On-board PCI IDE hard disk controller
- 2x 16550 compatible UART driven high speed serial ports • EPP and ECP compatible parallel port • Support for EDO RAM, Pipeline-Burst cache and Native Signal Processing • On-board sound with Creative Labs Vibra 16 chipset • Accepts 72-pin SIMMs.

Upgrade to 256k Pipeline-Burst cache .....£50.00<sup>+VAT</sup>

Upgrade to 512k Pipeline-Burst cache .....£140.00<sup>+VAT</sup>

Type 8 board with P90 processor .....£425.00<sup>+VAT</sup>

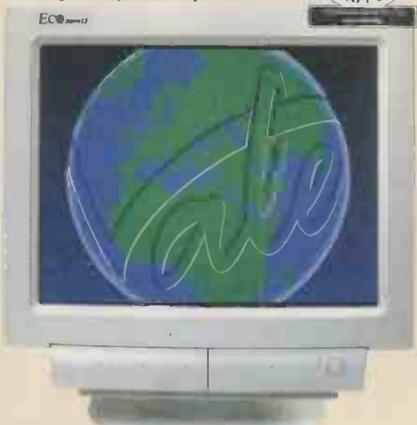
Type 8 board with P120 processor .....£525.00<sup>+VAT</sup>

Type 8 board with P133 processor .....£655.00<sup>+VAT</sup>

**NB - all board + CPU offers include heatsink and fan.**

### MONITORS

Due to our bulk purchasing power for our own Vale PCs, we are able to offer the following high specification monitors at very competitive prices.



#### Vale EcoScan15

- On screen micro-processor controlled digital adjustments
- Fully non-interlaced
- 72Hz Flicker-Free at 1024x768
- Low radiation (MPR II)
- 1280 x 1024 max. res.
- Energy Star power saving

**ONLY £249.00<sup>+VAT</sup>**

#### Vale EcoScan17

- Complete control of all screen settings via comprehensive micro-processor controlled digital adjustments with on-screen display
- 0.28mm dot pitch
- Fully non-interlaced
- Up to 65kHz horizontal scan
- 1280 x 1024 max. res.
- MPR II and EPA compliant

**ONLY £449.00<sup>+VAT</sup>**

#### Viewsonic 14ES 14" Colour .....£180.00<sup>+VAT</sup>

0.28mm dot pitch • 1024x768 max non-interlaced • 800x600 @ 72Hz refresh • EPA Energy Star compliant

#### CTX 17" Colour .....£459.00<sup>+VAT</sup>

0.28mm dot pitch • 1280x1024 max • Up to 65kHz horiz. scan • 1024x768 @ 75Hz refresh • MPRII and EPA compliant

#### Idek iiyama 15" Colour .....£279.00<sup>+VAT</sup>

0.26mm dot pitch • 1280x1024 max • Up to 65kHz horiz. scan • 1024x768 @ 75Hz refresh • MPRII and EPA compliant

#### Idek iiyama 17" Colour .....£549.00<sup>+VAT</sup>

0.28mm dot pitch • 1600x1200 max • Up to 86kHz horiz. scan • 1280x1024 @ 74Hz refresh • MPRII and EPA compliant - PC Magazine "Editor's Choice" April 1995

#### Idek iiyama 21" Colour .....£1279.00<sup>+VAT</sup>

1600x1200 max • Up to 92kHz horiz. scan • 1280x1024 @ 72Hz refresh • MPRII and EPA compliant

#### Tatung 20" Colour .....£899.00<sup>+VAT</sup>

1280x1024 max. res (non-Interlaced) • 0.31mm dot pitch • Auto 29-65kHz horiz. scan

### UPSONIC UPSs



**Protect your installation from mains power faults with an Upsonic uninterruptible power supply.**

UPSONIC Station 28 280VA rating.....£84<sup>+VAT</sup>

UPSONIC Station 40 400VA rating .....£129<sup>+VAT</sup>

UPSONIC Station 60 600VA rating .....£155<sup>+VAT</sup>

UPSONIC Station 90 900VA rating .....£235<sup>+VAT</sup>

UPSONIC Station 140 1400VA rating .....£415<sup>+VAT</sup>

UPSONIC Station 200 2000VA rating .....£649<sup>+VAT</sup>

### SYSTEM SERIES ON-LINE UPSs

- True on-line protection • True Sine wave output
- Fully automatic operation with LED status indicators
- Communications interface for use with automatic shutdown software

• System 300 has comprehensive LCD display of operating, monitoring and diagnostic information

UPSONIC System 60 600VA rating .....£360<sup>+VAT</sup>

UPSONIC System 100 1000VA rating .....£499<sup>+VAT</sup>

UPSONIC System 300 3000VA rating .....£1399<sup>+VAT</sup>

### Hard Disks

## COST EFFECTIVE MASS STORAGE



DRIVE MECHANISM ONLY:

Optional installation kit (5.25" mounting bracket kit plus cables).....£10.00<sup>+VAT</sup>

Seagate 130Mb (IDE).....£69.00<sup>+VAT</sup>

Seagate 260Mb (IDE).....£89.00<sup>+VAT</sup>

Seagate 340Mb (IDE).....£99.00<sup>+VAT</sup>

Seagate ST3660A (IDE) 528Mb.....£115.00<sup>+VAT</sup>

Seagate ST31220A (IDE) 1Gb.....£169.00<sup>+VAT</sup>

Seagate ST31230N (SCSI) 1Gb.....£299.00<sup>+VAT</sup>

Seagate ST32430N (SCSI) 2Gb.....£679.00<sup>+VAT</sup>

### HD CONTROLLER CARDS

Tekram (PCI bus) c/w 0Mb RAM (upgradeable to 16Mb).....£69.00<sup>+VAT</sup>

Tekram (PCI bus) c/w 2Mb RAM (upgradeable to 16Mb).....£149.00<sup>+VAT</sup>



### PROMISE CACHING HARD DISK CONTROLLERS

DC99M (ISA bus) c/w 512kb RAM (upgradeable to 8.5Mb).....£39.00<sup>+VAT</sup>

DC4030 (VL bus) c/w 0kb RAM (upgradeable to 16Mb).....£69.00<sup>+VAT</sup>

DC4030 (VL bus) c/w 2Mb RAM (upgradeable to 16Mb).....£119.00<sup>+VAT</sup>

### VIDEO CARDS

## Why Diamond DIAMOND Video Cards? MULTIMEDIA

The highly acclaimed Stealth range has won many press accolades including the coveted PC Magazine "Editors Choice", and the new Stealth SE and Stealth 64 Video continue the tradition of delivering the best price/performance available. They are all based around 53 chipsets for superb Windows acceleration as well as class leading DOS performance, and come with the renowned InControl Tools utility for setting up the Windows environment.

Diamond Stealth SE VL Bus (1Mb).....£78.00<sup>+VAT</sup>

Diamond Stealth SE PCI Bus (1Mb).....£74.00<sup>+VAT</sup>

Diamond Stealth 64DRAM VL Bus (2Mb).....£129.00<sup>+VAT</sup>

Diamond Stealth 64DRAM PCI Bus (2Mb).....£125.00<sup>+VAT</sup>

Diamond Stealth 64VideoVRAM VL Bus (2Mb).....£194.00<sup>+VAT</sup>

Diamond Stealth 64VideoVRAM PCI Bus (2Mb).....£190.00<sup>+VAT</sup>

Upgrade to 4Mb for Stealth 64VideoVRAM.....£130.00<sup>+VAT</sup>

Diamond MVP accessory for Stealth 64Video, gives MPEG decoding and upgrade to 4Mb VRAM.....£249.00<sup>+VAT</sup>

### NOTEBOOK CARRY CASES

**SOLIDEX®** Combining modern design with classic styling

**TECHNOLOGY CASE £39.00<sup>+VAT</sup>**



- Computer compartment (15.5" x 10.5" x 3.5")
- Printer/FAX compartment (12.75" x 9" x 2")
- Cellular phone and power supply pockets
- Diskette and file pockets, pen and business card holders

**EXECUTIVE CASE £59.00<sup>+VAT</sup>**

- Computer compartment (16.5" x 10.5" x 2.5")
- Cellular phone and power supply pockets
- Diskette and file pockets, pen and business card holders



**NETWORK PRODUCTS**



Reliability is the key to network installations – you cannot afford to make compromises. We offer top quality branded products at an affordable price.

We are NOVELL Authorised Resellers Please contact us regarding your specific networking requirements.

**Instant PCMCIA Ethernet**

**PCMCIA NETWORKING HEADACHES?**  
Solve all your problems with this revolutionary new adapter.



- Hassle free automatic installation – just plug it in, type NDCGO, and you have instant Ethernet
  - 10BaseT and 10Base2 ports
  - 10Mbps, 16-bit
- ONLY £139.00 +VAT**

**Cabling.**

BNC connectors: T Connector	£3.20 +VAT
Through Connector	£1.50 +VAT
Cable plug	£1.75 +VAT
Ethernet Cable: Loose, per metre	£0.75 +VAT
5m length with BNC plugs at each end	£8.50 +VAT
10m length with BNC plugs at each end	£14.00 +VAT
20m length with BNC plugs at each end	£20.00 +VAT



**Novell compatible 16-bit network card.**  
Fully Novell authorised and tested.

- Faster than and compatible with NE2000 cards
- 10BaseT and 10Base2 I/O
- NETBIOS compatible
- 10Mbps



**£39.00 +VAT**  
Kingston card with Novell Netware-Lite .....£59.00 +VAT



**Network hubs.**

- 9 port stackable hub ..£129.00 +VAT
- 16 port hub .....£219.00 +VAT



**Pocket LAN adaptor**

10Base2 & 10BaseT (connects to parallel port) ..£110.00 +VAT

**Page FAX/MODEMS**

**The Internet**

- V32bis package.....£90 +VAT
- V34bis package...£195 +VAT



This package is the affordable way to enhance your PC with communications ability. Send and receive faxes, and access online information services and the Internet. Apart from your PC and a phone socket, everything you need is included:

- Pace FAX/modem: either MobiFAX 144 pocket unit (V32bis) or Linnet 34fx desktop (V34bis)
- Software to access Internet facilities
- 21 days free subscription to an internet service provider
- "The Net" guide book
- FAX software

**SPECIAL OFFER**

All modems include free Pipex Dial Internet connection trial pack, awarded "PC PRO Excellence" November 1995.



**LIMITED OFFER!**

**MICROLIN V34bis fax modems**

- MICROLIN fx 34 portable external unit.....£180 +VAT
- MICROLIN fx 34 internal unit.....£179 +VAT
- MICROLIN NB 34 PCMCIA type II unit .....£199 +VAT

**Linnet Message Desk.....£185 +VAT**

Desktop Voice, Data and Fax Modem. Integrates your PC and your telephone to provide complete communications facilities.



**KEYBOARDS & MICE**

**£13.00 +VAT**



Made for us by Mitsumi, this is the 102-key keyboard used in our Vale Popular and Prestige ranges of PCs. A very neat and attractive design, it is superb value for money.

**£25.00 +VAT**



A top quality 102-key keyboard as used in our Vale Premier range of PCs. It features proper tactile keys and a sturdy metal base. This unit has consistently impressed reviewers: "...almost traditional in its weight and touch. A deeply desirable device." Computer Buyer, June 1994

**ERGONOMIC KEYBOARD**

**£29.00 +VAT**



Take the strain out of typing. This specially designed keyboard allows your hands and wrists to work naturally for maximum comfort and maximum speed. Recommended by professional typists, and ideal for learners.

**WINDOWS 95 KEYBOARD**

**£35.00 +VAT**



Our new Windows keyboard has three extra keys that are programmable for use with Windows 3.x but really come in to their own in Windows 95 as Application keys. As used in our state of the art Vale Platinum PCs.

**MS Mouse 2.0 £38.00 +VAT**

**Intellipoint version**



Microsoft's ergonomics at its best! Microsoft have their finger on the button when it comes to mouse design. Maximum comfort and optimum usability for all home PC users. With the Home Edition of Intellipoint Software

**£25.00 +VAT MS Home Mouse**

**MITSUMI MOUSE £9.99 +VAT**



A very stylish, comfortable and good quality mouse at a budget price. As used in our Vale Popular range of PCs.

**SOFTWARE BARGAINS**

**Microsoft Office**

- ◆ MS Word
- ◆ MS Excel
- ◆ MS Schedule+
- ◆ MS Powerpoint
- ◆ MS Access (Office professional only)

Now all your programs work together like one!

**Competitive bargains:**

**OFFICE 95 STANDARD £199 +VAT**

**OFFICE 95 PROFESSIONAL £299 +VAT**

Competitive Upgrades are via voucher redemption.

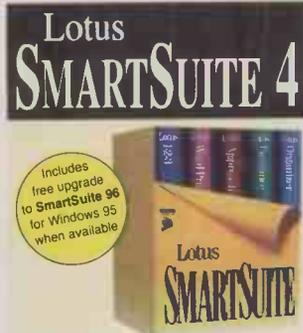
**Version Upgrades**

Office 95 Standard.....£175 +VAT  
Office 95 Professional.....£259 +VAT

**Outright Purchase**

Office 95 Standard.....£409 +VAT  
Office 95 Professional.....£529 +VAT

**Lotus SMARTSUITE 4**



Includes free upgrade to SmartSuite 96 for Windows 95 when available

- 1-2-3
- Word Pro
- Approach
- Organizer
- Freelance Graphics

Competitive upgrade (via voucher redemption)

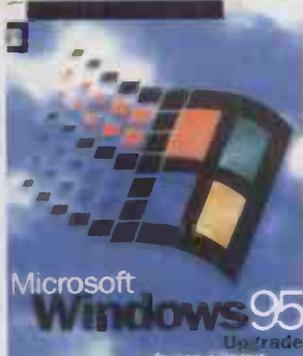
**£229 +VAT**

Version upgrade **£174 +VAT** (via voucher redemption)

**Outright purchase**  
No competing product?

Don't worry, we will supply a qualifying product free of charge.

**Microsoft Windows 95 Upgrade pack**



Upgrade from Windows 3.x or Windows for Workgroups 3.x

**CD format .....£69.00 +VAT**

**3.5" format .....£70.00 +VAT**

**Windows 95 'Plus pack'**  
Comprises Internet Access and Themes for Windows 95

**CD format .....£30.00 +VAT**

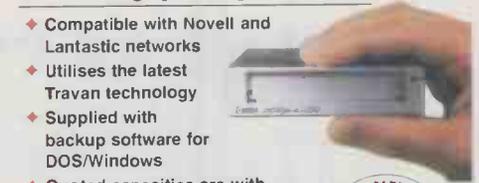
**3.5" format .....£31.00 +VAT**

**TAPE BACKUP**

**OMEGA ditto™ tape drives**

Top quality tape streamers available as either internal or a stand alone units. The stand alone versions simply connect to the PC's parallel port, with a through port for printer operation.

- ◆ Compatible with Novell and Lantastic networks
- ◆ Utilises the latest Travan technology
- ◆ Supplied with backup software for DOS/Windows
- ◆ Quoted capacities are with compression software supplied
- ◆ 2 year manufacturer's warranty



**PC today** "A superb combination of tape drive and software." PC Today, December 1993

Omega Tape250 Parallel Port Unit

**WINNER-UP HITS TAPE BACKUP SYSTEMS**

EVERSHAM MICROS LTD  
Lange Top 250 Internal

**800Mb Internal unit.....£129 +VAT**

**800Mb Parallel port unit ...£209 +VAT**

Tape for ditto 800Mb .....£29.00 +VAT

**3.2Gb Internal unit.....£225 +VAT**

**3.2Gb Parallel port unit ....£295 +VAT**

Tape for ditto 3.2Gb .....£29.00 +VAT

Evesham Micros (01386) 765500 Evesham Micros (01386) 765500 Evesham Micros (01386) 765500

# SCAN THESE PRICES

ALL SCANNERS ARE TWAIN COMPLIANT



True 24-bit

Colour Model

£89.99+VAT

or with 'parallel port' interface (see below) £139.00+VAT

True 256 GREYSCALE HANDY SCANNER with all the right features, including O.C.R. and extensive graphics editing facilities.

- Genuine 256 greyscale performance – not interpolated from 32 greyscales (Beware: Many scanners advertised as 256 greyscale are 32 greyscale, achieving 256 only by software interpolation)
- Photo-realistic quality monochrome scans, with actual shades and shadows, at up to 400dpi
- Halftone and Line-art scanning at genuine 800dpi resolution
- Full 105mm wide scanning head
- Eight selectable scanning resolutions between 100 and 800dpi
- Variable brightness control ● Built-in scan speed indicator
- Includes "iPhoto Plus" top professional Windows based image scanning and photograph re-touching software, and "Perceive OCR" software

Scanners from **Mustek**

Personal Computer World

"...I have found the quality of photographic and line-art scans to be good... this is extremely good value for money." Personal Computer World, September 1994

Requires '386 or higher, Windows 3.1 or higher, at least 4Mb RAM, Mouse, Hard Drive and 256 colour SVGA graphics or higher.



WHAT PC? BEST BUY

"Superb quality results time after time. The ease of use is commendable and the bundled software offers brilliant value for money... We therefore recommend the Mustek without hesitation." What PC?, August 1993

with internal interface card £59.00+VAT

with 'parallel port' interface (see below) £109.00+VAT

Requires '386 CPU or above with Colour Monitor, at least 4Mb RAM, Windows 3.1 or higher, Hard Drive and Mouse.

## A4 SHEETFED SCANNER

The simple, effective document scanning solution for office and home!

Expand your PC into a multi-purpose office tool – scan documents of all sizes for filing or faxing, or use with a printer for easy copying.

- Genuine 256 greyscale performance – not interpolated from 32 greyscales
- Halftone and Line-art modes
- Genuine 300dpi resolution, interpolated to 600dpi
- Document size: 216x356mm max, 51x89mm min
- 10 sheet automatic document feeder
- Very compact "small footprint" design
- Very simple, fast scanning (only 12 seconds per page)
- Includes "iPhoto Plus" top professional Windows based image scanning and photograph re-touching software, and "TextBridge OCR" software



with internal interface card £149.00+VAT

Requires '386 CPU or above with Colour Monitor, at least 4Mb RAM, Windows 3.1 or higher, Hard Drive and Mouse.

## SCAN SAMPLE SERVICE TRY BEFORE YOU BUY

To help with your choice of scanner we have prepared a sample disk pack for the scanners featured on this page.

Each sample pack contains several images (including the Car and Child) scanned in various modes to provide an exact representation of each unit's capabilities – before you buy. A fact sheet is also included containing loading instructions, scanning info., and printed originals produced by the scanner of your choice for comparison. Please state which scanner you are interested in (greyscale, colour or flatbed). Supplied on 3 1/2" disks.



Cost Per Pack £5.00+VAT incl delivery. Refundable on purchase of a scanner.

## External SCANNER INTERFACE Connect your scanner to your printer port!

This compact in-line interface box does away with the need to install an expansion card for your scanner, by simply plugging into the Parallel port. It is ideal for anyone who wants to transfer their scanner quickly between computers, as well as notebook owners and those who have simply run out of expansion ports. Compatible with the Mustek Black & White, Greyscale, & 24-bit Colour hand-held scanners.



only £59.00+VAT

## FLATBED A4 COLOUR SCANNERS

- Conventional models: 600dpi unit giving up to 4800dpi via interpolation, or 1200dpi unit giving up to 9600dpi via interpolation
- Very fast single-pass models: 800dpi giving up to 6400dpi via interpolation, or 1200dpi giving up to 9600dpi via interpolation
- Colour, 8-bit grey and line art modes ● 12 built-in halftoning patterns
- 216mm x 356mm scan area ● SCSI expansion card interface supplied
- Image scanning and photograph re-touching software, and powerful OCR software

	Paragon 600	single pass Paragon 800SP	single pass Paragon 1200SP
OPTICAL RESOLUTION:	300x600dpi	400x800dpi	600x1200dpi
INTERPOLATED RESOLUTION:	4800dpi	6400dpi	9600dpi
COLOUR DEPTH:	24-bit	30-bit	30-bit
FREE SOFTWARE:	iPhoto+ Wordlinx OCR	Image Pals GO TextBridge OCR	PhotoShop LE TextBridge OCR
	£299+VAT	£399+VAT	£549+VAT
	Transparency adaptor...£179+VAT	Automatic sheet feeder...£299+VAT	

Requirements: '386 or higher, Windows 3.1 or higher, Mouse, Hard Drive and 256 colour SVGA graphics or higher. 600dpi model needs at least 4Mb RAM, other models need at least 8Mb RAM.

new fast single pass models

"Excellent value for money. The works for only £700." December 1993

Personal Computer World April 1993

PERSONAL COMPUTER

"The MFS6000C is a quality piece of hardware... Superb results."



"The Mustek MFS-1200CX provides a good set of features at the lowest price in the test group... If you need an inexpensive high-resolution scanner, then the Mustek MFS-1200CX should be on your shortlist."

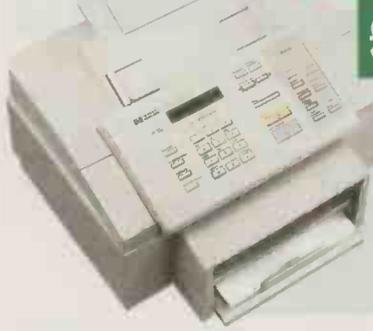
PC MAGAZINE October 1994

Evesham Micros ● CALL US NOW ON (01386) 765500 ● Evesham Micros

**PRINTERS**

**HP OfficeJet LX**

Inkjet Printer, Scanner, Fax



**NEW**

If you can't decide between a new printer, fax or copier, get all three.

**£519<sup>+VAT</sup>.00**

HP's new OfficeJet combines the convenience of a printer, fax and copier in one neat unit, without compromising quality or performance.

- Printer** ■ Up to 600 x 300dpi precise inkjet printing at up to 3ppm ■ Prints on plain paper, transparencies and envelopes
- Fax** ■ 20 page document feeder ■ Standard (203x98dpi) and Fine (203x196dpi) send resolution ■ 32 halftone levels ■ 9600 bps ■ 10 seconds per page transmission ■ 24 page incoming fax memory ■ 60 number speed dial memory ■ Auto redial ■ BAPT approved ■ Fax directly from and to your PC with the supplied software
- Copier/Scanner** ■ 50 second per page scanning ■ Copy reduction down to 70% ■ Twain scanner interface ■ Up to 99 unattended copies
- General** ■ 100 sheet paper capacity ■ 1 year manufacturer's warranty

**HEWLETT PACKARD**

**Lazer-sharp type and brilliant colour - at a very affordable price...**

**HP DeskJet 600**

Inkjet Printer



**£229<sup>+VAT</sup>.00**

Colour kit £29<sup>+VAT</sup>

- 600 x 600dpi for precise black ■ Up to 600 x 300dpi colour with optional colour cartridge
- HP's Resolution Enhancement and ColorSmart technology ■ Up to 4ppm black, up to 1ppm colour (EconoFast mode) ■ Prints on plain, glossy or recycled paper, transparencies, envelopes and labels ■ Wide selection of scalable fonts ■ 512k built-in RAM, 32k buffer ■ HP PrintSmart for Windows ■ 3 year manufacturer's warranty



Authorised Reseller Personal Computer Products

**HP DeskJet 850C**

Inkjet Printer

- 600 x 600dpi black ■ 300 x 300dpi colour printing - 800 x 800dpi colour with C-Res (Colour Resolution enhancement) ■ 6ppm black, up to 3ppm colour
- Print on plain, glossy or recycled paper, transparencies, envelopes and labels ■ 1Mb RAM ■ 26 scalable fonts ■ 150 sheet paper tray & manual feed plus envelope and single sheet feeder ■ 1000 page per month duty cycle ■ 1 year manufacturer's warranty

**£359<sup>+VAT</sup>.00**



HP DeskJet 850C "It's output was superb, it has performance and terrific features on its side, and it's economical to run. Its enhanced colour resolution of 800-by-800dpi outspecifies any other printer..." Few will be disappointed after buying this printer. \* October 1995

- HP LaserJet 5 L ..... £375.00<sup>+VAT</sup>
- HP LaserJet 5 P ..... £629.00<sup>+VAT</sup>
- HP LaserJet 5 MP ..... £769.00<sup>+VAT</sup>
- HP LaserJet 4 ML ..... £799.00<sup>+VAT</sup>
- HP LaserJet 4 Plus ..... £1059.00<sup>+VAT</sup>
- HP LaserJet 4 M Plus ..... £1399.00<sup>+VAT</sup>

- PostScript Level 2 upgrade for LaserJet 4 ..... £229.00<sup>+VAT</sup>
- 2Mb RAM upgrade for LaserJet III / IIIp ..... £119.00<sup>+VAT</sup>
- 4Mb RAM upgrade for LaserJet III / IIIp ..... £169.00<sup>+VAT</sup>
- 4Mb RAM upgrade for LaserJet 4 ..... £169.00<sup>+VAT</sup>

- HP DeskJet 340 ..... £185.00<sup>+VAT</sup>
- HP DeskJet 340 with sheet feeder ..... £201.00<sup>+VAT</sup>
- Colour kit for 310/320/340/540 ..... £30.00<sup>+VAT</sup>
- HP DeskJet 660 ..... £299.00<sup>+VAT</sup>
- HP DeskJet 1200C ..... £679.00<sup>+VAT</sup>
- HP DeskJet 1200C/PS ..... £1069.00<sup>+VAT</sup>
- HP DeskJet 1600 ..... £899.00<sup>+VAT</sup>

- HP DeskJet long life black ink cartridge ..... £25.00<sup>+VAT</sup>
- HP DeskJet colour ink cartridge ..... £25.00<sup>+VAT</sup>
- HP DeskJet 3 year On-Site warranty agreement (mono models) ..... £55.00<sup>+VAT</sup> (colour models) ..... £65.00<sup>+VAT</sup>
- 256k RAM cartridge for DeskJet Plus / 500 ..... £59.00<sup>+VAT</sup>

This product can seriously **SAVE** you money...



**INK REFILLS**

For HP DeskJet/500/Plus/DeskWriter printers

The best and easiest to use inkjet refills we have found. Comprehensive and simple to follow instructions are supplied. Each pack will refill a standard cartridge four times, or a long life cartridge twice.

**ONLY £11.99<sup>+VAT</sup>**  
- that's as little as £3 per cartridge fill!

**STAR**

- Star XB24-200 ..... £346.00<sup>+VAT</sup>
- Star XB24-250 ..... £425.00<sup>+VAT</sup>
- Star WinType 4000 laser (requires Windows 3.1 or later) ..... £319.00<sup>+VAT</sup>

**EPSON**

- Epson LX300 ..... £105.00<sup>+VAT</sup>
- Epson LQ570+ ..... £235.00<sup>+VAT</sup>
- Epson Stylus 820 ..... £220.00<sup>+VAT</sup>
- Epson Stylus 25 Colour ..... £278.00<sup>+VAT</sup>

Cut Sheet feeders are available for most printers. Please call for price / availability

**PANASONIC**

- Panasonic KX-P2135 ..... £139.00<sup>+VAT</sup>
- Panasonic KX-P3626 ..... £329.00<sup>+VAT</sup>

**CANON**

- Canon BJ-30 ..... £169.00<sup>+VAT</sup>
- Canon BJ-200EX (Epson compatible) ..... £190.00<sup>+VAT</sup>
- Canon BJ-230 ..... £269.00<sup>+VAT</sup>
- Canon BJ-C600E ..... £369.00<sup>+VAT</sup>
- Canon BJ-C4000 ..... £259.00<sup>+VAT</sup>

**CLEARANCE BARGAINS**

- Categories: 1. As new, complete
- 2. Slightly soiled, complete
- 3. Soiled, incomplete

**MONITORS**

- Tatung CM17MCR 17" Category 2 ..... £225.00<sup>+VAT</sup>
- Tatung CM17MBD 17" Category 2 ..... £249.00<sup>+VAT</sup>
- Tatung CM17MKR 17" NEW ..... £299.00<sup>+VAT</sup>
- Tatung CM17MCR 17" Category 2 ..... £225.00<sup>+VAT</sup>
- Tatung CM20MCR 20" Category 2 ..... £399.00<sup>+VAT</sup>

**PRINTERS**

Cut sheet feeders available for many printers - please call ..... from £20.00<sup>+VAT</sup>

- DOT MATRIX** .....
- NEC P22Q 24-pin Category 2 ..... £129.00<sup>+VAT</sup>
- Star LC15 Category 3 ..... £99.00<sup>+VAT</sup>
- Star LC240 Category 1 ..... £89.00<sup>+VAT</sup>
- Star NB24-15 Category 2 ..... £50.00<sup>+VAT</sup>
- Olivetti DM124 Colour Category 2 ..... £49.00<sup>+VAT</sup>

- Panasonic KX-P2135 Category 3 ..... £99.00<sup>+VAT</sup>
- Pace 14400bps (external) Category 2 ..... £59.00<sup>+VAT</sup>

**INKJET**

- Canon BJ-C600 Category 2 ..... £199.00<sup>+VAT</sup>
- Canon BJ-C600 Category 3 ..... £188.00<sup>+VAT</sup>
- Canon BJ-C4000 Category 2 ..... £149.00<sup>+VAT</sup>
- HP DeskJet 320 Category 2 ..... £170.00<sup>+VAT</sup>

**LASER**

- NP LaserJet 4 Plus Category 2 ..... £999.00<sup>+VAT</sup>
- Lexmark WinWriter 200 Category 2 ..... £209.00<sup>+VAT</sup>
- OKI Microline OL400E Category 2 ..... £249.00<sup>+VAT</sup>
- Star WinType 4000 Category 3 ..... £199.00<sup>+VAT</sup>
- TI microWriter PS65 NEW ..... £399.00<sup>+VAT</sup>

**FAX/MODEMS**

- Amstrad 2400bps (external) NEW ..... £20.00<sup>+VAT</sup>
- Datafax 2400bps (PCMCIA) NEW ..... £59.00<sup>+VAT</sup>
- Datafax 14400bps (PCMCIA) NEW ..... £79.00<sup>+VAT</sup>
- Pace 14400bps (internal) NEW ..... £59.00<sup>+VAT</sup>
- Pace 14400bps (internal) Category 2 ..... £49.00<sup>+VAT</sup>
- Pace 14400bps (external) NEW ..... £69.00<sup>+VAT</sup>

**OTHERS**

- Colorado 120Mb tape drive Category 2 ..... £30.00<sup>+VAT</sup>
- Iomega 250Mb taps drive (connects to parallel port) Category 2 ..... £69.00<sup>+VAT</sup>
- Iomega 700Mb taps drive (connects to parallel port) Category 2 ..... £149.00<sup>+VAT</sup>
- 486sx20 CPU NEW ..... £20.00<sup>+VAT</sup>
- 486sx33 CPU NEW ..... £25.00<sup>+VAT</sup>
- 486sx33 CPU NEW ..... £25.00<sup>+VAT</sup>
- 486sx20 CPU NEW ..... £35.00<sup>+VAT</sup>
- 486sx50 CPU NEW ..... £49.00<sup>+VAT</sup>
- Vale Keyboard Category 2 ..... £15.00<sup>+VAT</sup>
- PS/2 Keyboard Category 3 ..... £20.00<sup>+VAT</sup>

Please contact our Evesham branch for these products. All are clearance lines, shop soiled or second hand stock and all carry 12 months warranty. More clearance bargains are held at our other branches - please call them if you do not see what you require.

**Evesham Micros**



WINNER OF ALL CUSTOMER SERVICE CATEGORIES IN THE 'PC DIRECT HITS AWARDS' FOR '93 AND '94

**HOW TO ORDER....**



Call us now on **01386 765500**

TELESALES OPENING TIMES:  
9am - 7pm Monday-Friday  
9am - 5.30pm Saturday



Mail Order Fax: **01386-765354**



Send Cheque, Postal Order or Access/Visa/Switch/AmEx card details to:

Evesham Micros Ltd., Dept PECW,  
Unit 9, St Richards Road,  
Evesham, Worcs. WR11 6TD

**DELIVERY**

Same day despatch whenever possible. Delivery on orders up to £150.00 ex VAT value is charged at £4.50 +VAT. All items above this value are shipped by insured Express Courier service at £8.00 +VAT per order - normally next working day after despatch (UK mainland only, others please call). Please note that 5 banking days must be allowed for cheque clearance. Immediate clearance on Bank Drafts and Building Society cheques. Government, Education & PLC purchase orders welcome

Credit card orders: We do not charge the card until the goods are despatched.



Always a good sign.

**RETAIL SHOWROOMS**

Normal Opening times: Monday-Saturday, 9.00-5.30  
Late Night Opening Until 7pm Wednesday-Friday

- EVESHAM**  
Unit 9 St Richards Rd, Evesham  
Worcs WR11 6TD  
☎ 01386-765500  
fax: 01386 765354
- CAMBRIDGE**  
5 Glisson Road, Cambridge  
CB1 2HA  
☎ 01223-323898  
fax: 01223 322883

- BIRMINGHAM**  
251-255 Moseley Rd, Highgate,  
Birmingham B12 0EA  
☎ 0121-446 5050  
fax: 0121 446 5010
- MILTON KEYNES**  
320 Witan Gate, Milton Keynes  
MK9 2HP  
☎ 01908-230898  
fax: 01908 230865



TECHNICAL SUPPORT Monday to Friday, 10.00 - 5.00  
**01386-769403**

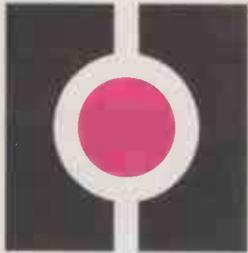
**1 YEAR WARRANTY ON ALL GOODS**

All goods subject to availability. Please note that On-site Maintenance applies to UK mainland only. Details correct at time of going to press. Prices and specifications subject to change without notice. E & O E

THIS ADVERT IS EFFECTIVE FROM 1/11/95  
SOME PRICES AND SPECIFICATIONS MAY CHANGE AFTER 30/11/95

Evesham Micros • CALL US NOW ON (01386) 765500 • Evesham Micros • CALL US NOW ON (01386) 765500 • Evesham Micros • Media Code: PECW

# Power



# Mark

**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

**42 pages!**

**CONTENTS**

- Memory.....1-8
- Processor Upgrades.....8-9
- Mass Storage.....10-12
- Multimedia.....13-20
- Scanners.....21-22
- Printers.....23-24
- Modems.....25-30
- Networking.....31-32
- Monitors.....33-34
- Windows 95.....37-38
- Software.....35-42

**QUALITY!  
QUALITY!  
QUALITY!**

Being the largest direct memory supplier means we buy memory direct from world class manufacturers.

Powermark plc only supply factory original memory.



**MEMORY LANE**

Do you remember...?

- ... Bayco building sets
- ... Stone Ginger Beer bottles
- ... Raleigh Choppers

# MEMORY



## WELCOME TO POWERMARK - Part 13

*I'm passionate about my company and I feel that it is important that you know about the culture and ethos of the organisation that you are dealing with.*

*Mark Simon*

Mark Simon  
Chairman

Here are just some of the things that make Powermark so different:

- All staff are rigorously trained and tested as part of the Powermark Academy.
- Every 3 months we have a fancy dress day. A magician comes in and we donate £1 to charity for every megabyte of RAM sold on that day.
- A bottle of champagne is always awarded to any member of staff who receives an unsolicited letter of praise.

**A great new way to buy from Powermark...**

## The MEMORYBANK GOLD CARD

**The only credit card that offers you these benefits:**

- **Powermark Points** - Every time you buy you earn Powermark Points. Accumulate Powermark Points for savings against future purchases
- **Two easy ways to pay** - Settle your monthly account in full by the date shown on your statement and get up to 56 days interest free credit **or** Settle by Direct Debit (£10 minimum payment or 5% of your statement balance if higher) and take advantage of our competitive interest rate of only **20.9% APR**

Once only card fee of £10 includes a **free CD ROM** and a **£5 rebate** after your first purchase over £99 (plus VAT and carriage).

*With all these benefits and competitive interest rates too*

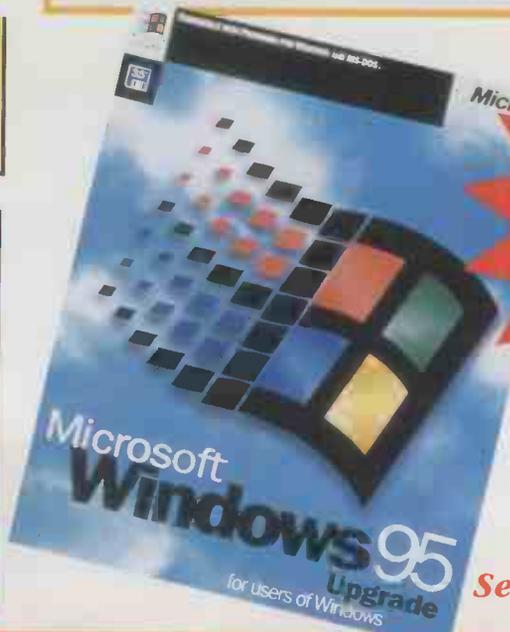
*... you know it makes sense!*

Call our Technical Sales Lines today and ask for an application form.

Powermark plc is a licensed credit broker. Cards are issued subject to status and are available only to persons aged 18 or over. Written quotations available.



- **Huge discounts** on Powermark branded products
- **Exclusive offers** too!
- **Free subscription to The Upgrader**  
Our 400 page colour catalogue packed with upgrades of all types
- **Save on the Upgrade Drive Thru** - Take advantage of the Upgrade Drive Thru and get any second peripheral installation absolutely free



**£55**

when you purchase any other product over £29  
(One upgrade at £55 per order. Offer applies to upgrade version only.)

**Unlock the potential of your PC with Microsoft® Windows® 95**

**Microsoft Windows 95 makes everything you do with your computer faster and easier.**

The Microsoft® Windows® 95 operating system will transform everything you do with your PC. Suddenly using a computer can be fast, easy and fun - with limitless possibilities!

**See pages 37 and 38 for full details**

1

**DELIVERY CHARGES**  
See page 9

A great new way to buy...  
**Gold Card**  
See above

**EARLY BIRD**  
Order Bonus  
See page 29

**Powermark Academy**  
Everyone at Powermark passes through our training college

# BANK

New Products every month!



## THE LARGEST DIRECT MEMORY

Every month Powermark plc supply thousands of memory upgrades to thousands of satisfied customers, making us the largest direct supplier of memory in the United Kingdom.

**Lower Prices!**  
on most regular SIMMs

Technical Sales Order Lines  
**0181-951 3355**  
(50 lines)

MEMORY

*"Adding memory to your computer is undoubtedly the easiest, most cost effective way of increasing the performance of your system"*

More and more applications demand large amounts of memory to work effectively. By increasing the standard memory in your PC you can:

- Radically increase the performance of your system
- Run multimedia applications at optimum speed
- Keep fonts and desktop accessories in RAM for instant access
- Run more than one application at a time, enabling true multi-tasking

DON'T JUST TAKE OUR WORD FOR IT...

*"For at least two years we've recommended 8MB machines*

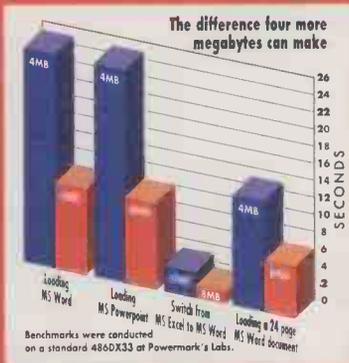
*to our readers. Under Windows 95 this recommendation becomes a must and because Windows 95 is much better at handling extra memory than 3.x you'll get even better performance from 16MB RAM, if you can afford it, get 16MB RAM."*

Personal Computer World, September 1995

*"Possibly the greatest upgrade you can offer a flagging PC is an increase in memory.*

*The difference in speed between 4MB and 8MB is enormous, as is the jump from 8MB to 16MB. Anyone attempting to run Windows 3.1 in less than 4MB should upgrade now."*

Personal Computer World, January 1995



## MATCHED MEMORY SIMM KITS

If you're unsure about upgrading then our Matched Memory SIMM Kits are for you. They're guaranteed to be totally memory matched. That means speed, voltage, refresh, parity and physical characteristics are all matched to give optimum performance to your system.

From our listings on the following pages, just select the upgrade kit for your PC. They cost a little more but you get:

- full installation instructions
- anti-static wrist strap
- dedicated support hotline
- our famous double guarantee - full lifetime warranty and the Powermark Promise - our 14 day 'no-quibble' money back guarantee

If your PC is not listed then call us. Our Memory Database has the upgrade path for almost every PC supplied in the UK over the last five years.

## UPGRADING IS EASY

- With most memory upgrades it's just a case of:
- switching off PC
  - removing lid
  - locating SIMM sockets
  - installing SIMMs
  - closing lid
  - switching back on

## HANDLING MEMORY

Static can degrade a DRAM, shortening its life. That's why we include an anti-static wrist strap in every Matched Memory SIMM Kit. If you're buying loose SIMMs then do ask for an anti-static wrist strap. For multiple installations we can supply complete ESD (Electro Static Device) protection equipment.

**PRICE INSTABILITY!**  
CALL FOR LATEST OFFERS ON MEMORY BEFORE ORDERING

## REGULAR SIMMS

### 30 PIN SIMMS

- 5 year warranty on all SIMMs listed here

Type	Capacity	Speed	Price
256K x 9	256K	100ns	£12
256K x 9	256K	80ns	£12
256K x 16	256K	70ns	£20
1M x 9	1MB	80ns	£30
1M x 9 (SIP)	1MB	70ns	£34
1M x 9	1MB	70ns	£29
1M x 9 (3cs)	1MB	70ns	£31
1M x 9	1MB	60ns	£30
4M x 9 (3cs)	4MB	70ns	£114
4M x 9	4MB	70ns	£107
4M x 9	4MB	60ns	£119
16M x 9	16MB	70ns	£579
16M x 9	16MB	60ns	£599

### GOLD EDGED SIMMS

- Specified by many PC manufacturers

• Longer MTBF			
1M x 9	1MB	70ns	£35
1M x 9	1MB	60ns	£45

### 72 PIN SIMMS

- 10 year warranty on all SIMMs listed here

Type	Capacity	Speed	Price
256K x 36	1MB	80ns	£59
256K x 36	1MB	70ns	£59
512K x 32	2MB	70ns	£82
512K x 36	2MB	70ns	£82
1M x 32	4MB	80ns	£105
1M x 32	4MB	70ns	£105
1M x 36	4MB	80ns	£119
1M x 36	4MB	70ns	£119
1M x 36	4MB	60ns	£127
2M x 32	8MB	60ns	£239
2M x 32	8MB	70ns	£213
2M x 36	8MB	80ns	£245
2M x 36	8MB	70ns	£245
2M x 36	8MB	60ns	£259
4M x 32	16MB	70ns	£357
4M x 36	16MB	70ns	£409
4M x 36	16MB	60ns	£425
8M x 32	32MB	70ns	£839
8M x 36	32MB	70ns	£849
8M x 36	32MB	60ns	£949
8M x 32	32MB	60ns	£839
16M x 36	64MB	60ns	£2001

### 72 PIN EDO SIMMS

- Call for full details
- |             |      |      |      |
|-------------|------|------|------|
| 1M x 32 EDO | 4MB  | -    | £129 |
| 2M x 32 EDO | 8MB  | -    | £229 |
| 4M x 32 EDO | 16MB | 60ns | £479 |

### NEW! 72 PIN DIMMS

1M x 32	4MB	70ns	£159
2M x 32	8MB	70ns	£279
4M x 32	16MB	70ns	£499

**HUGE STOCKS**  
Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While you wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355  
(50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com

## HOW MUCH MEMORY DO YOU NEED?

OS	Minimum Requirement	Comfort Level	Optimum Performance
Windows 3.1	4	8	16
Windows 95	8	12	20
Windows NT	12	16	32
Windows AS	16	32	48
OS/2 Warp	4	12	20
Apple System 7.5	8	12	16

Numbers indicate Megabytes of memory required

Source: manufacturers' figures



Public Sector customers can purchase through HMSO by calling 01603 694153.



Certificate no. BS 26535

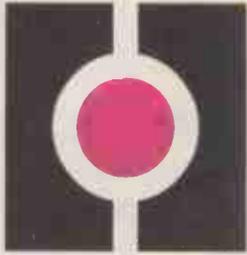
BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices





**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**



**Unsure  
about upgrading?**

Upgrading is easy but if you would like us to upgrade your computer then our **UPGRADE DRIVE THRU** is for you. It's fast, it's simple and it's convenient. Just drive into our loading bay at the rear of Premier House and your computer will go directly to our on-site labs for instant upgrading by our fully qualified engineers.

For upgrades that take a little while we'll even hand you a Pager enabling you to visit the shopping centre next door. You'll be paged the minute your computer is ready.

In most cases you need only bring your base unit along, but do call first to discuss your requirements and to confirm our stock position on the upgrades you require.

### DESKTOP MENU

(Call for notebook menu)

Memory	£34
Hard Disk	£47
Processor	£31
Tape Backup	£34
Sound or Modem Card	£29
Graphics or Video Card	£29
Multimedia Kit	£47

**Save £££s with  
combo orders!**

**TURN THE PAGE  
FOR MORE**

# MEMORY



## MATCHED MEMORY UPGRADES FEATURE

**THE LARGEST DIRECT MEMORY SUPPLIER**

Every month Powermark plc supply thousands of memory upgrades to thousands of satisfied customers, making us the largest direct supplier of memory in the United Kingdom.

### MATCHED MEMORY UPGRADES FOR HP

• Authorised HP dealer

HP VECTRA 386/25 PC, 486 PC, 486s/20	
4MB Kit	£129
8MB Kit	£269
HP VECTRA VL3	
S/75/90/100, VE SERIES	
8MB Kit	£269
16MB Kit	£519

### NEW! HP VECTRA XU 5/75/90/100 VE SERIES

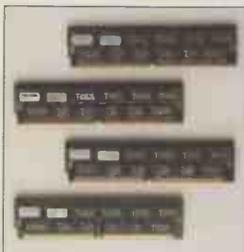
4MB Kit	£159
8MB Kit	£299
HP NETSERVER SERIES	
8MB Module	£269
16MB Module	£499

### HP95, HP100, HP200

1MB Card	£149
2MB Card	£245
HP OMNIBOOK 530, 630C SERIES	
4MB Module	£209
8MB Module	£399

### NEW! HP OMNIBOOK 4000 SERIES

8MB Kit	£319
16MB Kit	£599



### “UPGRADING TIPS

**You own a DX2/66MHz, 8MB of memory and 250MB hard disk. Verdict: It's definitely well worth upgrading to Windows 95 and when you can afford it add more memory and a bigger hard disk for better performance.”**

Personal Computer World  
September 1995

### MATCHED MEMORY UPGRADES FOR OLIVETTI

PCS386SX	
1MB → 2MB	POWERCUT! £64
1MB → 4MB	POWERCUT! £129
1MB → 6MB	POWERCUT! £209
1MB → 8MB	£272

PCS40, 44	
4MB Kit	£129
8MB Kit	£279

M290	
2MB Kit	POWERCUT! £74
4MB Kit	POWERCUT! £149

M486/CP386	
2MB Kit	£99
4MB Kit	£168

PCS 11, 33	
2MB Kit	POWERCUT! £66
8MB Kit	£259

M300-30	
4MB Kit	£139
8MB Kit	£279

M400-10/40/60	
4MB Kit	£156
16MB Kit	£539

MODULO RANGE	
4MB Module	£149
8MB Module	£279
16MB Module	£489

SUPREMA M6-600, 700	
4MB Module	£149
8MB Module	£289

PCI/ISA PENTIUMS	
8MB Kit	£279
16MB Kit	£575

### MATCHED MEMORY UPGRADES FOR ELONEX

PC386SX/M, SX/B, 386/16, B/33	
2MB Kit	£64
4MB Kit	£139
8MB Kit	£249

PC386 V/E, 486 V/E	
4MB Kit	POWERCUT! £139
8MB Kit	POWERCUT! £279
16MB Kit	POWERCUT! £469

WS RANGE	
4MB Kit	£139
8MB Kit	£269
16MB Kit	£499

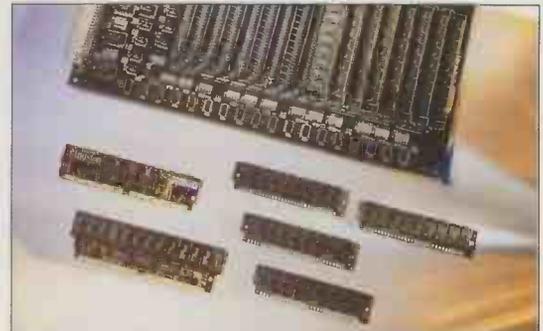
PC433M, 450M, 466M	
4MB Kit	£129
8MB Kit	£279
16MB Kit	£469

LT386SX/P	
2MB Kit	£64
4MB Kit	£139

PC-500 SERIES, PC-560M	
8MB Module	POWERCUT! £279
16MB Module	POWERCUT! £479

ELONEX 560F EISA	
8MB Kit	POWERCUT! £279
16MB Kit	POWERCUT! £475

PC 575M/I, PC5120M/I, PC5133M/I	
8MB Kit	£279
16MB Kit	£549



### MATCHED MEMORY UPGRADES FOR TOSHIBA

T1000/E/XE/1E, T1800, T1850C, T2000SX, T2000SXE, T2200SXE	
2MB Card	£79
4MB Card	£149
8MB Card	£289

T3300SL	
2MB	£66

T1600/T5100	
2MB Card	£75

T2100, T2100CS	
4MB Card	£149
8MB Card	£279

T2105CS, T2130CS, CT, T2150 CDT	
16MB Card	£575

T2400CS, T2450, T2400CT, T3600	
4MB Module	£159
8MB Module	£319

T3100SX	
2MB Card	£85
4MB Card	£159

T3200SX/C	
4MB Module	£159
8MB Module	£299

T3200	
3MB Card	£159

T4400, T6400 SX/C, DX/C	
4MB Card	£185
8MB Card	£329

T1900, T1910, T1950CT, T1960, T3400CT, T4500, T4600, T4700CT, T4800CT,	
4MB Module	£149
8MB Module	£265
16MB Module	£499

T4850/4900	
8MB	£265

T5200/C & T8500/6400/6600	
2MB Module	£129
8MB Module	£329
16MB Module	£569

DYNAPAD T100X	
6MB Card	£259

DYNAPAD T200, T200CS	
4MB Module	£149

PROTEGE 610CT, T2130CS	
8MB Module	£425
16MB Module	£799

SATELLITE PRO 400 SERIES	
8MB Module	£329

**PRICE  
INSTABILITY!  
CALL FOR LATEST  
OFFERS ON  
MEMORY BEFORE  
ORDERING**

### MATCHED MEMORY UPGRADES FOR AMSTRAD

PC1286/PC1386/PC3286/PC3386/PC5286	
1MB → 4MB	£129

ALT286/386SX	
1MB → 4MB	£129
1MB → 4MB (Zero-wait state)	£139

PC7286, 7386	
2MB	POWERCUT! £62
4MB	£129

PC7486 SLC	
4MB Kit	£139
16MB Kit	POWERCUT! £459

PC9486	
4MB Kit	£139
16MB Kit	£499

ANB386SX	
4MB Module	POWERCUT! £169

386SX25 MEGA PC	
4MB Kit	£129
8MB Kit	£235

NEW! PC9555i	
8MB Kit	£279
16MB Kit	£499

**LIFETIME  
WARRANTY ON  
ALL MATCHED  
MEMORY**

**BEWARE**  
Beware of low grade 5 volt notebook memory that reduces battery life by up to 40%. Powermark plc only supplies 3.3 volt devices from market leaders with manufacturers' approvals.

**DELIVERY CHARGES**  
See page 9

A great new way to buy...  
**Gold Card**  
See page 1

**EARLY BIRD**  
Order Bonus  
See page 29



Everyone at Powermark passes through our training college

# BANK

at  
Powermark



## MATCHED MEMORY UPGRADES FEATURE

THE LARGEST DIRECT MEMORY SUPPLIER

Every month Powermark plc supply thousands of memory upgrades to thousands of satisfied customers, making us the largest direct supplier of memory in the United Kingdom.

### MATCHED MEMORY UPGRADES FOR IBM

- Planar memory plugs directly onto system board
- Price instability - check latest offers on IBM matched memory before ordering

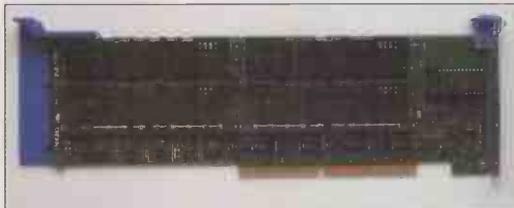


PS/2 55SX, 60, 65SX/57SX/M57	4MB	£135
PS/2 70, Portable 70/75	4MB	£149
	8MB	£279
PS/2 80	4MB	£239
PS/2 140SX, N335SX, NSL	4MB Card	POWERCUT! £149
	8MB Card	£349
PS/2 90, 95, 95A	4MB Kit	£149
	8MB Kit	£279
PS/2 95 ARRAY PENTIUM	8MB Kit	£299
	16MB Kit	£699
VALUEPOINT 6381, 6382	4MB	£129
	8MB	POWERCUT! £279
VALUEPOINT 6384 RANGE	4MB Kit	£139
	8MB Kit	£269
PENTIUM VALUEPOINT PERFORMANCE SERIES	4MB Kit	£139
	8MB Kit	POWERCUT! £299
	16MB Kit	£529
THINKPAD 350, 350C, 710	4MB Kit	£165
	8MB Kit	£309
THINKPAD 355C, 355CS, 360, 360C, 360CS, 730T	4MB Kit	£189
	8MB Kit	£339
THINKPAD 500, 510	4MB Kit	£165
	8MB Kit	£309
THINKPAD 700, 720	4MB Kit	£165
	8MB Kit	£309
THINKPAD 750, 750C, 755C, 755CDV	8MB Kit	£339
	16MB Kit	£639
PC466DX2, 100DX4	8MB Module	£289
TREKKA	2MB	£89
HURDLA, SPRINTA	4MB Kit	£139
	16MB Kit	£459
PS/1 - 386	4MB	£149
PS/1 - PRO 486	4MB	POWERCUT! £139
	8MB	£289
CONSULTANT, ESSENTIAL, WILLOW, EXPERT SERIES	4MB	£139
	8MB	£259

### MATHS CO-PROCESSORS

Installation of a Co-Processor results in a significant speed increase in maths intensive applications eg: spreadsheets, databases, CAD and graphics packages.

	INTEL	IIT	CYRIX
80387 SX (16 MHz → 20MHz)	£53	£35	POWERCUT! £40
80387 SX (40 MHz)	£53	£35	£48
80387 SL (25 MHz)	£53	-	-
80387 DX (16 MHz → 33MHz)	£56	£32	POWERCUT! £41
80387 DX (40 MHz)	-	£35	£41



### MATCHED MEMORY UPGRADES FOR SIMM KITS

- Include:
- full installation instructions
  - anti-static wrist strap
  - dedicated support hotline
  - our famous double guarantee - full lifetime warranty and the Powermark Promise - our 14 day 'no-quibble' money back guarantee

### MATCHED MEMORY UPGRADES FOR IBM

<b>NEW! APTIVA SERIES</b>	
4MB Module	£129
8MB Module	£259
16MB Module	£439
<b>PENTIUM APTIVA</b>	
8MB Kit	£269
16MB Kit	£449
<b>PC 300 SERIES</b>	
4MB Module	£129
<b>PC 700 SERIES</b>	
8MB Module	£259

### MATCHED ADAPTER BOARDS FOR IBM PS/2

*Completely user expandable	
<b>PS/2 50, 50Z, 60 &amp; 65</b>	
16MB Board with 4MB	£295
16MB Board with 8MB	£425
<b>PS/2 70, 80, 90 &amp; 95</b>	
64MB Board with 4MB	£295
64MB Board with 8MB	£465

### MATCHED MEMORY UPGRADES FOR VIGLEN

* Complete range for Executive, Professional and Tower	
<b>GENIE 386SX</b>	
2MB Kit	£64
4MB Kit	£129
<b>VIG II ELITE</b>	
2MB Kit	£69
4MB Kit	£179
<b>VIG III LS (Type 1)</b>	
4MB Kit	£169
8MB Kit	£399
<b>VIG III/25, III/33</b>	
4MB Kit	£129
8MB Kit	£269
16MB Kit	£459

<b>NEW! PENTIUM</b>	
75/90/100/135MHz	
8MB EDO Kit	£299
16MB EDO Kit	£549
<b>EX 4DX33/50</b>	
4MB	£129
8MB	£269

<b>VIG 4SX25, 4DX33, 4DX50, 4DX2-50, 4DX2-66</b>	
4MB Kit	£129
8MB Kit	£269
16MB Kit	POWERCUT! £469

<b>CONTENDER RANGE</b>	
4MB	£139
8MB	£269

<b>GENIE 486VLB RANGE</b>	
4MB Module	£139
8MB Module	£269
16MB Module	POWERCUT! £469
64MB Kit	£1999

<b>GENIE PCI RANGE</b>	
4MB Module	£139
8MB Module	£279
16MB Module	£469



Certificate no. FS 26535  
BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.  
Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

### MATCHED MEMORY UPGRADES FOR APRICOT

<b>XEN 486SX-25, 486DX2-50, 486 DX2-66, PCM</b>	
4MB Module	£149
8MB Module	£269
16MB Module	£499
<b>NEW! SHOGUN SERVER</b>	
16MB Kit	£689
32MB Kit	£1199

### MATCHED MEMORY UPGRADES FOR PACKARD BELL

<b>LEGEND 200/316SX</b>	
2MB Kit	POWERCUT! £72
4MB Kit	POWERCUT! £129
<b>LEGEND 600, 900</b>	
4MB Kit	POWERCUT! £129
8MB Kit	POWERCUT! £279
<b>486 VLB, EXECUTIVE, ELITE RANGE</b>	
4MB Module	£139
16MB Module	£449
<b>FORCE RANGE</b>	
4MB Kit	£129
16MB Kit	£489
<b>MULTIMEDIA 486/586 RANGE</b>	
8MB Kit	£269
16MB Kit	£519

### MATCHED MEMORY UPGRADES FOR APPLE

- Complete range stocked
- Authorised Reseller



### BEWARE

Beware of third party, low grade memory. Powermark plc only supply factory original memory.

Technical Sales  
Order Lines

0181-  
951 3355  
(50 lines)

MEMORY

It's time once again to  
Ponder Memory Moments



with  
Professor Paul

Dear Professor Paul,  
I am about to upgrade the RAM on Granny's PC. I know what parts are needed and she has given me a list of suppliers to obtain prices. 'Pulled' memory and 'ASIC' appear to be inexpensive options. I do not understand the terminology. Please, please help as she is getting agitated.

Yours, Helpless in Healey

Dear Helpless,  
Granny beware... 'pulled' memory refers to second-hand modules. You cannot tell how old they are, how they have been handled or how much they have been used.

ASIC memory is not what it appears to be. Parity SIMMs have an extra memory chip to provide true parity, whereas ASIC SIMMs have a logic gate on them that tricks a system into believing that there is a true parity chip on-board. I recommend only using new modules. Call my laboratory and my technical sales people will answer all your questions. Don't forget the rule: Same Modules - Same Bank.

Yours, Professor Paul

P.S. I have completed my tests on EDO (Extended Data Out), and it's all true - they are faster. It is all down to keeping the data active on the output for longer, thus the next data read cycle can start much faster.

Send your thoughts and queries to Professor Paul, c/o Powermark plc, Premier House, Station Road, Edgware, Middlesex, HA8 7AQ or fax them to 0181 905 6233. You can also Email Professor Paul on: profpaul@powermark.com

Professor Paul makes every effort to answer your memory problems, but he cannot guarantee to reply to everyone.

Okay - So he's not a real professor but we think he should be!

Powermark plc  
Premier House, 112 Station Rd,  
Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355  
(50 lines)

Fax: 0181 905 6233  
Email: sales@powermark.com



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices



Public Sector customers can purchase through HMSO by calling 01603 694153.



Certificate no. FS 26535

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**



... and here's what some of our customers have said ...

*I would like to record how well and professionally I was dealt with by your Mr Tim Hunt when I called with a computer upgrade last week.*

*I just wish other organisations were as helpful and professional.*

R. Ollerton  
Precision Research  
International  
Berkshire

.... I pay particular compliments to a member of your Technical Sales staff: Danielle Lester.

*She has been unfailingly helpful and courteous as well as obviously well informed.*

.... the correct product was identified within seconds together with all necessary details... you have a very competent member of staff - please pass on my appreciation.

R Rainsford Hannay  
Cardoness Estate  
Kirkcudbrightshire

**TURN THE PAGE  
FOR MORE**

# MEMORY

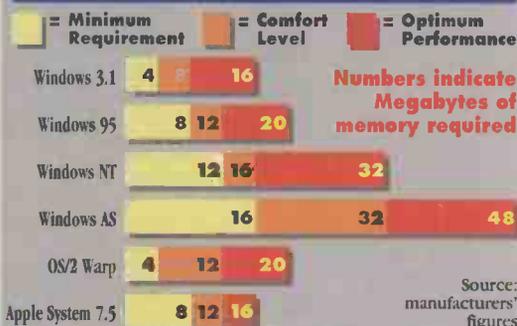


## MATCHED MEMORY UPGRADE FEATURE

**THE LARGEST DIRECT MEMORY SUPPLIER**

Every month Powermark plc supply thousands of memory upgrades to thousands of satisfied customers, making us the largest direct supplier of memory in the United Kingdom.

### HOW MUCH MEMORY DO YOU NEED?



### PCMCIA MEMORY

- All formats stocked: JEDEC, FLASH, OTPROM, DRAM, etc
- Check compatibility before ordering

256K SRAM	£48
512K SRAM	£74
1MB SRAM	£122
2MB SRAM	£99
2MB FRAM	£149
4MB FRAM	£439

**POWERCUT!**

### DRAMS

- Call for devices not shown
- Full range of PROMs, SRAMs & ZIPs available
- 5 year warranty

64K x 1	120ns	£1.79
256K x 1	80ns	£2.80
256K x 4	80ns	£5.77
256K x 16	70ns SOJ	£25
1M x 1	80ns	£4.99
1M x 1	70ns	£5.20
1M x 4	80ns	£17.80

### VRAMS

256K x 8	70ns SOJ	£20
----------	----------	-----

### SRAMS

32K x 8	15ns SRAM	£11
32K x 9	25ns SRAM	£12
128K x 8	20ns SRAM	£28
8K x 8	15ns SRAM	£8

**QUALITY!  
QUALITY!  
QUALITY!**

Being the largest direct supplier means we buy memory direct from world class manufacturers.

Powermark only supply factory original memory.

### MATCHED MEMORY UPGRADES FOR HP NOTEBOOKS AND PALMTOPS

HP OMNIBOOK 300,425

#### SERIES

4MB	£189
6MB	£289

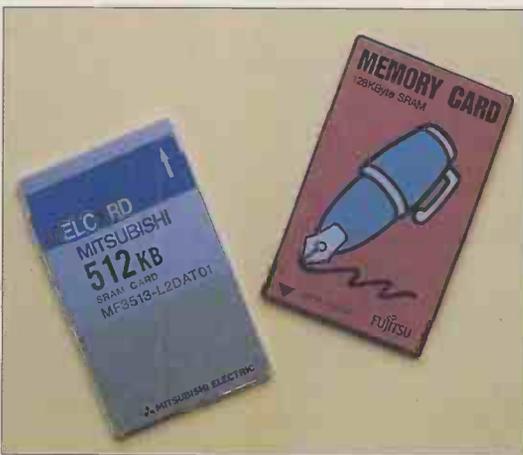
HP OMNIBOOK

#### 530 SERIES

8MB	£389
12MB	£599

HP 95LX & 100LX

1MB	£129
-----	------



### MEMORY UPGRADES FOR TANDON

POSITIVE 386SX25,  
386DX40, 486SX25,  
486DX33

4MB Kit	£129
16MB Kit	£499

**LIFETIME WARRANTY ON ALL MATCHED MEMORY**

“ For at least two years we've recommended 8MB machines to our readers. Under Windows 95 this recommendation becomes a must and because Windows 95 is much better at handling extra memory than 3.x you'll get even better performance from 16MB RAM, if you can afford it, get 16MB RAM.”

Personal Computer World  
September 1995

### MATCHED MEMORY UPGRADES FOR DAN

DAN VANTAGE,

WINDOWS NT SERIES

4MB Kit	£129
16MB Kit	£479

PREMIUM, DANTIUM,

ULTIMATE

8MB Kit	£269
16MB Kit	£499
32MB Kit	£899

**PRICE INSTABILITY!  
CALL FOR LATEST OFFERS ON MEMORY BEFORE ORDERING**

### MATCHED MEMORY UPGRADES FOR AST

AGENTIA 900N, 910N

4MB Module	£179
8MB Module	£339

BRAVO LCII, III

4MB Module	£149
8MB Module	£279

PREMIUM, POWER

PREMIUM 8MB Module	£320
--------------------	------

POWER EXEC 4/25/33

4MB Module	£189
16MB Module	£579

BRAVO NOTEBOOK SERIES

4MB Kit	£175
16MB Kit	£549

BRAVO MS P/75,

PREMMIA GX /P90/P100

8MB Kit	£269
16MB Kit	£509



### MATCHED MEMORY FOR NOTEBOOKS & PALMTOPS

- More memory can increase battery life by up to 18%

COMMODORE LT286/386

4MB Kit	£169
---------	------

SANYO 17NB, 18NB

2MB	£79
4MB	£165

SHARP PC 7700

4MB	£169
-----	------

SHARP PC 6891

4MB	£179
-----	------

PANASONIC CF1000

4MB Module	£198
------------	------

PANASONIC CF580

4MB Module	£185
------------	------

LIBREX V386SX

1MB → 4MB	£199
-----------	------

DEC HI-NOTE RANGE

4MB Module	£197
8MB Module	£398

HP OMNIBOOK RANGE

Complete range stocked



### BEWARE!

Beware of third party, low grade memory. Powermark plc only supply factory original memory.



**DELIVERY CHARGES**  
See page 9

A great new way to buy...



See page 1

**EARLY BIRD Order Bonus**  
See page 29



Everyone at Powermark passes through our training college

# BANK

at Powermark



## MATCHED MEMORY UPGRADE FEATURE

THE LARGEST DIRECT MEMORY SUPPLIER

Every month Powermark plc supply thousands of memory upgrades to thousands of satisfied customers, making us the largest direct supplier of memory in the United Kingdom.

### MATCHED MEMORY UPGRADES FOR COMPAQ

<b>DESKPRO 386/20/25/e/s</b>	
4MB Add-on Module	£169
4MB Expansion Board	£205
<b>SYSTEMPRO, DESKPRO</b>	
<b>486/33L, 50L &amp; 486/25</b>	
2MB Module	£109
8MB Module	£294
32MB Module	£1249
<b>SYSTEMPRO XL 486/50,</b>	
<b>PENTIUM</b>	
256MB Board with 16MB	£599
256MB Board with 32MB	£1099
<b>DESKPRO 386N, 386S/20</b>	
2MB Module	£79
4MB Module	£139
<b>DESKPRO XL 5/60/75/90</b>	
8MB Kit	£269
16MB Kit	£519
<b>DESKPRO 386A/486,</b>	
<b>486/25M, 486S/33M, 486DX2</b>	
64MB Board with 4MB	£249
64MB Board with 8MB	£399
<b>DESKPRO XE &amp; XL FAMILY</b>	
4MB	£129
8MB	£269
<b>DESKPRO 5/90</b>	
8MB Module	£269
16MB Kit	£539
<b>PROLINEA 4/25S, 4/33, 4/50,</b>	
<b>4/66, NET 1, MT</b>	
4MB	£129
8MB	£269
<b>PROLINEA 5/75/90MX</b>	
<b>RANGE</b>	
4MB Kit	£139
8MB Kit	£269
<b>PROLIANT 1000, 2000, 4000,</b>	
<b>PROLIANT PENTIUM</b>	
4MB	£159
8MB	£295
16MB	£539
<b>PROSIGNIA SERIES</b>	
8MB Kit	£269
16MB Kit	£499
32MB Kit	£899
<b>SLT386</b>	
2MB	£109
4MB	£169
<b>LTE LITE 386, 386S/20</b>	
4MB Card	£179
<b>LTE LITE 4120/25/25C/25E</b>	
4MB Card	£159
8MB Card	£289
16MB Card	£549
<b>LTE ELITE SERIES</b>	
4MB Card	£171
8MB Card	£321
<b>CONTURA 400 C/CX, 4100,</b>	
<b>410C/CX</b>	
4MB Module	£169
8MB Module	£339
16MB Module	£769
<b>CONTURA 3/25/20/25C, 4/25</b>	
4MB Card	£149
8MB Card	£287
<b>CONCERTO 4/25, 4/33</b>	
8MB	£335
16MB	£699

### MATCHED MEMORY UPGRADES FOR COMPAQ

<b>AERO 4/25/33</b>	
4MB	£149
<b>NEW! PRESARIO CDS 510, 720,</b>	
<b>972, 982, 990, 992</b>	
4MB Kit	£139
8MB Kit	£269
16MB Kit	£499
<b>NEW! PRESARIO 425, 633, 833,</b>	
<b>850, 866, 800 SERIES</b>	
4MB	£139
8MB	£269
<b>PRESARIO 700/900</b>	
16MB Module	£499
<b>PROSIGNIA 500</b>	
8MB Kit	£289
16MB Kit	£499

All our Matched Memory Kits come with our famous double guarantee - full lifetime warranty and 14 day money back guarantee

### MEMORY EXPANSION BOARDS

<b>KINGSTON ATA BOARD</b>	
16MB Board with 4MB	£239
16MB Board with 8MB	£349
16MB Board with 16MB	£649



### MATCHED MEMORY UPGRADES FOR GRAPHICS CARDS

<b>Diamond Stealth 64</b>	
<b>1MB DRAM all versions</b>	
1MB Upgrade Kit	£49
<b>Diamond Stealth 64</b>	
<b>2MB VRAM PCI and VLB</b>	
1MB Upgrade Kit	£49
<b>Orchid Kelvin 1MB DRAM</b>	
<b>ISA and VLB versions</b>	
1MB Upgrade Kit	£49
<b>Taxan GTS Winboost</b>	
<b>1MB DRAM PCI, VLB,</b>	
<b>ISA versions</b>	
1MB Upgrade Kit	£49

Call for upgrades on video cards not listed here



### BEWARE

Beware of economy memory modules that use ASIC parity generation. Powermark plc only supply SIMMs with genuine parity DRAMs.

### MATCHED MEMORY UPGRADES FOR MITAC

<b>486SX/DXDV Series</b>	
4MB Kit	£129
16MB Kit	£459
<b>PENTIUM RANGE</b>	
8MB Kit	£279
16MB Kit	£539

### MATCHED MEMORY SIMM KITS

Include:

- full installation instructions
- anti-static wrist strap
- dedicated support hotline
- our famous double guarantee - full lifetime warranty and the Powermark Promise - our 14 day 'no-quibble' money back guarantee

**PRICE INSTABILITY!**  
CALL FOR LATEST OFFERS ON MEMORY BEFORE ORDERING

### MEMORY TOOLS

• Complete range of anti-static products available	
<b>ANTI-STATIC WRIST STRAP</b>	
• Essential when handling electrostatic devices	£8
<b>IC EXTRACTOR TOOL</b>	£9
<b>SIMM TESTER</b>	£779
<b>WRIST STRAP TESTER</b>	£99

### MATCHED MEMORY UPGRADES FOR ZENITH

<b>TURBOSPORT 386E</b>	
4MB Kit	£159
<b>Z-NOTE 420/25/33</b>	
4MB Module	£219
<b>Z-SERVER/STATION/</b>	
<b>425/433/450</b>	
8MB Module	£289
<b>Z-SPORT 420/425</b>	
4MB Kit	£169
<b>Z-SELECT SERIES</b>	
8MB Module	£269
<b>Z-SERVER LT P60E,</b>	
<b>EX 450/E RANGE</b>	
8MB Kit	£329
16MB Kit	£639
<b>Z-NOTEFLEX 486DX</b>	
<b>33/50/66/100</b>	
8MB Module	£189
16MB Module	£349
<b>Z-STATION</b>	
<b>510/33/50/66/100</b>	
8MB Kit	£139
16MB Kit	£259

### MATCHED MEMORY UPGRADES FOR ICL

<b>DRS 40, 45</b>	
2MB Kit	£86
4MB Kit	£169
<b>ERGOPRO C4, D4</b>	
8MB Kit	£249
16MB Kit	£539
<b>DRS M95</b>	
4MB Kit	£180
32MB Kit	£1199
<b>VALUEPLUS DL RANGE</b>	
4MB	£168
<b>ZENO SERIES</b>	
4MB Kit	£149
16MB Kit	£539

### WE ALSO SUPPLY UPGRADES FOR...

Acorn, ALR, AST, Austin, Canon, Commodore, Goldstar, Hyundai, MJN, NEC, NeXT, Opus, Phillips, QMS, Tandy, TI, Unisys, Wyse and all Pentium and multimedia systems.

MEMORY

Technical Sales Order Lines

0181-951 3355  
(50 lines)

**HUGE STOCKS**  
Guaranteed same day despatch on a virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While-you-wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday, to 6.00pm Saturday from 9.30am to 4.00pm. Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355  
(50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com

MasterCard VISA SWITCH

Cards are not debited until despatch  
VAT at 17.5% will be added to all prices

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.  
Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

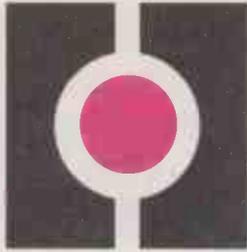


Public Sector customers can purchase through HMSO by calling 01603 694153.



Certificate no. BS 26545

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.  
Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

**MATCHED  
MEMORY  
UPGRADES FOR  
IBM PRINTERS**



<b>IBM 4019 &amp; 4019E</b>	
3MB	£149
<b>IBM 4029</b>	
2MB	<b>POWERCUT!</b> £79
<b>IBM 4039 &amp; 4079</b>	
4MB	<b>POWERCUT!</b> £149
8MB	<b>POWERCUT!</b> £339
<b>LEXMARK OPTRA LX/L/R/RX</b>	
4MB	£149
<b>WINWRITER 200/400/600</b>	
2MB	£79

... and here's what some of our customers have said ...  
*Please find the following order and my compliments to Nira, extremely polite, efficient and very friendly - a real asset to your company.*  
R. Smith  
Kent

**TURN THE PAGE  
FOR MORE**

**MEMORY QUIZ**

???????

"Your starter for 10MB"

1. What is EDO RAM?
2. What is a QIC tape?
3. Why is VRAM faster than DRAM?

Answers on fax form page

# MEMORY



## MATCHED MEMORY UPGRADE FEATURE

**THE LARGEST DIRECT MEMORY SUPPLIER**

Every month Powermark plc supply thousands of memory upgrades to thousands of satisfied customers, making us the largest direct supplier of memory in the United Kingdom.

**MATCHED  
LASERPRINTER  
MEMORY**

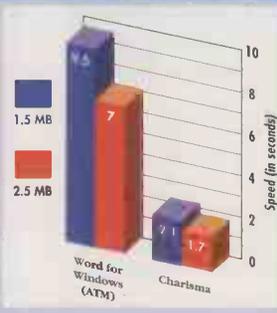
• Price instability - check latest offers on laser printer memory before ordering

<b>APPLE LASER WRITER SELECT 300/310</b>	
4MB	£149
<b>APPLE LASER WRITER PRO 810</b>	
4MB	£179
<b>APPLE LASER WRITER PRO 600/630</b>	
4MB	£149
<b>BROTHER HL-630, 660, 1260</b>	
1MB	<b>POWERCUT!</b> £79
1.5MB	<b>POWERCUT!</b> £119
<b>BROTHER HL8/E/V, HL10, DPS</b>	
2MB	£109
<b>CANON NOTEJET 486, BN22/BJC-880</b>	
4MB Module	£149
<b>CANON LBP4, 4+, LITE, SX</b>	
2MB Board	£149
<b>CANON LBP8II</b>	
2MB	£95
<b>CANON LBP8IV</b>	
4MB	<b>POWERCUT!</b> £119
<b>CANON LBP 860, 1260</b>	
4MB	£129
16MB	£499
<b>COMPAQ PAGEMARQ 15/20</b>	
8MB	£269
16MB	£579
<b>EPSON EPL4000/4100/ 4300/8100</b>	
2MB	£99
<b>EPSON EPL7000</b>	
3MB	£125
<b>EPSON ACTION LASER 1600/1100</b>	
4MB	£149
<b>FUJITSU VM4, VM8</b>	
4MB Module	£149
<b>KYOCERA F800</b>	
2MB	£129
<b>KYOCERA FS400, 410, 1500, 1550</b>	
2MB	£85
4MB	£149
<b>NEC SILENT WRITER 95/95FX/97/97FX</b>	
2MB	£85
<b>OKI LASER 400, 410E</b>	
2MB	£159
<b>OKI 800/820</b>	
2MB	£99
<b>OKI LASER 830/840/850</b>	
2MB	£109
<b>PANASONIC 4420, 4450i</b>	
2MB	£109
<b>PANASONIC 5410, 4440</b>	
2MB	£105
<b>TEXAS MICROLASER PS, MICROWRITER</b>	
1MB	£69

**LASER PRINTER MEMORY - AN EXPLANATION**

Increasing memory in your laser printer will enable it to print large, graphics intensive documents. Additional benefits include faster print spooling, faster printing speed and multiple font downloading.

This chart shows the improvement a single megabyte of printer memory can make. "Speed" represents the amount of time required to spool the document into the printer and get the full use of your PC back.



How much memory do you need?

Full page graphics	1MB - 2MB	PostScript with duplexing	4MB
Soft fonts	1MB	4 - 5 PostScript fonts	2MB
PostScript cartridge	1.5MB	8 - 10 PostScript fonts	4MB
		Network printer sharing	4MB

**MATCHED  
MEMORY  
UPGRADES FOR  
HP PRINTERS**



AUTHORISED RESELLER

<b>LASERJET II, IID</b>	
2MB	<b>POWERCUT!</b> £89
4MB	£159
<b>LASERJET III, IIIi, IIIiX, IIIiP</b>	
2MB	<b>POWERCUT!</b> £82
4MB	£149
<b>LASERJET 5P, 5MP</b>	
4MB	<b>POWERCUT!</b> £139
8MB Module	£259
<b>LASERJET IIIsi, 4, 4M, 4si, 4MV, 4MP, 4P, 4V</b>	
4MB	<b>POWERCUT!</b> £129
<b>LASERJET 4L</b>	
1MB	£59

<b>DESKJET 500, 500c, 550 256K</b>	
	£39
<b>DESKJET 520, 540 256K Kit</b>	
	£39
<b>DESKJET 560C</b>	
4MB	£139
<b>DESKJET 660C/PS</b>	
4MB	£139
8MB	£259
<b>DESKJET 1200 C/PS/1200, 1600C</b>	
2MB	£85
4MB	£149
8MB	£259

<b>NETSERVER SERIES</b>	
32MB Module	£1399
<b>DESIGNJET 600/650</b>	
4MB	£139
<b>PAINTJET XL300</b>	
	£Call
<b>HP COLOUR LASERJET</b>	
4MB Module	£139
8MB Module	£259

All our Matched Memory Kits come with our famous double warranty - full lifetime warranty and 14 day money back guarantee

**MATCHED  
MEMORY  
UPGRADES FOR  
DEC  
Workstations**

• Call for models not listed here

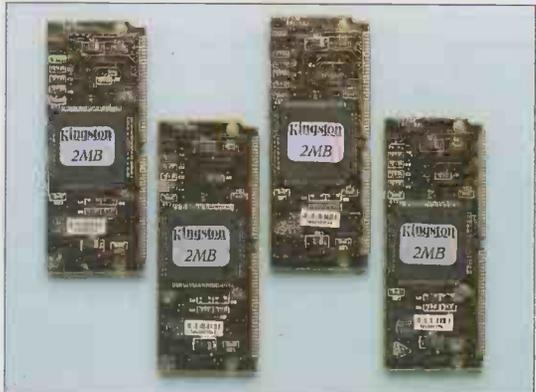
<b>MICROVAX 3100 MODEL 30 &amp; 40</b>	
8MB Kit	£386
<b>DEC-SYSTEM 5100</b>	
8MB Kit	£386
32MB Kit	£1986
<b>ALPHASTATION 200/400 SERIES</b>	
16MB Kit	£575
32MB Kit	£1099

**MATCHED  
MEMORY  
UPGRADES FOR  
SUN  
Workstations**

• SPARC tested and approved  
• All Sun memory is individually tested

<b>SPARC 1, 3/60, 3/80, 4/40, 4/60, 4/65, 4/75</b>	
4MB Kit	<b>POWERCUT!</b> £162
16MB Kit	£499
<b>SPARC ELC</b>	
16MB Kit	<b>POWERCUT!</b> £489
<b>SPARC STATION LX</b>	
32MB Kit	£1199
<b>SPARC 330, 370 &amp; 390</b>	
32MB Kit	£1802
<b>SPARCSERVER 630MP, 670, 690</b>	
64MB Kit	£2812
<b>SPARCSTATION 10/20</b>	
16MB	£699

**QUALITY!  
QUALITY!  
QUALITY!**  
Being the largest direct supplier means we buy memory direct from world class manufacturers. Powermark plc only supply factory original memory.



**MATCHED  
MEMORY  
UPGRADES FOR  
IBM RISC  
Workstations**

• Call for models not listed here

<b>RISC SYSTEM 6000</b>	
32MB Kit	£1299
64MB Kit	£2699
448MB Kit	£17,384
<b>POWERSTATION/ POWERSERVER 200</b>	
8MB Kit	£298
<b>X STATION</b>	
6MB Kit	£228

**MATCHED  
MEMORY  
UPGRADES FOR  
SILICON  
GRAPHICS  
Workstations**

<b>POWER SERIES IRIS</b>	
32MB Kit	£2030
<b>PROFESSIONAL IRIS</b>	
4MB	£265
<b>INDIGO, 4D/30, 4D/35533</b>	
64MB Kit	<b>POWERCUT!</b> £1999
<b>CHALLENGE M/ POWER CHALLENGE SERIES</b>	
	&Call

**DELIVERY  
CHARGES**  
See page 9

A great new way to buy...  
**MEMORYBANK  
Gold Card**  
See page 1

**EARLY BIRD  
Order Bonus**  
See page 29



Everyone at Powermark passes through our training college

# BANK

at Powermark



## MATCHED MEMORY UPGRADE FEATURE

THE LARGEST DIRECT MEMORY SUPPLIER

Every month Powermark plc supply thousands of memory upgrades to thousands of satisfied customers, making us the largest direct supplier of memory in the United Kingdom.

### MATCHED MEMORY UPGRADES FOR DELL

<b>325/D/P, 333/D/P</b>	
2MB → 6MB	£129
2MB → 10MB	£289
<b>POWERLINE</b>	
<b>WORKSTATION SERIES</b>	
4MB Kit	£159
8MB Kit	£299
16MB Kit	<b>POWERCUT!</b> £499
<b>POWER DESKTOP SERIES</b>	
4MB Module	<b>POWERCUT!</b> £139
<b>POWEREDGE SP/XE SERIES</b>	
8MB Kit	£299
16MB Kit	£579
<b>NL20, NL25</b>	
2MB Module	£109
<b>320SLI</b>	
2MB	£99
<b>DIMENSION 'I'</b>	
4MB	£139
16MB	£499

### MATCHED MEMORY UPGRADES FOR DELL

<b>DIMENSION XPS, P100C, 133C</b>	
<b>NEW!</b> 8MB EDO Kit	£299
<b>NEW!</b> 16MB EDO Kit	£599
<b>NEW!</b> 32MB EDO Kit	£898
<b>OMNIPLEX 466/50ME</b>	
8MB Module	£259
16MB Module	£499
<b>OMNIPLEX PENTIUM RANGE</b>	
8MB	£279
16MB	£519
<b>OPTIPLEX</b>	
<b>XL/XM/XMT 5/75/90/100</b>	
16MB Module	£499
<b>LATITUDE M SERIES</b>	
4MB	£149
8MB	£309
<b>LATITUDE XP SERIES</b>	
4MB	£169
8MB	£289
16MB	£599
<b>NETPLEX SERIES</b>	
4MB Module	£139
8MB Module	£269
16MB Module	£439
<b>PERFORMANCE 4/33/50/66</b>	
4MB	£139
8MB	£259

### MATCHED MEMORY UPGRADES FOR GATEWAY

<b>PC 4SX-33</b>	
4MB Module	£129
16MB Module	£475
<b>PC 4DX-33V, PC 4DX-66V</b>	
4MB Module	£129
16MB Module	£475
32MB Module	<b>POWERCUT!</b> £899
<b>PC 4DX2-66P/V</b>	
4MB Module	£129
8MB Module	£249
16MB Module	£475
32MB Module	£999
<b>PC P5-60, P5-66, P90, P100</b>	
8MB EDO Kit	£299
16MB EDO Kit	£499
32MB EDO Kit	£1099
64MB EDO Kit	£2299
<b>PC 4D-66, PC 4DX-100</b>	
8MB Kit	£249
32MB Kit	<b>POWERCUT!</b> £999
<b>PS-120/133 ELITE, P90 PREMIUM SERIES</b>	
<b>NEW!</b> 8MB EDO Kit	£299
<b>NEW!</b> 16MB EDO Kit	£575
<b>LIBERTY NOTEBOOK</b>	£Call

### MATCHED MEMORY UPGRADES FOR DIGITAL

<b>VENTURIS DESKTOP RANGE</b>	
4MB Module	£159
8MB Module	£299
16MB Module	£549

### MATCHED MEMORY UPGRADES FOR ESCOM

<b>486 DESKTOP RANGE</b>	
4MB Kit	£139
16MB Kit	£475
<b>P90/100PCI</b>	
8MB Kit	£269
16MB Kit	£529



### BEWARE!

Beware of economy memory modules that use ASIC parity generation. Powermark plc only supply SIMMs with genuine parity DRAMS.

30 Memory Specialists ready to take your call

## CYRIX FEATURE

### CYRIX 386 TO 486 PROCESSOR UPGRADE



THE CYRIX MICROPROCESSOR UPGRADE FAMILY



The package consists of one Cx486DRx<sup>2</sup> Microprocessor, a 386DX removal tool, (SX version is a clip-on chip), installation manual, upgrade cache installation software (on both 3.5" and 5.25" media) and a pin 1 locator arrow (for correctly aligning the upgrade processor in the socket). A Cyrix-green heatsink is also included with 20/40, 25/50 and 33/66 versions.

#### CYRIX DRx<sup>2</sup>/SRx<sup>2</sup>

- Single chip upgrade solution for 386 DX and SX personal computers
- Clock doubling technology for increased performance
- 1K on-chip cache
- Very easy to install
- Compatible with DOS, Windows and OS/2
- Free technical support
- Limited lifetime warranty

Plug in the Cyrix 386 to 486 Processor Upgrade. It's the fastest, most cost effective way to a 486 computer and it's totally compatible with the world's leading software: DOS, Windows and OS/2 operating systems.

It's easy to install. Just clip on the Cyrix processor

and load the cache installation software. It's as simple as that. You're ready to run in minutes.



### EVEN LOWER PRICES!

<b>386DX</b>	
DX 16MHz → 486 32MHz	£128 <del>£129</del>
DX 20MHz → 486 40MHz	£128 <del>£129</del>
DX 25MHz → 486 50MHz	£139 <del>£155</del>
DX 33MHz → 486 66MHz	£149 <del>£159</del>
<b>386SX</b>	
SX 16MHz → 486 32MHz	£128 <del>£129</del>
SX 20MHz → 486 40MHz	£128 <del>£129</del>
SX 25MHz → 486 50MHz	£139 <del>£155</del>

Technical Sales Order Lines

0181-951 3355  
(50 lines)

MEMORY & PROCESSOR UPGRADES

## Email from America

I've just purchased an amazing product - NoiseBuster active noise reducing headphones and they really work! The NoiseBuster reduces rumbles and hums by between 50 and 95% whilst leaving desired sounds such as speech, ringing telephones and music clearly audible.



Microphones in the headphones listen for offensive noise and feed those sounds to the controller pack that produces 'anti' noise waves at 180° out of phase. These waves help cancel out annoying sounds like vacuum cleaners, air conditioners, aeroplane engine drone and vehicle engines.

Just clip the pager sized pack to your belt, switch on and relax. There is also a line out jack socket so you can plug the NoiseBuster in to your Walkman or aircraft entertainment system.

I've instructed my purchasing team to source them and now you can buy them from stock at a very low price of only £67.

*Mark Simon*

PS. Professor Paul will go bananas when he sees one! NoiseBuster includes battery and line-in cord with volume control NOISEBUSTER £67

**Powermark plc**  
Premier House, 112 Station Rd,  
Edgware, Middlesex HA8 7AQ

Tel: 0181-951 3355  
(50 lines)

Fax: 0181 905 6233

Email: sales@powermark.com



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices



Public Sector customers can purchase through HMSO by calling 01603 694153.

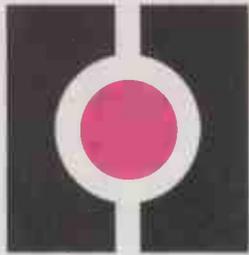


Certificate no. PS 26535

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

Power



Mark®

Technical Sales  
Order Lines  
**0181-  
951 3355**  
(50 lines)



DELIVERY CHARGES

UK MAINLAND  
Next working day courier delivery to your door

**SMALL ITEMS**

Examples: memory, sound/video cards, CD ROM titles, small software packages

UP TO 3 ITEMS  
£6.95 total

4 ITEMS OR MORE  
£1.95 for each additional item

**LARGE ITEMS**

Examples: CD ROM drives, monitors, multimedia kits, software suites

1ST ITEM  
£8.95

EACH ADDITIONAL ITEM  
£4.95

Call for rates outside UK mainland

# MEMORY

INTEL OVERDRIVE

**LOWER PRICES**



Intel OverDrive® processors enable you to take advantage of advanced technology on your existing upgradable Intel 486 CPU-based system. OverDrive® processors accelerate all applications running under MS-DOS, Windows,

Intel OverDrive Processor  
CPU upgrade - speeds up all software on existing systems



**INTEL DX4 OVERDRIVE®**

- Give your PC 100MHz performance with the Intel DX4 OverDrive® processor
- For most 16, 20, 25, 33MHz Intel 486 SX or DX CPU-based systems
- Features Intel's "speed tripling" technology
- 16K on-chip cache memory
- On-chip maths co-processor
- The most powerful PC upgrade available
- Accelerates DOS, Windows, Windows 95, OS/2 and Unix application



INTEL DX4 25MHz - 75MHz £105  
Order codes  
Single socket PC DX4/2575DX  
Dual socket PC DX4/2575SX

INTEL DX4 33MHz - 100MHz £135  
Order codes  
Single socket PC DX4/33100DX  
Dual socket PC DX4/33100SX



**OVERDRIVE®**

watch your applications run at blazing speeds. Intel OverDrive® processors are available for all Intel 486 CPU-based systems with or without an OverDrive® socket.

**INTEL DX2 OVERDRIVE®**

- Give your Intel 486 SX or DX PC 66MHz performance with the Intel DX2® OverDrive® processor
- For any 16, 20, 25 or 33MHz Intel 486 SX or DX CPU-based systems
  - Features Intel's "speed doubling" technology
  - 8K on-chip cache memory
  - On-chip Maths Co-processor
  - Opens and runs all your software applications faster on your system

INTEL DX2 25MHz - 50MHz £78  
Order codes  
Single socket PC DX2/2550DX  
Dual socket PC DX2/2550SX

INTEL DX2 33MHz - 66MHz £99  
Order codes  
Single socket PC DX2/3360DX1  
Dual socket PC DX2/3360DX2

**LIFETIME WARRANTY ON ALL INTEL OVERDRIVE® PROCESSORS**



Can be installed in seconds by anyone

**INTEL PENTIUM® OVERDRIVE®**

The Pentium® OverDrive® processor is the newest and fastest member of the Intel OverDrive® processor family. It is the upgrade option for Intel SX2 and DX2® CPU-based systems and is the superior upgrade option for Intel 486SX and DX based systems. It is based on Intel's latest and most sophisticated Pentium® processor technology and features a superscalar architecture,

**Amazing performance**

which allows the execution of more than one instruction per clock cycle, 32K on-chip cache (one 16K code cache and one 16K data cache) and a faster floating point unit. It operates at two and a half times the speed of the system bus. For example, when a Pentium OverDrive® processor is installed in a 33MHz Intel 486 DX based system, the integer unit, floating point unit and cache operate at 83MHz while the speed of the external bus remains at 33MHz, thus delivering Intel® processor class performance.



INTEL P24T 63MHz DX5/P24T3 £189 **NEW!** INTEL P24T 83MHz DX5/P24T3 £199

TURN THE PAGE FOR MORE

**REAL HARD DRIVES**

Famous hard drives...  
The hand gear change Velocette motor cycle  
Driving the Sinclair C5 in heavy traffic  
Your first solo drive after passing your test



DELIVERY CHARGES  
See page 9

A great new way to buy...  
See page 1



EARLY BIRD Order Bonus  
See page 29



Everyone at Powermark passes through our training college

## ADAPTEC ADAPTER FEATURE



I/O. NOW MORE IMPORTANT THAN EVER.™

### AIRPORT 2000 AHA9320

These products are designed to connect to the serial port of a PC and/or portable and enables wireless file transfers. The kits include Transxit Software which is a Windows based application that enables Infra-Red transfers.



- IrDA compliant
- Plugs into standard serial port
- Up to 2 metre range
- High speed file transfer

AIRPORT 1000 PORTABLE CONNECTION £Call

AIRPORT 2000 DESKTOP CONNECTION £Call

AIRPORT 2500 COMBO KIT £Call

### SLIMSCSI AHA1460

The SlimSCSI adapter delivers high performance peripheral connections to your PCMCIA portable PC with quick connection of up to 7 external SCSI devices like CD ROMs, hard drives and scanners.



- Type II, III & Toshiba IV compatible
- Adaptec EZ-SCSI Software
- Card & Socket Services software
- 10Mb/Sec data transfer
- Ideal for connection to multimedia scanning peripherals

SLIMSCSI PCMCIA CONNECTION £142

### SCSI MASTER AHA1542CP KIT



- The industry standard, high performance ISA solution with Plug & Play support
- Software driven Board Configuration through SCSISelect

SCSI MASTER AHA1542CP KIT £169

SCSI experts available for specialist advice

### PCI SCSI MASTER FAMILY

This family of high performance, intelligent host adapters supports advanced SCSI features with fast data transfers, combined with the high performance PCI system bus they deliver maximum I/O throughput for demanding desktop and Network applications. The family brings compatibility, reliability and ease of use, with all major operating systems, SCSI-2 and SCSI-3 peripherals as well as industry standard application software.

PCI SCSI MASTER AHA2940 KIT £185

- Up to 10Mb/s transfer rate

PCI SCSI MASTER AHA2940W KIT £209

- Fast & Wide SCSI
- Up to 20Mb/s transfer rate with support for 15 devices

PCI SCSI MASTER AHA3940 KIT £299

- Multichannel Fast SCSI
- Up to 14 device support on two SCSI channels
- Also available as Wide option



PCI ULTRA WIDE SCSI HOST ADAPTER AHA2940UW KIT £Call

- Increase data transfer to up to 40Mb/s, with 15 peripheral devices supported

## VALUE AND PERFORMANCE ADAPTERS

TOTAL CD AHA1505 KIT £39

TOTAL CONNECT AHA1515 KIT £65

- Like the Total CD this kit offers affordable connection with the added bonus of boot device connectivity
- On board BIOS for boot device support

SCSI DIRECTION AHA1522 KIT £109

- The SCSI Direction kit offers you all the connectivity advantages of SCSI with multiple OS & Peripheral support
- Up to 10Mb/s transfer rate
- Floppy support

EISA SCSI MASTER AHA2742AT KIT £267

- TwinChannel, 14 device support
- MINISCSI PLUS £65
- MINISCSI EPP £85
- Plugs into parallel port
  - SCSI-Works software
  - Ideal for portable backup

## HP COLORADO FEATURE



TRAVAN

HP COLORADO T1000

### HP COLORADO T1000

- New, advanced TRAVAN technology
- 800MB capacity (with compression)
- Up to 9.5MB/min backup speed
- Fits into 3.5" or 5.25" drive bay

HP COLORADO T1000 CHST51000 £123

### HP COLORADO BACKUP

- Easy to use software
  - Works with all HP Colorado devices
- COLORADO BACKUP £39

### HP COLORADO TRAKKER

- Plug and play - no hardware installation
- A total backup solution - fully assembled systems available in up to 350MB and up to 680MB capacities

PARALLEL PORT TRAKKER 350 £146

PARALLEL PORT TRAKKER 700 £198

TRAKKER CARRY CASE £37

### HP COLORADO JUMBO

- Connects to your floppy controller
  - Includes software and cables
- JUMBO 350 £79
- JUMBO 700 £124
- JUMBO 1.36GB **POWERCUT!** £184
- QIC 3020 £23
- FAST CONTROLLER CARD £49
- EXTERNAL MOUNTING KIT £61

## COLORADO MEMORY SYSTEMS

A division of  
HEWLETT PACKARD

### HP SURESTORE TAPE SERIES

- Very fast DAT drive system
- Capacity from 2GB to typically 8GB
- PC Magazine Editors's Choice

Int ISA Kit\*  
HP SureStore Tape 2000 £651 £875  
HP SureStore Tape 5000 £739 £1639  
HP SureStore Tape 6000 £844 £1849

- ISA Kit includes cable, cartridge, head cleaner & full software

Mass storage experts available for specialist advice

### Technical Sales Order Lines

0181-951 3355  
(50 lines)

PROCESSOR  
UPGRADES &  
MASS STORAGE

**HUGE STOCKS**  
Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

TURN THE PAGE FOR MORE

**UPGRADE DRIVE THRU**  
While-you-wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm. Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355  
(50 lines)

Fax: 0181 905 6233  
Email: sales@powermark.com



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices

10



Public Sector customers can purchase through HMSO by calling 01603 694153.



Certificate no. FS 20355

BSS750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



# MEMORY

## CONNER FEATURE

### CONNER® The Storage Answer

**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

#### DATA CARTRIDGES

	Each 10 Pack	
DC6150	£13	£112
DC6250	£15	£139
DC6525	£19	£169
DC9100Magnus	£31	£295

All QIC tapes are preformatted

QIC	Capacity	Each	10 Pack
DC2120	120-250MB	£13	£119
DC2120XL	350MB	£17	£151
QIC3010	700MB	£17	£185
QIC3020	1.7GB	£23	£209

QIC-Wide	Capacity	Each	10 Pack
5500c	420MB	£19	£169
9000c	850MB	£21	£190

DAT	Length	Each	10 Pack
1.3GB	60m	£6	£58
2GB	90m	£9	£89
4GB	120m	£15	£145
Head Cleaner		£26	

#### IDE DRIVES

CFS425A	<b>POWERCUT!</b> 425MB	14ms	£96
CFS635A	<b>POWERCUT!</b> 635MB	12ms	£120
CFS850A	850MB	14ms	£129
CFS1275A	1.275GB	14ms	£177

#### SCSI DRIVES

CFP1080	1.08GB	10ms	£289
CFP2107	2.1GB	9ms	£629
CFP2105	2.1GB	11ms	£569
CFP4207 Caymen	4.2GB	8ms	£999

#### 1GB HARD DISKS AND ABOVE FEATURE:

- 5 year warranty on all SCSI drives
- Embedded servo systems eliminate the need for thermal recalibration and provide consistent data transfer rates
- Hot pluggable for uninterrupted data access in RAID applications
- Low power consumption means less heat and component wear



**HARD DISK EXPERTS  
AVAILABLE FOR  
SPECIALIST ADVICE**

**NEW!**

#### CONNER TRAVAN 800MB

The Travan 800 is the latest in value data protection. Each kit includes

- Backup Exec software
- Interface cable
- User Guide
- 800MB Travan cartridge
- 9.5MB/minute backup rate
- Backward compatible with QIC80 and QIC40

TAPE-STOR 800MB INTERNAL	£125
TAPE-STOR 800MB EXTERNAL	£225

#### CONNER TAPE-STOR 850MB

- External parallel porttape backup or internal IDE system
  - Compact, portable external system
  - 9.5MB/minute backup rate
  - QIC-wide and QIC-3010 compatibility
- |                          |      |
|--------------------------|------|
| TAPE-STOR 850MB INTERNAL | £139 |
| TAPE-STOR 850MB PARALLEL | £219 |

#### CONNER TAPE-STOR 420MB

- Kit includes: Tape, Software, Manuals and cables
- Backward compatible with QIC80 and can read QIC40
  - 9.5MB/minute backup rate
- |                          |      |
|--------------------------|------|
| TAPE-STOR 420MB INTERNAL | £89  |
| TAPE-STOR 420MB PARALLEL | £207 |

## MAXTOR HARD DISK KIT FEATURE

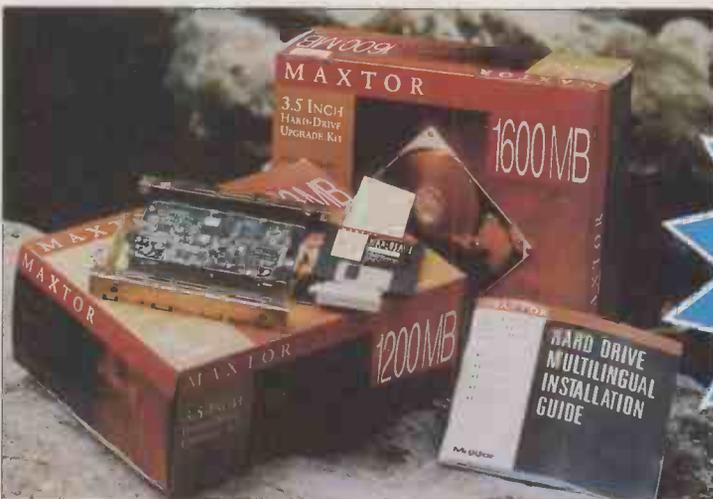
### Maxtor

- Available in the following EIDE capacities: 850MB, 1.0GB, 1.2GB and 1.6GB
- Ideally suited for upgrading to Windows 95 or Windows NT
- Exclusive, hotline technical support, BBS and faxback service available to only to Maxtor customers

- "No quibble" Maxtor service and warranty

#### MAXTOR IDE DRIVE KITS

K127540A	540MB Kit	12ms	£139
K127850A	850MB Kit	12ms	£169
K1271080A	1.0GB Kit	12ms	£205
K1271260A	1.2GB Kit	12ms	£219
K1271620A	1.6GB Kit	12ms	£389



#### ALL KITS INCLUDE:

- Easy step by step installation guide
- Dual IDE cable
- Formatting software that can format hard drives greater than 528MB
- 5.25" mounting brackets
- Rail supports
- Screws

**Complete  
Hard  
Disk  
Kits!**

**TURN THE PAGE  
FOR MORE**

#### VERBATIM FEATURE

##### DISKETTES

3.5" HD 10 Pack	£4
3.5" HD Preformatted 20 Pack + 2 free!	£8

##### DATA AND DAT CARTRIDGES

	Unit 10 Pack	
DC2120 QIC 80	£13	£119
DC2120XL	£17	£150
MC 3000 XL	£17	£185
4mm 60m	£6	£58
4mm 90m	£6	£58
8mm 112m	£6	£58

##### BLANK CDS

CD-R 74 Min	£10
-------------	-----

##### OPTICAL DISKS

3.5" 128MB	£17
3.5" 230MB	£22
5.25" 600MB	£45
5.25" 1.3GB	£57

**DELIVERY  
CHARGES**  
See page 9

A great  
new way  
to buy...



See page 1

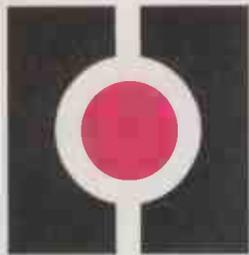
**EARLY BIRD  
Order Bonus**  
See page 29



Everyone at  
Powermark passes  
through our  
training college



Power



Mark®

**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

“... and here's what some of our customers have said ...  
I recently required a tape streamer. Having looked through all the advertisements I had no hesitation in choosing Powermark. I could have purchased the unit £5 cheaper elsewhere, but your excellent combination of presentation style, humour, price and BSI accreditation won me over. I appreciated the little ditties scattered around and liked your approach with the fancy dress. It was nice to see some humour and originality in an otherwise stale collection of ads.

P.S: The salesperson didn't let me down either!

C. Jenkins  
Leyfield Systems Ltd  
West Glamorgan

**TURN THE PAGE  
FOR MORE**

**MEDIA MOMENTS**  
Famous media moments...

The policeman on the white horse at the first Wembley cup final

The Tianaman Square protest

The light aircraft that landed in Red Square



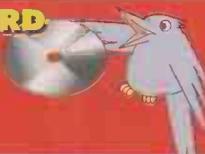
13

**DELIVERY CHARGES**  
See page 9

A great new way to buy...  
See page 1



**EARLY BIRD**  
Order Bonus  
See page 29



Everyone at Powermark passes through our training college

# MEMORY

## SYQUEST STORAGE FEATURE



**SyQuest®**



SYQUEST SQ5200

### SYQUEST REMOVABLE CARTRIDGE HARD DISK DRIVES

- Work like fixed drives yet provide unlimited capacity

### SYQUEST 3.5" RANGE

- Choice of 105MB or 270MB formatted capacities on each cartridge

**Unsurpassed warranties - 2 years on drives and 5 years on data cartridges**

### EZ135 DRIVES

**135MB Removable Disk Drive**

SYQ135/I	EZ135 IDE Internal	£159
SYQ135/E	EZ135 SCSI External	£189
SYQ135/P	EZ135 Parallel	£189
SYQ135/C	135MB Cartridge	£17

**Free cartridge with all EZ135 disk drives**

### SYQUEST CARTRIDGES

Capacity	Form	Each	5 Pack
SYQ105/C	105MB 3.5"	£39	£190
SYQ270/C	270MB 3.5"	£40	£195
SYQ4/C	44MB 5.25"	£29	£140
SYQ88/C	88MB 5.25"	£35	£170
SYQ200/C	200MB 5.25"	£50	£245

### SYQUEST REMOVABLE CARTRIDGE HARD DISK DRIVES

	Type	Capacity	Internal	External
SYQ270I	SyQuest 3.5" IDE	270MB	£249	£339
SYQ270E	SyQuest 3.5" SCSI	270MB	£254	£344
SYQ270P	SyQuest 3.5" PARALLEL	270MB	-	£429
SYQ88	SyQuest 5.25" SCSI	88MB	£179	£269
SYQ200	SyQuest 5.25" SCSI	200MB	£259	£349

## IOMEGA TAPE BACKUP FEATURE



Makers of Bernoulli

### DITTO 800

- New, advanced Travan technology
- 800MB capacity (with compression)
- Backward compatible with 250, 350 and 420MB tapes
- Direct drive - no belt
- Network compatible

DITTO 800 INTERNAL	£129
DITTO 800 PARALLEL	£209

TRAVAN



DITTO 800

### TRAVAN 3 3.2GB DRIVE

INTERNAL	£259
PARALLEL	£339
1.7GB INTERNAL QIC 3020 TAPES (for 1.7GB)	£23
QIC & WIDE 420MB INTERNAL	£89
TAPE700 PARALLEL PORT	£195
TAPE ACCELERATOR CARD	£49
700MB DATA CARTRIDGE	£17

## IOMEGA ZIP DRIVES

**Awarded 5 mice by MacUser, 9th June 1995**

- Increase your hard drive capacity inexpensively on 100MB removable disks
- Provides high capacity mobile storage - use it at the office, at home, on the road, anywhere
- Zip Tools Software helps you track, organise and find everything with ease
- Excellent and easy for transferring information between two computers
- Makes backup fast easy and worry free



- Use as many disks as you need for one or more people or applications

IOZIP Parallel	£159
IOZIP SCSI	£159
100MB Cartridge Single	£15
5 Pack	£60
10 Pack	£115

## PANASONIC OPTICAL & CD ROM DRIVE FEATURE



### Panasonic QuadPro IDE

#### 4xSpeed Upgrade Kit

- New quad speed CD ROM drive
- PowerIDE! software to eliminate conflict with hard disk drive
- Complies with MPC level 3
- 32-bit disk access
- Video-CD and CD-i movie
- Includes all accessory parts for quick, trouble free installation
- Optional IDE interface card available

QUADPRO KIT IDE	£129
OPTIONAL INTERFACE CARD	£11



### Panasonic QuadPro SCSI

#### 4xSpeed Upgrade Kit

- New quad speed CD ROM drive
- Corel SCSI! software supports most SCSI host adapters
- Complies with MPC level 3
- 256Kb cache memory
- Video-CD and CD-i movie
- Includes all accessory parts for quick, trouble free installation

QUADPRO SCSI KIT WITHOUT INTERFACE CARD	£149
QUADPRO SCSI KIT WITH INTERFACE CARD	£199



### Panasonic PD System

#### 2 in 1 CD ROM and Optical Disk drive

- New combined quad speed CD ROM drive and 650MB rewritable optical drive
- Removable 650MB optical media for archiving or re-distribution
- SCSI-2 interface for Mac or PC
- Corel SCSI! supports most SCSI host adapters
- Supports Video-CD and CD-i movie
- Includes all accessory parts for quick, trouble free installation

PD SYSTEM KIT WITHOUT I/F CARD	£499
PD SYSTEM KIT WITH I/F CARD	£569
PD 650MB MEDIA	£39
PD SYSTEM EXTERNAL KIT	£629

# BANK

at  
Powermark

## DIAMOND MULTIMEDIA FEATURE

### DIAMOND MULTIMEDIA

Diamond have established themselves as the industry standard for high speed graphics accelerators, combining dependable quality with value and high performance.

Windows 95 compatible

#### SPEEDSTAR 64 PRO

- The best price/performance card for Windows games packages
  - DRAM based
  - ISA bus
  - Includes Corel Draw 3 software
- |                             |      |
|-----------------------------|------|
| <b>SPEEDSTAR 64 ISA 1MB</b> | £105 |
| <b>SPEEDSTAR 64 ISA 2MB</b> | £169 |

#### STEALTH SE

- The best price/performance card for Windows/games packages
  - DRAM based
  - PCI or VLB bus
- |                           |     |
|---------------------------|-----|
| <b>STEALTH SE PCI 1MB</b> | £69 |
| <b>STEALTH SE VLB 1MB</b> | £69 |



#### STEALTH 64 VIDEO DRAM

- The world's fastest DRAM graphics accelerator
  - DRAM based
  - PCI or VLB bus
  - Now with software MPEG support
- |                                      |      |
|--------------------------------------|------|
| <b>STEALTH 64 VIDEO DRAM PCI 1MB</b> | £87  |
| <b>STEALTH 64 VIDEO DRAM PCI 2MB</b> | £134 |
| <b>STEALTH 64 VIDEO DRAM VLB 1MB</b> | £89  |
| <b>STEALTH 64 VIDEO DRAM VLB 2MB</b> | £134 |

#### STEALTH 64 VIDEO VRAM

- The world's fastest 64-bit graphics accelerator
  - Now with software MPEG support
- |                              |      |
|------------------------------|------|
| <b>STEALTH 64 VV PCI 2MB</b> | £213 |
| <b>STEALTH 64 VV PCI 4MB</b> | £309 |
| <b>STEALTH 64 VV VLB 2MB</b> | £213 |
| <b>STEALTH 64 VV VLB 4MB</b> | £309 |

## HAUPPAUGE FEATURE

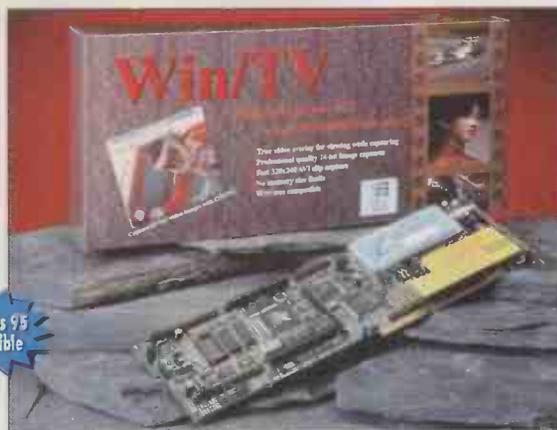
### WIN/TV CELEBRITY

#### THE NEW GENERATION

...the best choice for Multimedia Video! Perfect colour digitising from Hauppauge. Works with all VGA and SVGA cards up to 1280 x 1024 with up to 16.7 million colours, requiring no feature connector. No memory size limitations make this the easiest overlay/capture card to install.

- MAET technology support: on board motion artifacts elimination
- Fast 320 x 240 lossless AVI clip capture
- Integrated TV tuner/teletext
- Perfect colour: 4:2:2 YUV colour separations and S-Video support for high quality multimedia presentations
- Square Pixel (CCIR 601) support
- Teletext feature is Reuters 1000 ready, supporting dynamic data exchange (DDE) see page 876 on CNNtext, for updated news

Windows 95 compatible



- |  |      |
|--|------|
| <b>WIN/TV CELEBRITY</b>                      | £259 |
| <b>VIDEO OUT MODULE FOR WIN/TV CELEBRITY</b> | £149 |
| <b>WIN/CINEMA 95</b>                         | £169 |
- WIN/TV PRISMA** £159
- SVGA compatible
  - 640 x 480, up to 800 x 600 resolution
  - Audio line-out so you don't need a sound card

## CYBERMAN PCMCIA CD ROM DRIVE FEATURE



INNOVATIVE COMMUNICATIONS

#### CYBERROM DUAL CD ROM

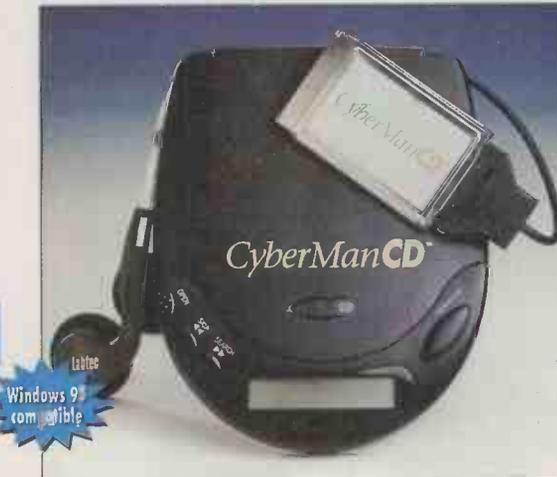
- Designed for the newest generation of 'sound ready' computers
- Play Audio CDs
- Includes headphones

<b>CYBERROM DUAL CD ROM</b>	£269
-----------------------------	------

#### CYBERROM QUAD CD ROM

- 16-bit wavetable synthesis sound card

<b>CYBERROM QUAD CD ROM</b>	£395
<b>CYBERMAN CM2 SB</b>	£395



The first slimline CD ROM drive with our optional built in 16-bit sound card and it's Windows 95 compatible too!

### Technical Sales Order Lines

**0181-951 3355**  
(50 lines)

MULTIMEDIA & CD ROMS

**HUGE STOCKS**  
Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While-you-wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355  
(50 lines)

Fax: 0181 905 6233  
Email: sales@powermark.com



Cards are not debited until despatch  
**VAT at 17.5% will be added to all prices**



Public Sector customers can purchase through HMSO by calling 01603 694153.



BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



# MEMORY

## CREATIVE LABS FEATURE

### SOUNDBLASTER CARDS

**SOUNDBLASTER 16 VALUE IDE** £60

- IDE interface
- 16-bit stereo sampling and playback
- 20 voice enhanced 4-operator stereo FM-synthesiser
- Power amplifier (4 watts per channel) and volume, bass and treble control
- Full software control of fade-in, fade-out, pan, volume, left/right steering and microphone mixing
- Bundled software

**SOUNDBLASTER 16 PRO IDE** £83

- With voice recognition software
- With Panasonic interface

**SOUNDBLASTER 16 PRO IDE ASP** £105

**SOUNDBLASTER AWE 32 IDE VALUE** £121

- Includes upgrade socket

**NEW! SOUNDBLASTER 32** £112

**SOUNDBLASTER AWE VALUE** £119



SOUNDBLASTER MULTIMEDIA HOME CD QUAD SPEED KIT

**NEW! BLASTERKEYS**

MIDI keyboard for SoundBlaster cards  
£115

### SOUNDBLASTER CARDS

**MIDIBLASTER** £94

- For amateur and professional music composition and presentation
- 16 channels, 128 preset sounds, 33 preset effects, 55 preset drums
- Bundled software included

### MULTIMEDIA KITS

**NEW! GAMEBLASTER VALUE KIT** £169

- SoundBlaster AWE Value sound card
- Dual speed IDE Panasonic CD ROM
- SX2000 joystick
- Speakers
- Doom, Heretic, Theme Park software

**NEW! HOMESTUDIO KIT** £299

- MIDI compatible keyboard
- AWE 32 IDE Lite sound card
- Windows software included

**NEW! DISCOVERY EZ 16 PACK** £312

- Double speed external CD ROM drive
- SoundBlaster 16
- Speakers
- Microphone
- Bundled software



**NEW! DISCOVERY QUAD SPEED KIT** £266

- Quad speed internal drive
- SoundBlaster 16 Pro
- Top selling bundled software
- Ideal for home and office use

**NEW! DISCOVERY QUAD VALUE KIT** £225

- MULTIMEDIA HOME CD QUAD SPEED KIT £275
- Quad speed IDE internal drive
- 16-bit ASP sound card
- Speakers



- MS Publisher
- MS Works 3
- MS Encarta '95
- MS Design Pack
- MS Bookshelf '94
- MS Cinemania '95
- MS Ancient Lands
- MS Dangerous Creatures
- MS Musical Instruments
- MS Golf and more

### NEW FROM CREATIVE!

- Infrared pointing devices**
- Aero Mouse £69
  - Aero Pen £69

### POWERMARK MULTIMEDIA KITS

**POWER PERFORMANCE PACK** £489

- Toshiba 3601 4.4 SCSI CD ROM drive
- 16-bit SCSI controller card
- AWE 32 sound card
- Quality 25 watt speakers



**SMART QUAD KIT** £219

- Mitsumi FX4 quad speed internal drive
- SoundBlaster 16 Pack
- 10 CD ROM bundle
- Lotus SmartSuite
- 15 watt speakers

**CREATIVE DOUBLE KIT** £239

- Double speed internal drive
- SoundBlaster Pro Pack
- MS Encarta, MS Dangerous Creatures, Doom I & II, MS Golf
- Screenbeat speakers

**TOSHIBA 4x4 KIT** £365

- Toshiba 5302 quad speed internal IDE drive
- SoundBlaster 32 AWE Value Pack
- 25 watt speakers
- 10 CD ROM bundle
- MS Encarta
- Enhanced IDE controller

*Also available with SoundBlaster 32 AWE full version* £399

**JUNIOR KIT** £179

- Double speed internal drive
- SoundBlaster 16 Value Pack
- Screenbeat speakers
- 10 CD ROM bundle

**GAMEBLASTER AWE 32 KIT** £287

- Quad speed internal drive
- SoundBlaster AWE32 IDE Lite
- Stereo speakers
- Joystick
- Top selling bundled software titles
- CSP Socket

### NEW! AERODUET KIT

Only £99



- Aero Mouse
- Aero Pen



**MOUSEMAN COMBO** £34

- Ergonomic design
- Ready for Windows 95



**SENSA** each £38

- Ergonomic design
- Ready for Windows 95, available in: soft matt Blue Leopard or Silver Pearl, or Deep Wood and Black Chess with their brilliant lacquered surface

**CORDLESS CHROMA** £23

- 3 button mouse with coordinated mouse mat, available in: Apple green with orange mat, luminous orange with blue mat, bright blue with yellow mat and canary yellow with green mat

**TRACKMAN VISTA** £43

- Ergonomic design
- Ready for Windows 95

**TRACKMAN LIVE** £105

- A unique radio-wireless solution for presentations can be used for controlling slideshows or as a handheld mouse works from up to 10 metres
- Ready for Windows 95

**TRACKMAN VOYAGER** £49

- Sets new standards in comfort, flexibility and performance for travellers

**PILOT MOUSE** £17

**SCANMAN COLOUR** £179

**SCANMAN 256** £87

**FOTOMAN PLUS DIGITAL CAMERA** £439

**NEW! TRACKMAN MARBLE** £59

**NEW! WINGMAN EXTREME JOYSTICK** £32

**NEW! THUNDER PC GAME PAD** £14



SOUNDBLASTER AWE32 IDE

Multimedia experts available for specialist advice



SOUNDBLASTER 16 VALUE IDE

### SOUNDBLASTER CARDS

**SOUNDBLASTER AWE 32 IDE** £159

- IDE Interface
- Next generation SoundBlaster card offering unbelievable sound quality
- Full 16 channels, 128 instruments, 6 drum kits, 32 voice polyphony
- Microphone included
- Comprehensive software bundle including Creative VoiceAssist, Creative TextAssist, WaveStudio, Creative Sound Panel, Creative Mosaic, Creative Ensemble and more

**WAVEBLASTER II** £94

- Programmable Advanced WaveEffects generator

TURN THE PAGE FOR MORE

**DELIVERY CHARGES**  
See page 9

A great new way to buy...  
**Gold Card**  
See page 1

**EARLY BIRD Order Bonus**  
See page 29



Everyone at Powermark passes through our training college

## CREATIVE LABS FEATURE

### SHAREVISION

**PC3000**  
Easy to use video conferencing over a single regular telephone line. Realtime application sharing

**PC300**  
Easy to use audio conferencing over a single regular telephone line

Call for pricing



### VIDEO BOARDS

- VIDEOLASTER SE100** £165
  - Live full motion video
  - Capture single frames in BMP, TIFF, GIF, MMP, PCX, TGA or JPEG
- VIDEOLASTER RT300** £249
  - Intel i750PE chip inside
- VIDEOLASTER MP400** £173
  - Displays full motion MPEG video in a scalable window up to full screen
- 3DO BLASTER** £269
  - Requires CR-563 CD ROM drive and SoundBlaster with CD audio connector
- TV CODER INTERNAL** £99
- TV CODER EXTERNAL** £119

### PHONEBLASTER

- NEW! PHONEBLASTER** £259
- Built-in answering machine
  - Fax machine
  - 28,800bps modem
  - Soundcard
  - SuperVoice software

## DFI MULTIMEDIA KIT FEATURE

# DFI®

### DFI MULTIMEDIA KIT

All you need to start exploring the world of multimedia together with some of the best selling software from Microsoft. Full installation instructions included to get you up and running quickly and easily.



**ORCHESTRA 16 SOUND CARD**

- Fully compatible with SoundBlaster 16, SoundBlaster Pro, SoundBlaster 2.0, AdLib and Microsoft Windows Sound System
- Built-in stereo amplifier
- IDE CD ROM interface
- Full duplex MIDI port to let you record and play back at the same time

- Jumperless plug and play for easy installation
- 15 treble/bass tone control and stereo balance

**Also includes:**  
Audiosession, a powerful Windows application that gives you a mixer, wave player, CD player and MIDI player. Audiosession makes it easy to record, edit, play files, adjust volume, balance and a lot more

### CONTAINS:

- Quad speed IDE CD-ROM drive
- High quality 16-bit sound card
- Quickshot SoundMate II stereo amplified speakers
- Microsoft Home pack consisting of:
  - Microsoft Encarta 95
  - Microsoft Works
  - Microsoft Dangerous Creatures
  - Microsoft Golf
  - Microsoft Home Sampler

**Complete Multimedia Bundle** £199

**DFI QUAD SPEED CD ROM DRIVE ONLY** £99  
**ORCHESTRA 16 SOUND CARD ONLY** £59

**Special Limited Offer while stocks last**  
10 pack of top CD ROM titles for only £18

## GOLDSTAR CD ROM DRIVE FEATURE

**GoldStar**  
Technology with the human touch

Goldstar CD ROM drives are on the leading edge of multimedia excellence. Each one is designed and built to take you into the next generation of personal computing.

Both the dual and quad speed drives feature MPC level 2, Photo CD, multi-session support, CD-i, Video CD, CD-DA and CD-ROM/XZ.

### GCD-R520B DUAL SPEED CD ROM DRIVE

- 300Kb/sec
  - 250ms access time
  - 64Kb buffer
  - IDE interface
  - Motorised tray loading
  - Volume control and headphone jack
- GCDR 520B** £67

### GCD-R540B QUAD SPEED CD ROM DRIVE

- 600Kb/sec
  - 220ms access time
  - 128Kb buffer
  - Enhanced IDE (AT-APD) interface
  - Motorised tray loading
  - Volume control and headphone jack
- GCD-R540B** £99



Multimedia experts available for specialist advice

### Technical Sales Order Lines

**0181-951 3355**  
(50 lines)

MULTIMEDIA & CD ROMS

### SUPER SPECIAL CD ROM BUNDLES!

#### 10 CD ROMs for £29!

- |                                       |                |
|---------------------------------------|----------------|
| The Blues Brothers                    | Fire Forget II |
| The Blues Brothers Juke Box Adventure | Battlestorm    |
| Crazy Cars 3                          | Super Cauldron |
|                                       | Titan          |
|                                       | Prehistorix    |
|                                       | Prehistorix II |

#### 11 CD ROMs for £19!

- |                        |                       |
|------------------------|-----------------------|
| Return to Ringworld    | Spectre VR            |
| Microcosm              | Compuserve Starter CD |
| Jutland                | The Psychotron        |
| The Cyberplasm Formula | Jurassic Park         |
| Bodyworks Voyager      | Shadowlands           |
|                        | Sleepwalker           |

#### CHILDREN'S CD BUNDLE £19

- |                       |                      |
|-----------------------|----------------------|
| Lenny's Musicoons     | Family Circus        |
| Cinderella            | Putt Putt's Fun Pack |
| Basic Spelling Tricks | Sing-along Kids      |

#### 16 TITLES ON 10 CDS for £29

- |                 |                 |
|-----------------|-----------------|
| Animals         | Enchantia       |
| World Atlas     | James Pond 2    |
| Space           | Outrun          |
| Encyclopaedia   | Print/Paint     |
| World Cup USA   | Power           |
| Winter Olympics | Comedy Central  |
| Links Golf      | Madonna         |
| Thunderhawk     | Michael Jackson |
| Curse of Hawk   | Phil Collins    |
|                 | Abba            |

#### 10 CDs MEGAPACK Now only £19

- |                   |                                      |
|-------------------|--------------------------------------|
| Links Golf        | Freakin' Funky                       |
| Test Drive III:   | Fuzzballs                            |
| The Passion       | Ultima: The Savage Empire            |
| F14 Tomcat        | The Magic Death: Virtual Murder II   |
| Mike Ditke        | Absolutely no shareware or clip-art! |
| Ultimate Football |                                      |
| Dinosaur Safari   |                                      |
| Audubon's Mammals |                                      |

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
**Tel: 0181-951 3355**  
(50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com



Cards are not debited until despatch  
**VAT at 17.5% will be added to all prices**

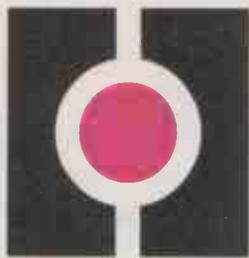
HMSO

Public Sector customers can purchase through HMSO by calling 01603 694153.



BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



Technical Sales  
Order Lines  
**0181-  
951 3355**  
(50 lines)

**COMFY  
KEYBOARD**

An interactive educational experience for pre-schoolers. Take the ComfyKeyboard, attach it to any PC and run a ComfyLand movie.



- Self-guided learning in a nurturing and delightful play-world
  - Hundreds of animated stories
  - An ever-expanding list of interactive movies
- PC Magazine November '94 rating \*\*\*\* (Excellent)  
PC Kids rating \*\*\*\*\*  
**COMFYKEYBOARD** £49

**INTERACTIVE MOVIES**

- The Great Concert in ComfyLand £25
- Colourful Adventures:  
The Missing Bone £25
- Christmas in ComfyLand £19

**TURN THE PAGE  
FOR MORE**

**MOVIE  
MEMORIES**

In Cyberspace no one can hear you scream

Alien

The Keyboard Kops  
The Mouse That Roared



# MEMORY

## VIDEOLOGIC FEATURE

### GRAFIXSTAR

A new generation of leading price/performance 64-bit Windows accelerators... expandable with low-cost multimedia options



#### GrafixStar 300

- Entry level graphics card
  - 64-bit - S3 Trio64
  - 85+ million Winmarks
  - Up to 1280 x 1024 resolution
  - Expandable with VMC multimedia options
- GRAFIXSTAR 300**  
VLB/PCI 1MB £97

Multimedia experts available for specialist advice

#### GrafixStar 500

- Best all-round graphics card
  - 64-bit - S3 Vision868
  - 95+ million Winmarks
  - Up to 1280 x 1024 resolution
  - Expandable with VMC multimedia options
  - Built-in AVI acceleration with advanced DCI drivers
- FREE XING SOFTWARE MPEG PLAYBACK**  
**GRAFIXSTAR 500**  
VLB/PCI 1MB £129

**FREE XING SOFTWARE MPEG PLAYBACK**  
**GRAFIXSTAR 500**  
VLB/PCI 1MB £129

### SPECIAL OFFER! 928MOVIE & MPEG card



ISA 1MB £189  
ISA 1MB plus sound £199

#### GrafixStar 700

- Fastest performance
- 64-bit - S3 Vision968
- 110+ million Winmarks
- Up to 1600 x 1200 resolution
- Built-in AVI acceleration DCI drivers

**FREE XING SOFTWARE MPEG PLAYBACK**  
**GRAFIXSTAR 700**  
VLB/PCI 2MB £229

- GrafixStar 300/500 1MB upgrade £47
- GrafixStar 300/500/700 VMC Controller £39
- GrafixStar 700 2MB upgrade & VMC Controller £149



#### 928MOVIE

- ISA 1MB £129
- 928MOVIE with sound **POWERCUT!** £159
- VLB 1MB £129
- 928MOVIE with sound **POWERCUT!** £159
- 928MOVIE with MPEG £359

#### MPEG PLAYER

The quality solution for Video CD playback MPEG PLAYER **POWERCUT!** £199

#### CAPTIVATOR PRO TV

Sensational quality video and TV for VML systems  
CAPTIVATOR PRO TV £199  
CAPTIVATOR PRO **POWERCUT!** £165

#### PCIMOVIE

Super fast graphics for PCI machines  
PCIMOVIE 2MB £229

## MULTIMEDIA ACCESSORIES FEATURE

#### INTERNAL MULTIMEDIA EA-PRO WITH STEREO SPEAKERS

Equalizer/amplifier and speaker combination that brings full stereo sound to your multimedia PC.



- 60 watt equalizer/amplifier
  - 40 watt stereo speakers
- INTERNAL MULTIMEDIA EA-PRO WITH STEREO SPEAKERS** £59  
External version for Mac & PC available

#### MULTIMEDIA STEREO KEYBOARD

For use with any multimedia software. Perfect for entertainment, education, presentations and your favourite music CDs.

- Built-in 16 watt stereo speakers 4" magnetically shielded
- Enhanced bass response for great listening pleasure
- Omnidirectional microphone
- Built-in headphone and microphone jacks
- Teleconferencing ready

**FREE PS/2 ADAPTER CABLE**  
**MULTIMEDIA STEREO KEYBOARD** £71

#### MULTIMEDIA STEREO AMPLIFIED KEYBOARD

For use with any multimedia software. Perfect stereo sound quality for education, entertainment, presentations and your favourite music CDs.

- Built-in 13 watt stereo amplifier
- Built-in 16 watt stereo speakers 4" magnetically shielded
- Soft sliding volume, treble and bass controls



- Enhanced bass response for great listening pleasure
  - Built in headphone and microphone jacks
  - Teleconferencing ready
  - LED volume readout
- MULTIMEDIA STEREO AMPLIFIED KEYBOARD** £99

## KEY TRONIC KEYBOARD FEATURE



#### KEY TRONIC COLORKEYS COOL STUFF KIT

- ColorKeys keyboard
  - Clickmate mouse
  - Mouse pad
  - Screen bezel for 14" monitor
  - Microsoft Fine Artist software
  - All cables and connectors
- COLORKEYS COOL STUFF KIT** £59

#### KEY TRONIC KT2000

Features three additional keys designed to offer users an easier interface to Microsoft Windows 95.  
**KT2000** £29



#### PROTOUCH WINDOWS 95 KEYBOARD

ProTouch offers increased reliability - hinge tested to 70

million cycles. The flexible lever arm switch assembly makes ProTouch a more comfortable keyboard to use.  
**PROTOUCH KEYBOARD** £28

**DELIVERY CHARGES**  
See page 9

A great new way to buy...  
**MEMORYBANK Gold Card**  
See page 1

**EARLY BIRD Order Bonus**  
See page 29



Everyone at Powermark passes through our training college  
**POWERMARK ACADEMY**

# BANK

at  
**Powermark**

## POWERMARK MULTIMEDIA FEATURE

**Power**  
  
**Mark**  
**Multimedia**

### POWERMARK MULTIMEDIA KIT

- Quad speed CD ROM drive
- Sony, Mitsumi, Panasonic interface
- 16-bit sound card
- Stereo speakers
- Microphone
- CD ROM game pack

PNMULKIT **POWERMARK MULTIMEDIA KIT** £145



**Multimedia experts available for specialist advice**

### POWERMARK QUAD CD ROM DRIVE

- Quad speed CD ROM drive
- 600Kb/sec transfer rate
- 190ms access time
- Manufactured by Pioneer
- Top quality design
- Tray loading

PNMCDROM **POWERMARK QUAD CD ROM DRIVE** £97

### POWERMARK 16-BIT SOUND CARD

- SoundBlaster compatible
- Sony, Mitsumi, Panasonic and IDE interface
- Intergrated MIDI interface
- 20 voice FM music synthesizer
- Wave table synthesizer

PNMSB16 **POWERMARK 16-BIT SOUND CARD** £42

### POWERMARK VALUE AUDIO KIT



- Quad speed CD ROM drive
- Sony, Mitsumi, Panasonic interface
- 16-bit sound card

PNMVALKIT **POWERMARK VALUE AUDIO KIT** £129

## POWERMARK KEYBOARD FEATURE

**Power**  
  
**Mark**  
**KEYBOARDS**

### POWERMARK ERGONOMIC KEYBOARDS

Conventional keyboards have a major ergonomic problem, users must angle their hands along the side of the keyboard when typing. This posture is unnatural and can lead to injuries. This problem is known in the medical profession as Repetitive Strain Injury (RSI). The Powermark Ergonomic

Keyboard can greatly reduce the risk of developing RSI.

- **Micro joystick for full mouse control**
  - 106-key ergonomic enhanced keyboard layout
  - Built-in Windows 95 keys
  - Comfortable tactile feel
  - Arc shaped arm and wrist rest
  - Membrane key switch
  - Full functioned keyboard for complete compatibility with Windows applications
- MBKBERG95/MJ** £49  
**MBKBERG95** - As above but without joystick mouse £39



POWERMARK ERGONOMIC KEYBOARD

### WINDOWS 95 KEYBOARDS

- Top quality design
  - Full 105 key design
  - Optional ergonomic wrist support
- MBK95 WITH REST** £19  
**MBK95 WITHOUT REST** £17

**Technical Sales Order Lines**

**0181-951 3355**  
(50 lines)

**MULTIMEDIA & KEYBOARDS**

**HUGE STOCKS**  
Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While-you-wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday, to 6.00pm Saturday from 9.30am to 4.00pm. Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd,  
Edgware, Middlesex HA8 7AQ

**Tel: 0181-951 3355**  
(50 lines)

**Fax: 0181 905 6233**

**Email: sales@powermark.com**



Cards are not debited until despatch  
**VAT at 17.5% will be added to all prices**

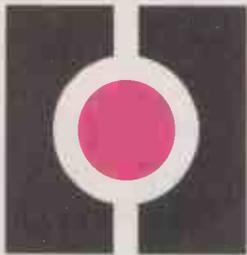
Public Sector customers can purchase through HMSO by calling 01603 694153.



Certificate no. FS 26535

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



# MEMORY

## CD ROM DRIVES, SOUND CARDS AND SPEAKERS FEATURE

### MULTIMEDIA KITS

- AZTECH HOME OFFICE KIT** £269
- 16-bit sound card
  - Quad speed CD ROM
  - Speakers
  - Microphone
  - MS Encarta, Money, Works
- AZTECH STELLA KIT** £222
- AZTECH VOYAGER KIT** £245
- NEW! MIRO CONNECT 34 WAVE** £299
- CD quality 16-bit sound card
  - 32 voice wave table synthesis
  - V34 integrated fax/modem
  - Software included

### VIDEO CARDS

- TV BUSTER PRO EXTERNAL** £69
- TV ENCODER PROFESSIONAL PLUS** £229
- REELMAGIC** £289
- Watch VideoCDs on your PC
  - Built-in 16-bit sound card
  - Includes bundled software
- MIRO VIDEO 20TD LIVE** £345
- MIRO VIDEO 20SD TWIN** £549
- MIRO VIDEO 12PD** £129
- MOVIE MACHINE II** £475
- MOVIE MACHINE PRO** £299

### SPEAKERS

- Quality speakers supplied as matched pairs
- CREATIVE LABS SBS 300 STEREO SPEAKERS** £79
- 10 watts
  - Magnetically shielded
  - SoundBlaster compatible
  - Built-in amplifier
- CREATIVE LABS SBS 37 STEREO SPEAKERS** £18
- Magnetically shielded
- SCREENBEAT** £9
- Amplified with bass control
- POWERSOUND MAX SP30** £15
- With power adaptor
  - 2 watts per channel
  - Shielded, with volume control
- ALTEC ACS50** £69
- QUICKSHOT SOUNDMATE 4** £12
- LABTEC CS-1000** £59
- 'Under Monitor' unit
- YAMAHA YST-M10** £49
- 10 watts per channel
  - 80Hz - 20KHz frequency response
  - Full magnetic shielding
  - Built-in power amplifier
- YAMAHA YST-SW10 SUB WOOFER** £79

### NEW! YAMAHA YST-M5 SPEAKERS

- £39**
- 3 watts per channel
  - Advanced Frequency Response
  - Includes power supply

### SOUND BOARD

- The widest range of Sound Boards
  - Multimedia experts available for specialist advice
- AZTECH SOUND GALAXY PRO** £65
- SoundBlaster compatible
- AZTECH SOUND GALAXY WAVERIDER 32+** £96
- AUDIOTRIX PRO** £169
- Wavetable synthesiser
  - 16-bit stereo record and playback
  - On-board CD ROM instruments
  - ADPCM compression software
- GRAVIS ULTRASOUND** £99
- GRAVIS ULTRASOUND MAX** £144
- 16-bit record and playback, 48KHz
  - Multi CD ROM interfaces
  - Dedicated digital sound processor
- WAVJAMMER** £199
- 16-bit PCMCIA sound card
  - Includes MS Sound System
- NEW! YAMAHA SW20 SOUND CARD** £139
- 16-bit sound card
  - Wave table synthesis

Technical Sales Order Lines  
**0181-951 3355**  
(50 lines)

### WHICH? SOFTWARE FEATURE

### WHICH? software

Ever been frustrated by a garage over-charging? A shop selling faulty goods? A misleading holiday brochure? Inexplicable debits from your bank account? Noisy neighbours?



For these and many other kinds of problems '120 Letters that get Results' contains a carefully worded letter template - written by Which? lawyers - for you to adapt. A full WP package is included as is text from the Which? Book 350 Legal Problems Solved in an easily accessible question and answer format. All letters can be exported to your own WP application. Just insert your details, print and post your professionally written letter and see the difference it makes to the results you obtain.

**120 Letters That Get Results** £Call

### NEW! DIAMOND ULTRA 8000 KIT

- £469
- 8 Speed CD ROM
  - 16 bit Wavetable sound card
  - 3D sound
  - Yamaha YST-M5 speakers
  - Games software

### RECORDABLE CD ROMS

- YAMAHA CDE-100** £1799
- External device
  - Quad speed CD ROM recorder
  - Records 630MB in 15 minutes
  - Software included
- JVC XR-W2001** £1449
- Internal
  - Dual speed SCSI
  - Windows software included
  - 1505 SCSI card
- Also available: Philips and Sony CD ROM recorders

Amazing Performance



PLUG & PLAY CD ROM RECORDER

### CD ROM DRIVES

	Type	Speed	Transfer rate	Access	Loading	Cache	Interface	Int	Ext
Argosy 592CD	PCMCIA	D	307Kb/sec	320ms	Tray	64Kb	PCMCIA	-	£249
<b>NEW! Aztech 6Xi</b>	IDE	6	900Kb/sec	150ms	Tray	256Kb	E-IDE	£149	-
Aztech 4Xi	IDE	Q	600Kb/sec	300ms	Tray	256Kb	E-IDE	£99	-
DFI / SANYO	IDE	Q	600Kb/sec	190ms	Tray	256Kb	E-IDE	£99	-
Goldstar GCD-R520B	IDE	D	300Kb/sec	250ms	Tray	64Kb	E-IDE	£67	-
Goldstar GCD-R540B	IDE	Q	600Kb/sec	220ms	Tray	128Kb	E-IDE	£99	-
Mitsumi FX400	IDE	Q	600Kb/sec	230ms	Tray	128Kb	E-IDE	£104	-
Nakamichi (7 CD-ROM)	SCSI	D	330Kb/sec	380ms	Caddy	256Kb	16-bit SCSI	-	£249
NEC 3XP	SCSI	T	450Kb/sec	250ms	Caddy	128Kb	16-bit SCSI	-	£249
NEC 6Xi/e	SCSI	6	900Kb/sec	150ms	Caddy	256Kb	16-bit SCSI	£265	£349
Plextor 6x	SCSI	6	900Kb/sec	115ms	Caddy	512Kb	16-bit SCSI	£359	£439
Panasonic 562B	SB	D	300Kb/sec	320ms	Tray	64Kb	SB16 card	£49	-
Panasonic LF1004PDO	SCSI	Q	600Kb/sec	220ms	Caddy	512Kb	16-bit SCSI	£499	£569
<b>NEW! Pioneer DRM624X</b>	SCSI-II	Q	670Kb/sec	150ms	Caddy	256Kb	16-bit SCSI	£409	-
Pioneer DRU124X	SCSI	Q	660Kb/sec	150ms	Tray	256Kb	16-bit SCSI	£185	-
Pioneer 124X	IDE	Q	600Kb/sec	150ms	Tray	256Kb	E-IDE	£118	-
<b>NEW! Powermark</b>	IDE	Q	600Kb/sec	300ms	Tray	256Kb	E-IDE	£95	-
Sony CDU4X	IDE	Q	600Kb/sec	190ms	Tray	256Kb	E-IDE	£124	-
Sony CD76S	SCSI	Q	600Kb/sec	150ms	Tray	256Kb	16-bit SCSI	£147	-
<b>NEW! TEAC CD56E</b>	IDE	6	900Kb/sec	139ms	Tray	256Kb	E-IDE	£215	-
Toshiba XM3601	SCSI	Q	660Kb/sec	130ms	Tray	256Kb	16-bit SCSI	£210	£277
<b>NEW! Toshiba XM-3701B</b>	SCSI-II	6	1000Kb/sec	135ms	Caddy	256Kb	16-bit SCSI	£299	-
Toshiba XM5301B	SCSI	Q	600Kb/sec	190ms	Tray	256Kb	16-bit SCSI	£135	£199
Toshiba XM5302	E-IDE	Q	600Kb/sec	150ms	Tray	128Kb	E-IDE	£109	£218

Key to drive speeds: D=Double, Q=Quad, T=Triple, 6=Six speed

### CD ROM ACCESSORIES

- QUALITY DISK CADDY 10 PACK** £5
- CD ROM DISK CLEANER KIT** £19
- CD ROM BLANK DISKS (700MB)** £10

TURN THE PAGE FOR MORE

**DELIVERY CHARGES**  
See page 9

A great new way to buy...



See page 1

**EARLY BIRD Order Bonus**  
See page 29



Everyone at Powermark passes through our training college

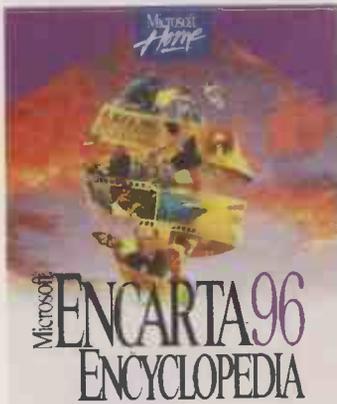
# BANK

at **Powermark**

## MICROSOFT® FEATURE

# Microsoft®

**Prices Slashed!**  
on most titles



### NEW! ENCARTA® 1996

- New 40 country fact boxes, covering climate, religion, economy, geography, musical styles and more
- Over 9 million works, 8,000 photographs, 300,000 links, 26,000 articles and over 15,000 multimedia elements with 100 minutes of video and animation
- Now on screen link to the Concise Oxford Dictionary - 140,000 definitions
- On line updates

ENCARTA 1996 £39

### NEW! CINEMANIA® 1996

- Nearly 20,000 film reviews, 1,000 movie stills, 168 dialogue excerpts, and 139 tracks of film music
- Now includes 1994 films



CINEMANIA 96 FOR WINDOWS 95 £23

### FURY³

Conquer at least one world today Fury³ puts the fast, furious world of 32-bit gaming technology right in your face!

FURY³ £29

MICROSOFT BUNDLE - FURY³ & SIDEWINDER 3D PRO JOYSTICK £49

### CHILDRENS SOFTWARE

Creative Writer CD ROM or floppy £21

Fine Artist CD ROM or floppy £21

NEW! Creative Writer & Fine Artist Bundle for Windows and Mac CD ROM £36

How the Leopard Got his Spots CD ROM £32

Gahan Wilson's Ultimate Haunted House POWERCUT! CD ROM £21

Magic School Bus - Inside the Human Body CD ROM £21

Solar System POWERCUT! CD ROM £29

NEW! Explores the Oceans CD ROM £29

### NEW! MICROSOFT JOYSTICKS AND MICE

SIDEWINDER JOYSTICK £23

SIDEWINDER 3D PRO £40

EASYBALL KIDS TRACKBALL

MOUSE WITH EXPLORAPEDIA

WORLD OF NATURE £30



### REFERENCE AND EXPLORATION

Explorapedia	POWERCUT!	CD ROM	£21
500 Nations	POWERCUT!	CD ROM	£21
NEW! 3D Movie Maker		CD ROM	£29
Wine Guide	POWERCUT!	CD ROM	£21
Oceans V1.0	POWERCUT!	CD ROM	£21
Autoroute Express	POWERCUT!	CD ROM	£21

UK and Ireland V4		floppy	£29
UK and Ireland V4		CD ROM	£35
Europe V4	POWERCUT!	floppy	£29
Europe V4	POWERCUT!	CD ROM	£35
Dangerous Creatures		CD ROM	£21
Ancient Lands	POWERCUT!	CD ROM	£21
Cinemanía '96		CD ROM	£23
Bookshelf '95	POWERCUT!	CD ROM	£58
Dinosaurs	POWERCUT!	CD ROM	£21
Art Gallery	POWERCUT!	CD ROM	£27
Musical Instruments		CD ROM	£21
Schubert	POWERCUT!	CD ROM	£21
Stravinsky	POWERCUT!	CD ROM	£21
Strauss	POWERCUT!	CD ROM	£21
Mozart	POWERCUT!	CD ROM	£21
Beethoven	POWERCUT!	CD ROM	£21
Composer Collection		CD ROM	£49
• 3 CD ROM set includes Mozart, Beethoven and Schubert			
NEW! World Of Flight		CD ROM	£29
NEW! For Windows		CD ROM	£29



### ENTERTAINMENT

NEW! Flight Simulator 5.1		CD ROM	£25
Space Simulator		floppy	£29
Arcade		floppy	£15
Golf	POWERCUT!	floppy	£25
Golf	POWERCUT!	CD ROM	£25
Golf course - Mauna Kea		floppy	£15
Golf course - Pinehurst		floppy	£15
Golf course - Banff Springs		floppy	£15
Best of Entertainment Packs	POWERCUT!	floppy	£16
Return Of Arcade		&Call	

Technical Sales Order Lines

**0181-951 3355**  
(50 lines)

VIDEOS CARDS & MONITORS

**HUGE STOCKS**  
Guaranteed same day despatch on a virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantee.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While-you-wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355 (50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com

Gold Card VISA MasterCard SWITCH  
Cards are not debited until despatch  
VAT at 17.5% will be added to all prices

## MICROSOFT® HARDWARE FEATURE

### MICROSOFT® MICE

MICROSOFT MOUSE 2.0

- Plug and Play with Windows 95
- Ergonomically designed for comfort
- Optimum hand position
- Teflon 'gliders' - moves smoother and swifter over any surface
- New improved IntelliPoint software



MICROSOFT® HOME MOUSE £27  
• 18 FREE games!

MICROSOFT MOUSE 2.0 £35

## Microsoft®

### MICROSOFT® NATURAL KEYBOARD

- Ready for Windows 95
- 104 key design
- IntelliType software - customisable for improved Windows based performance



MICROSOFT NATURAL KEYBOARD £65



Public Sector customers can purchase through HMSO by calling 01603 694153.



BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.  
Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

Power

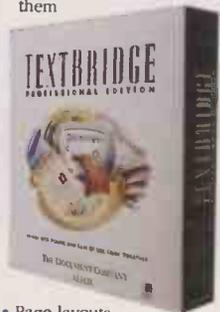


Mark®

**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

**TEXTBRIDGE  
PROFESSIONAL  
EDITION  
OCR SOFTWARE  
FEATURE**

- Award winning accuracy on normal, faxed and dot matrix text
- Exclusive DocuRT technology re-constructs cell tables that can be edited as if you created them



- Page layouts with columns and pictures are maintained for true text flow editing
- Instant Access OCR from within your Windows application
- Post Recognition Editing within your word processor
- On-line word training, user dictionaries and saving for future use
- OLE 2.0, drag and drop support
- 11 European languages
- Easy to use automatic functions

**Includes voucher for  
FREE upgrade to  
Windows 95 version**

TEXTBRIDGE 3.0	£65
TEXTBRIDGE PROFESSIONAL EDITION	£269
COMPETITIVE UPGRADE	£129

**TURN THE PAGE  
FOR MORE**

21

**DELIVERY CHARGES**  
See page 9

A great new way to buy...



See page 1

**EARLY BIRD  
Order Bonus**  
See page 29



Everyone at Powermark passes through our training college

# MEMORY

## MICROTEK SCANNERS FEATURE

### MICROTEK Scanners • Software • Support

#### MICROTEK SCANMAKER II

This Microtek scanner reproduces your hard copy in 16.7 million colours at a maximum resolution of 1200 x 1200 dpi. It can even be specially equipped to meet your specific needs, if most of your scanning is text-based, just add an ADF-600 50-page document feeder; or for film scanning, choose the backlit TMA-II transparency



attachment.

All Microtek scanners include ScanMaker Plug-in for Adobe Photoshop and a TWAIN-Module for TWAIN-compliant Windows software plus an additional ASPI driver and SCSI card.

- 24-bit colour flatbed scanner
  - 600 x 300 dpi up to 1200 x 1200 dpi (interpolated)
  - Scanning area 21.6cm x 35.6cm (approx A4)
  - Scanning modes: 24 bit/16.7 million colours, 8 bit/256 shades of grey, 1 bit/64 shades of grey simulated
  - SCSI interface
- MICROTEK SCANMAKER II** £299  
Mac version available £299

**SCANNER EXPERTS  
AVAILABLE FOR  
SPECIALIST ADVICE**

## UMAX SCANNERS FEATURE

### UMAX FLATBED SCANNERS

- Umax is one of the world's largest manufacturers of flatbed scanners
- All Umax flatbed scanners come complete with Adobe Photoshop LE V.3, SCSI controller card and 12 months on-site warranty

**Vista T630** **POWERCUT!** £299

- 300 x 600 dpi up to 4800 dpi interpolated
- A4 scan area
- SCSI interface kit
- 16.7 million colours
- Adobe Photoshop LE V.3

**Vista S8** £539

- 400 x 800dpi up to 6400 dpi interpolated
- A4 scan area
- SCSI interface kit
- 16.7 million colours
- Adobe Photoshop LE V.3

**UC1260** £699

- 600 x 1200 dpi up to 2400 dpi interpolated
- A4 scan area
- SCSI interface kit
- 16.7 million colours
- **Full Adobe Photoshop V.3**

**Document Feeder** £399

**Omnipage Direct** £39

**Powerlook Pro**

**Scanner** £1999

**Transparency Adapter** £399

Mac versions available at the same prices

#### PAGEOFFICE

PageOffice is the way to bridge the gap between piles of paper accumulating on your desk and PC. Its impeccable design lets you work efficiently and easily. PageOffice performs important functions including:

- document filing
- OCR translation,
- image editing,
- electronic mail, faxing,
- form-filing and copying.



- 300 dpi optical resolution
- 8-bit 256 shades of grey
- 5-10 sheet built-in document feeder
- 16-bit ISA SCSI interface included
- Fully TWAIN compatible

**NEW! Now with PRESTO  
OCR software**

**PAGEOFFICE** £249



## CAERE OCR FEATURE



**Can you accurately  
type at 1500 words  
per minute?**

Upgrade your Caere OCR software to Omnipage PRO 5.0 or Wordscan Plus 4.0 for only £129

#### WORDSCAN PLUS 4.0

- Integrates to Microsoft Office, Novel Perfect Office and Lotus Smart Suite
- Chameleon Toolbar - emulates the toolbar in your favourite WP
- Microsoft Word button will initiate a scan
- Direct Fax/Email support

**WORDSCAN PLUS V4**

**UPGRADE** £129

**WORDSCAN PLUS V4** £263



#### OMNIPAGE PRO 5.0

- The most full featured OCR package available
- Recognises 12 European languages
- Retains page layout
- 24-bit colour image editing
- Save text and graphics into applications.

**OMNIPAGE PRO 5.0**

**UPGRADE** £129

**OMNIPAGE 5.0** £279

**OMNIPAGE PRO 5 WIN** £379

**OMNIPAGE DIRECT 2** £74

**OCR experts available  
for specialist advice**

# BANK

at Powermark

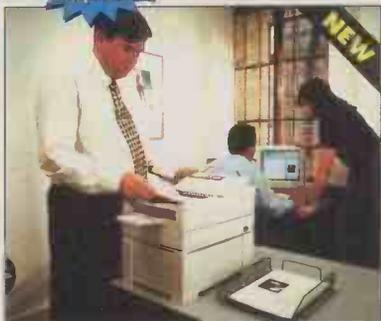
## HP SCANNERS FEATURE

**NEW FROM HP**

### HP SCANJET 4Si

- Mono 400 dpi enhanced to 1200 dpi
- Up to 12 pages per minute
- Includes award winning **Visioneer Paperport V3.0 and Autolaunch software**

**HP SCANJET 4Si** £Call  
**AUTOMATIC DOCUMENT FEEDER** £139  
**3 YEAR ON-SITE MAINTENANCE** £85



**hp HEWLETT PACKARD**  
 Authorised Reseller  
 Personal Computer Products

### HP SCANJET 4c

- 600 dpi enhanced to 2400 dpi
- 30-bit colour gives you 1 billion colours
- Up to 18 pages per minute



Windows 95 compatible

**NEW!** Caere Omnipage Limited Edition and Visioneer Paperport V3.0 software included

**HP SCANJET 3c** £Call  
**AUTOMATIC DOCUMENT FEEDER** £315  
**TRANSPARENCY UNIT** £449

**Scanner experts available for specialist advice**

## KYOCERA PRINTER FEATURE

### KYOCERA FS-400

*In our opinion, the best compact printer available*

A compact 4 pages per minute, low cost personal page printer that also offers full system printer capabilities and savings on print costs due to its cartridge-free design. The FS-400 has a wealth of features, including 300 dpi resolution, enhanced to 300 x 1200 dpi by Kyocera resolution technology, 13 scalable in-built fonts, and for addition cost savings, Energy Star compliance and draft print mode. Other features include industry standard LaserJet III and optional PostScript emulations and full compatibility with Windows applications.

**KYOCERA FS-400** **POWERCUT!** £380  
**NETWORK-SPECIFIC ETHERNET INTERFACE** £169  
**TONER KIT** £16  
**3 YEAR ECOSHIELD ON-SITE WARRANTY** £99



KYOCERA FS-400

### KYOCERA FS-1550

The FS-1550 10 pages per minute printer offers substantial savings on running costs compared with competitive printers - where the ongoing cost of consumables can amount to far more than the purchase price.

It is ideal for word processing, database and spreadsheet printing, and with resolution enhancement, graphics. As your requirements grow, ECOSYS paper handling options include extra paper trays, a duplex unit and a sorter/collator.

Other features include industry-standard LaserJet III and optional PostScript emulations, sophisticated networking and IBM connectivity options, and full compatibility with Windows applications.

**KYOCERA FS-1550** £915  
**NETWORK-SPECIFIC ETHERNET INTERFACE** £279  
**TONER KIT** £51  
**3 YEAR ECOSHIELD ON-SITE WARRANTY** £199  
 Also available - **KYOCERA FS1600** £1089  
**KYOCERA FS3600** £1789



KYOCERA FS-1550



KYOCERA FS-1550 WITH ACCESSORIES

**ECOSYS**

**Printing costs. Stop paying the price.**

## PRINTER ACCESSORIES

### HP SupportPack

- Onsite warranty by HP engineers
- Recommended for all HP Laserjets & Deskjets



### ORIGINAL TONER CARTRIDGES

**HEWLETT-PACKARD**  
 LaserJet II/IIID/III/IIID £47  
 LaserJet II IIP/IIIP+/IIIP £46  
 LaserJet II IIISi/4Si/4MX £77  
 LaserJet II 4/4+/4M/4M+ £67  
 LaserJet II 4L/4ML/4P/4MP £44  
 LaserJet II4V/4MV £115  
 LaserJet 5 Series £Call

### DESKJET CARTRIDGES

**HP DESKJET BLACK CARTRIDGE** £18  
**HP DESKJET COLOUR CARTRIDGE** £21

### PRINTER CABLES

	1.5m	3m
<b>PARALLEL</b>	£4	£8
<b>25M - 25M</b>	£4	£9
<b>25M - 36M</b>	£6	£8

### PRINTER SHARERS

**AUTO SWITCHES**  
 2 PCs to 1 printer £18  
 4 PCs to 1 printer £18  
**AUTO SWITCHES**  
 • 256K buffer  
 4 PCs to 2 printers £127

**Printer experts available for specialist advice**

## Technical Sales Order Lines

**0181-951 3355**  
 (50 lines)

**SCANNERS & PRINTERS**

**HUGE STOCKS**  
 Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**

Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**

Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**

We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**

Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**

We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**

All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
 While you wait installation service available. See page 3 for details.

**PERSONAL CALLERS**

Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

## Powermark plc

Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ

**Tel: 0181-951 3355**  
 (50 lines)

**Fax: 0181 905 6233**

**Email: sales@powermark.com**



Public Sector customers can purchase through HMSO by calling 01603 694153.



Certificate no. FS 20535

BS7570 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



Cards are not debited until despatch  
**VAT at 17.5% will be added to all prices**



**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

**NEW!**

**PENTAX  
POCKET JET  
PRINTER**



- The smallest, lightest portable PC printer in the world: its dimensions are just 30mm x 255mm x 55mm and it weighs only 497g including battery!
- Fast, laser quality printing: 3ppm @ 300dpi
- Full HP Laserjet IIP (PCL4) emulation
- 30-35 pages per battery charge, only 70 minutes to re-charge
- Complete kit includes printer, battery, charger/adaptor, mains and parallel cable, carry case and 100 sheets of paper
- No need for ribbons, toner or ink cartridges

£359

**TURN THE PAGE  
FOR MORE**

# MEMORY

## HP PRINTER FEATURE

**HP HEWLETT  
PACKARD**

Authorised Reseller  
Personal Computer  
Products

**NEW!**

**HP OFFICEJET  
LX**

*The complete office solution*

- High quality printer
- Integrated fax
- Photocopier
- Scanner

**HP OFFICEJET LX** £495

**HP DESKJET  
850C**

- 600 x 600 dpi in black
- Up to 6 pages per minute in black
- 45 TrueType fonts

**HP DESKJET 850C** £343

**HP DESKJET  
1200C**

- 600 x 300 dpi
- Up to 6 pages per minute in black

**HP DESKJET 1200C** £651  
**HP DESKJET 1200C/PS** £1035



HP DESKJET 660C

**HP LASERJET  
5P**

- 6 pages per minute
- 600 dpi, RET, microfine toner
- 2MB RAM, up to 50MB

**HP LASERJET 5P** £597  
**HP LASERJET 5MP** £729

**HP COLOR  
LASERJET**

- Up to 10 pages per minute in black
- Up to 2 pages per minute in colour
- 300 dpi
- 1 year on-site warranty
- Delivery: £27 on this printer

**HP COLOR LASERJET** £4338  
**IEEE 1284 COMPLIANT  
PRINTER CABLE** £19  
**HP COLOR LASERJET  
CABINET** £345  
**250 SHEET REAR  
FEED UNIT** £315



HP OFFICEJET LX

**HP DESKJET  
320**

- 600 x 300 dpi in black
- Up to 3 pages per minute in black
- 13 scalable Windows fonts

**HP DESKJET 320** £169  
**HP DESKJET 320 WITH  
CUT SHEET FEEDER** £189  
**COLOUR KIT UPGRADE** £32  
**3 YEAR ON-SITE  
WARRANTY** £39

**HP DESKJET  
660C**

- 600 x 600 dpi in black
- 14 TrueType fonts

**HP DESKJET 660C** £283

**HP DESKJET  
1600C**

- 600 x 600 dpi in black
- 4MB RAM

**HP DESKJET 1600C** £835

**HP LASERJET  
4V**

- A3 paper handling
- 8 pages per minute in A3, 12 in A4
- Delivery: £27 on this printer

**HP LASERJET 4V** £1409  
**HP LASERJET 4MV** £2039  
**HP LASERJET 4V 500  
SHEET TRAY SYSTEM** £279  
**3 YEAR ON-SITE  
WARRANTY** £199



HP DESKJET 1600C

**Matched Memory Kits for  
HP Printers on page 7**



HP LASERJET 5P

**HP LASERJET  
5L**

- 4 pages per minute
- 600 x 600 dpi in black
- 1MB RAM
- New innovative style case

**HP LASERJET 5L** £358

**HP LASERJET  
4 PLUS**

- 12 pages per minute
- Up to 600 dpi
- 2MB RAM

**HP LASERJET 4 PLUS** £1018  
**HP LASERJET 4M PLUS** £1335  
**HP DUPLEX UNIT** £479  
**3 YEAR ON-SITE  
WARRANTY** £159



HP COLOUR LASERJET

**HP LASERJET  
4Si**

- 16 pages per minute
- 600 dpi
- 1 year on-site warranty
- Delivery: £27 on this printer

**HP LASERJET 4Si** £2170  
**HP LASERJET 4SiMX** £3041  
**3 YEAR ON-SITE  
WARRANTY** £459

**HP DESKJET  
600**

- 600 x 600 dpi, RET
- Colour option
- High resolution in black

**HP DJ600** £216

## PRINTER ACCESSORIES

**HP SupportPack**

- Onsite warranty by HP engineers
- Recommended for all HP Laserjets & Deskjets

**ORIGINAL TONER  
CARTRIDGES**

**HEWLETT-PACKARD**

Laserjet II/IIID/IIII/IIID £47  
Laserjet II IIP/IIIP+/IIIP £46  
Laserjet II IIISI/4Si/4MX £77  
Laserjet II 4/4+/4M/4M+ £67  
Laserjet II 4L/4ML/4P/4MP £44  
Laserjet II4V/4MV £115  
Laserjet 5 Series &Call

**DESKJET CARTRIDGES**

**HP DESKJET BLACK  
CARTRIDGE** £18  
**HP DESKJET COLOUR  
CARTRIDGE** £21

**PRINTER CABLES**

	1.5m	3m
PARALLEL	£4	£8
25M - 25M	£4	£9
25M - 36M	£6	£8

**PRINTER SHARERS**

**AUTO SWITCHES**

2 PCs to 1 printer £18  
4 PCs to 1 printer £18

**AUTO SWITCHES**

• 256K buffer  
4 PCs to 2 printers £127

**Printer experts  
available for  
specialist advice**

**DELIVERY  
CHARGES**  
See page 9

A great new way to buy...  
**MEMORYBANK  
Gold Card**  
See page 1

**EARLY BIRD  
Order Bonus**  
See page 29



Everyone at Powermark passes through our training college

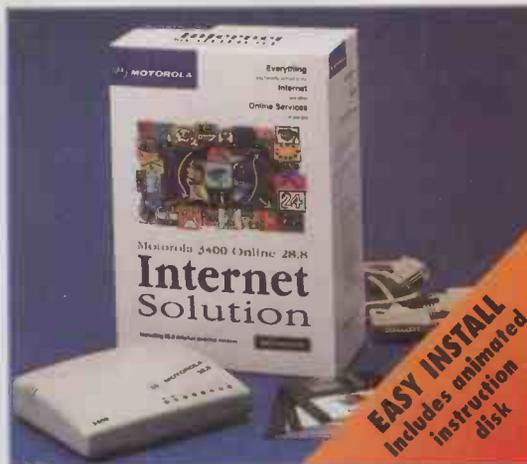
## MOTOROLA MODEM FEATURE



### MOTOROLA MODEMS

Model	V32bis	V32terbo	V34	MNP2-4	V42	V42bis	MNP5	Fax	Voice	External
MOTO34/ON	3400 Online	●	●	●	●	●	●	●	●	<b>POWERCUT!</b> £169
MOTO34/MAC	3400 Pro Mac	●	●	●	●	●	●	●	●	<b>POWERCUT!</b> £175
MOTO34	3400 Pro PC	●	●	●	●	●	●	●	●	<b>POWERCUT!</b> £159

Windows 95 compatible



**EASY INSTALL**  
Includes animated instruction disk

### 3400 ONLINE & PRO MODEMS

- Motorola RISC Technology
- Twice the speed of V.32bis 14.4bps technology
- Automatically selects the fastest possible line speed
- Robust performance over standard telephone lines
- Data error correction and data compression
- Fax error correction
- Phone number directory

- ➔ Speed 28,800 bps the fastest standard available
- 🌐 True V.34 worldwide compatibility
- 📞 Complete with all necessary cabling
- 📠 Includes popular fax and communications software
- 📖 Comprehensive user manual included
- ☎ Telephone support helpline

Easy install - includes animated instruction disk

Motorola 3400 Online 28.8 Internet Solution comes complete with all hardware and software that you need to get your PC online to the Internet!

- Internet software
- Protocol software
- File transfer software
- WorldWide Web browser software
- Electronic mail software
- Newsgroup software
- Interactive online game
- Internet phone software licence

Comms experts available for specialist advice



**EASY INSTALL**  
Includes animated instruction disk

## DFI MODEM FEATURE

# DFI®

### F1114V

- Features**
- Data/Fax speed: 14,400 bps
  - V.32, V.32 BIS, V.42, V.42BIS
  - MNP level 2-4, 5
  - Fax Class 1, 2 & 3
  - Call back security
  - Full/half duplex and auto fallback
- Accessories included**
- Serial cable
  - Telephone lead
  - User's manual
  - AC adapter
- Software**
- Delrina's 4 in 1 Win/DOS Fax Lite and Comit Lite Win/DOS software for data transmission
- Access**
- Introductory membership to CompuServe
- Warranty**
- 5 years

DFI manufactures a comprehensive line of high quality PC components which are the strength behind its custom-built desktop and notebook PCs. To supplement this product line, DFI have now moved into the data communications arena, launching the passport range of BABT approved fax modems. This complete package offers you state of the art technology and incorporates everything you need to gain access to the information super highway at a highly competitive price.

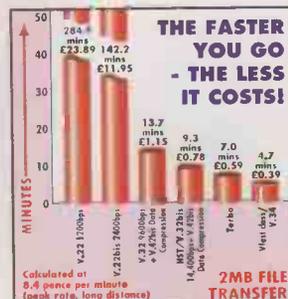
### DFI MODEMS

Model	V32bis	V32terbo	V34	MNP2-4	V42	V42bis	MNP5	HST Cellular	Fax	Internal	External
DFIMOD144	Passport F1114V	●	●	●	●	●	●	●	●	£84	£84
DFIMOD288	Passport F1128V+	●	●	●	●	●	●	●	●	<b>POWERCUT!</b> £155	£155



### F1128V+

- Access**
- Introductory membership to CompuServe
- Warranty**
- 5 years
- Features**
- Data/Fax speed: 28,800/14,400 bps
  - V.32, V.32 BIS, V.42, V.42 BIS, V.34
  - MNP Level 2-4, 5
  - Fax Class 1, 2 & 3
  - Call back security
- Accessories included**
- Telephone lead
  - User's manual
- Software**
- Delrina's 4 in 1 Win/DOS Fax Lite and Comit Lite DOS/Win software for data transmission



### Technical Sales Order Lines

**0181-951 3355**  
(50 lines)

### PRINTERS & MODEMS

**HUGE STOCKS**  
Guaranteed same day despatch on a virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While-you-wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday, Saturdays. Sales from 9.30am to 4.00pm. Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ

**Tel: 0181-951 3355**  
(50 lines)

**Fax: 0181 905 6233**  
**Email: sales@powermark.com**



Cards are not debited until despatch VAT at 17.5% will be added to all prices

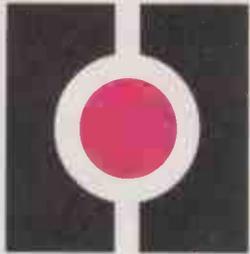


Public Sector customers can purchase through HMSO by calling 01603 691153.



BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades. Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

Power



Mark®

**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

**SPECIAL OFFER!**

**Powermark  
Dual High Speed  
Serial Card**

- Dual 16550 UART serial connections providing data transfer rate three times faster than V.34 modems
- Prevents interrupt overruns and data loss
- Easily installed even into heavily loaded systems
- Shorter communication times reduce costs
- Ideal for other high bandwidth communications including ISDN

HSSC10 £27

**Save £8 -  
Only £19 when  
purchased with any  
modem**

**CABLES**

- 2 metre 9F to 25M £8
  - 2 metre 25F to 25F £8
- Call for modem/serial cables and adaptors not listed here.

**TURN THE PAGE  
FOR MORE**

**FAMOUS  
COMMUNICATORS**

*The Sesame  
Street  
characters*

*Jimminy Cricket*

*Any Playschool  
Presenter*



# MEMORY

## LASAT MODEM FEATURE

### LASAT MODEMS

Model	V32bis V.34	MNP2-4	MNP5	MNP10	Fax	External	Price
LASATUNIQ Unique 144	●	●	●	●	●	POWERCUT!	£149
LASATSAF/144 Safire 144 (Mains only)	●	●	●	●	●		£116
LASAT/7 Credit 144 PCMCIA	●	●	●	●	●		£159
LASAT/288 Credit 288 PCMCIA	●	●	●	●	●		£191
LASATSAF/288 Safire 288	●	●	●	●	●		£195
Unique 640i single channel ISDN1/A							£399



# LASAT

**SAFIRE 288**

The Safire 288 V34 modem has V.42 error correction; V.42bis

data compression, MNP 2-5, MNP10; industry standard AT commands; async/sync/autosync communications; V.29 and V.27 fax. With indicator lights on front panel, the Safire 288 comes with cable and fax software.

It can send and receive data at 115,200 bps and send and receive faxes at 14,400 bps.

**CREDIT 288**

The Credit 288 V.34 PCMCIA modem which has V.42 error correction; V.42bis data compression, MNP 2-5, MNP10; industry standard AT commands; async (8/9/10-bit), autosync; auto dialling/answering; built-in 16550 FIFO UART.

It can send and receive data at 115,200 bps and send and receive faxes at 14,400 bps. Includes telephone cable and fax software.



"We were wrong to expect a good looking modem to perform badly. The Unique 144 displayed perfect data performance... and its throughput was excellent."  
Computer Shopper, April 1994

## DATAFLEX MODEM FEATURE



**14.4  
portable  
only £69  
Limited offer**

### DATAFLEX MODEMS

Model	V32bis V.34	MNP2-4	V.42	V.42bis	MNP5	MNP10	Voice	V.17Fax	Internal	External
FLEXGEM PC SuperGEM	●	●	●	●	●	●	●	●	£99	-
FLEXGEM/P Portable SuperGEM	●	●	●	●	●	●	●	●	LIMITED OFFER!	£115
FLEXGEM/C Comms Office	●	●	●	●	●	●	●	●	£105	£169
FLEXGEM/H PC HyperGEM	●	●	●	●	●	●	●	●	£155	POWERCUT!
FLEXGEM/P Portable HyperGEM	●	●	●	●	●	●	●	●	POWERCUT!	£169
FLEXGEM/D Desktop HyperGEM	●	●	●	●	●	●	●	●	-	£179

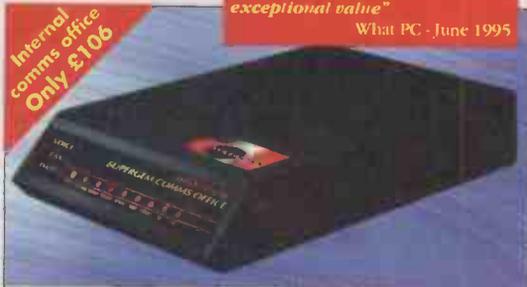
**SuperGEM  
Comms Office**

Combines voice recording, message taking, automatic touch tone response, fax, modem and comms management in one box. Easy to use Windows software enables your PC to become an answering machine with automatic voice, fax and data detection.

- Touch tone selection
- Voice mail
- Pager notification
- Call screening
- Sound card support
- Fax broadcasting
- Faxback/Faxforward
- Super Voice 2.0 software
- Windows fax and comms software

*Versatile modem combining answering machine with fax and data functionality - exceptional value"*

What PC - June 1995



**Internal  
comms office  
Only £106**



**HyperGEM**

Available as portable, PC card or desktop

- V34 (28,800bps)
- Ideal for Internet
- Windows fax and comms software



25

**DELIVERY  
CHARGES**  
See page 9

A great new way to buy...  
**MEMORYBANK  
Gold Card**  
See page 1

**EARLY BIRD  
Order Bonus**  
See page 29



Everyone at Powermark passes through our training college

# BANK

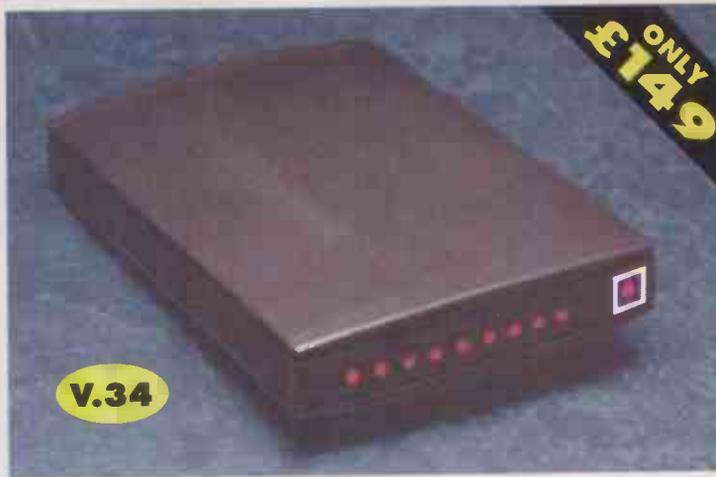
at Powermark

## POWERMARK MODEM FEATURE

Power  
Mark.  
Modems

Top quality, fully featured, Internet ready, BAPT approved modems brought to you at unbeatable prices from Memory Bank.

All modems feature Auto-Dial and Auto-Answer to ensure ease of use. Error correction and Data compression offer enhanced reliability and improved throughput of data giving you complete piece of mind whilst saving you money.



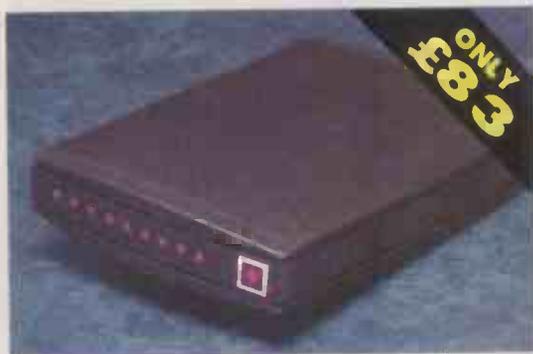
MBM288 External



MBM288 Internal

### All Powermark modems come complete with:

- 10 year warranty
- Delrina Dosfax Lite
- Winfax Lite (upgradable to Winfax Pro for Windows 95)
- Comit Lite for Windows
- Comprehensive user manual
- Free introductory subscription to CompuServe - your gateway to the Internet
- Telephone cable
- Serial cable and AC adapter (with external models)



MBM144 External

## POWERMARK MODEMS

Model	V32bis	V34	MNP2-5	V42	V42bis	Fax	Internal	External
MBM0D144	●	●	●	●	●	●	£79	£83
MBM0D288	●	●	●	●	●	●	£148	£149

### HSSC10 - 2 Port High Speed Serial Card

- Dual 16550 UART serial connection
- Enables shorter communication times and therefore reduces costs
- Save £8 when purchased with any modem

All Powermark modems are BAPT APPROVED

## ZOOM MODEM FEATURE

# ZOOM

Personal Computer  
World:  
Editor's Choice  
Award Dec '93 and  
June '93

Windows User:  
Best On Test,  
February '94



## ZOOM 14.4 MODEMS

- Remote configuration and callback security
- High speed 14,400 bps fax and data transmission with V.42bis and MNP 2-5

- Extended status reporting with 15 LED lights (14.4X only)
- 5 year warranty
- Buffered 16550 UART to prevent data overruns (14.4i only)

## ZOOM MODEMS

Model	V32	V32bis	V34	MNP2-5	V42	V42bis	Fax	Internal	External
ZOOM144X	●	●	●	●	●	●	●	POWERCUT!	£92
ZOOM144i	●	●	●	●	●	●	●	POWERCUT!	£86
ZOOM144X/MAC	●	●	●	●	●	●	●	POWERCUT!	£109
ZOOM288X	●	●	●	●	●	●	●	POWERCUT!	£168
ZOOM288i	●	●	●	●	●	●	●	POWERCUT!	£148
ZOOM288X/MAC	●	●	●	●	●	●	●	POWERCUT!	£179

Technical Sales  
Order Lines

0181-  
951 3355  
(50 lines)

MODEMS

Another spin  
for  
Webster's  
Web



Dear Webster,  
I read with real interest your article on the Internet. I want to talk to the World Wide Web and explore the "communications global village", talk to fellow musicians and exchange musical notes. I know I need a modem but as for actually getting access to the 'Net', I am completely stuck in the mud.

Eager in Ealing

Dear Eager,  
There are two main types of Internet access, "Internet Protocol" and "Gateway". With IP services you run the client software on your PC. As for Gateway access, all you need on your PC is a modem and general communications software. A good choice is the new Powermark 28.8 modem with Internet software. With this you can join a 'PoP' group and 'SLIP' in on some new tunes on a 'PPP' and go for a MOO in the MUD.

Yours, Webster

Send your communications problems to Webster, c/o Powermark plc, Premier House, Station Road, Edgware, Middlesex, H8 7AQ or fax them to 0181 905 6233. You can also Email Webster on: web@powermark.com

Webster makes every effort to answer your communication problems, but he cannot guarantee to reply to everyone

**Powermark plc**  
Premier House, 112 Station Rd,  
Edgware, Middlesex H8 7AQ  
Tel: 0181-951 3355  
(50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com



Cards are not debited until despatch  
VAT at 17.5% will be  
added to all prices

26

HMSO

Public Sector customers  
can purchase through  
HMSO by calling  
01603 694153.

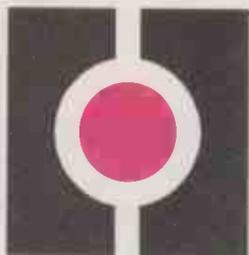


Certificate no. FS 26535

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

Power



Mark®

Technical Sales  
Order Lines  
**0181-  
951 3355**  
(50 lines)

... and here's what some of our customers have said ...  
*...the service and help I received from you all over the last few weeks has been nothing short of brilliant.*  
*... Your company has been brilliant and I will certainly use you again and recommend you whole heartedly to my friends in the future, THANK YOU.*  
Mr & Mrs N Luxford  
Herts  
  
Please find the following order and my compliments to Nira, extremely polite, efficient and very friendly - a real asset to your company.  
R. Smith  
Kent

# MEMORY

## PSION MODEM FEATURE



Comms experts available for specialist advice

All modems supplied by Powermark plc are BABT APPROVED

### PSION DACOM MODEMS

Model	V.32bis	V.F.C.	V.34	MNP2-4	V.42	V.42bis	MNP5	Fax	PC Card
PSIONDPG32	V.32bis Gold Card	●	●	●	●	●	●	●	POWERCUT! £157
PSIONDPG34	V.34 Gold Card	●	●	●	●	●	●	●	POWERCUT! £189

## GOLD DRIVE PC Card DRIVER



- Internal device reads any PC Card
  - Fits into any 3.5" drive bay
  - Front loading
  - Reads Type I, II and III cards
  - Easy to use
  - Easy to install
  - 5MB/sec data transfer rate
- GOLD DRIVE PC Card DRIVER** POWERCUT! £99

## WINFAX PRO FEATURE



Meet the fastest, easiest, most convenient way ever to handle all your faxing. WinFaxPRO 4.0 the only comms software that combines the advance faxing features you need with astonishing ease and usability.

- Advanced Phonebook
- E-Mail messaging
- Cover Page Designer
- Fax Autoforwarding

- Fax a File
  - OCR feature
  - Custom feature
- All of WinFax PRO's powerful features are so intuitive to use and incredibly accessible that you'll find faxing easier than you ever imagined. Upgrading from WinFax PRO 3 and and LITE is also easy.
- DELIRINA WINFAXPRO 4.0** £57



## MULTITECH MODEM FEATURE



### MULTITECH MODEMS

Model	V.32bis	V.32terbo	V.34	MNP2-4	V.42	V.42bis	MNP5	Fax	Simultaneous voice & data	External
MULTI28	●	●	●	●	●	●	●	●	●	£349
MULTI19	●	●	●	●	●	●	●	●	●	POWERCUT! £107
MULTI/PCM	●	●	●	●	●	●	●	●	●	£174
MULTI/PCMV34	●	●	●	●	●	●	●	●	●	£219
MULTI4P	●	●	●	●	●	●	●	●	●	POWERCUT! £299
MULTI14	●	●	●	●	●	●	●	●	●	POWERCUT! £269
MULTI78Z	●	●	●	●	●	●	●	●	●	POWERCUT! £155
MULTI78PCSI	●	●	●	●	●	●	●	●	●	POWERCUT! £439



MULTIMODEM II MT2834 ZDX

### MULTIMODEM II ZDX SERIES

- Desktop unit
- Group 3/Class 2 (TR29) fax
- V.17 fax compatible
- PSTN only
- V.42 (lap-M) error correction
- V.42bis data compression
- MNP to Level 5
- Asynchronous operation.
- AT command set (Hayes compatible)
- Free Multiexpress fax and comms software for windows
- 10 year warranty
- Available in 28.8bps (V34) and 14.4bps (V32bis)

### MULTIMODEM II SERIES

- Desktop unit/metal enclosure
- Group 3/Class 2 (TR29) fax
- V.17 fax compatible
- PSTN and 2W/4W leased line
- Leased line dial-backup with auto-restoral
- Security call-back (30 no.)
- V.42 (lap-M) error correction
- V.42bis data compression
- MNP to Level 5
- V.25bis async/sync
- Free Multiexpress fax and comms software
- 5 year warranty
- Available in 28.8bps (V34) and 14.4bps (V32bis)

Comms experts available for specialist advice

TURN THE PAGE FOR MORE

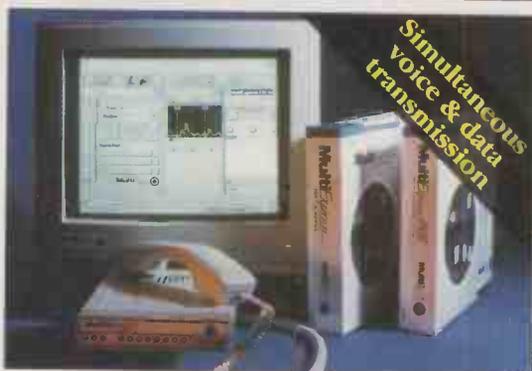
WARTIME Memories

Doodlebugs

Powdered Eggs

It is not the end of the beginning...

Winston Churchill



MULTIMODEM II MT2834 PCSI

27

**DELIVERY CHARGES**  
See page 9

A great new way to buy...



See page 1

**EARLY BIRD**  
Order Bonus  
See page 29



Everyone at Powermark passes through our training college

## U.S. ROBOTICS MODEM FEATURE

# UsRobotics®

The Intelligent Choice in Data Communications

### U.S. ROBOTICS MODEMS

Model	V32bis	V32terbo	V.34	MNP2-4	V42	V42bis	MNP5	IST Cellular	Internal	External
USRSP14 Sportster 14,400 + Fax	●	●	●	●	●	●	●	●	£105	£105
USRSP28 Sportster 28,800 V.34 + Fax	●	●	●	●	●	●	●	●	POWERCUT! £161	£159
USRSP28/MAC Sportster 28,800 V.34 Mac + Fax	●	●	●	●	●	●	●	●	POWERCUT!	£165
USRCDF1 Courier Dual Standard V.34 + Fax	●	●	●	●	●	●	●	●	£245	-
USRCDF6 Courier Dual Standard V.34 + Fax	●	●	●	●	●	●	●	●	POWERCUT!	£238
USRW4 WorldPort Dual Standard Cellular + Fax	●	●	●	●	●	●	●	●	POWERCUT!	£125
USR28/F WorldPort PCMCIA V.34	●	●	●	●	●	●	●	●	POWERCUT!	£161

USRSERIAL/2 **PowerPort High Speed Dual Async Serial Card.**  
Recommended for turbo and V34 modems to prevent bottleneck of data. £49



SPORTSTER 28,800 + FAX

### SPORTSTER 28,800 + FAX

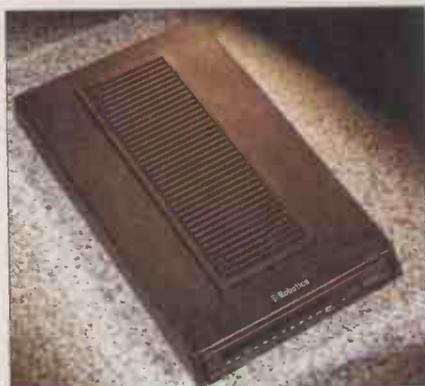
The world's best selling modem just got better. With speeds of up to 28,800bps, the Sportster 28,800 + Fax offers proven high performance technology, at an unbeatable price.

### COURIER

**Courier Dual Standard V.34 with V.32bis**

V.34 for speeds of up to 28,800bps. With the use of data compression a throughput of up to 115,200bps can be achieved, enabling you to

communicate at speeds previously never possible on a dial-up line.



COURIER V.34



WORLDPORT DUAL STANDARD CELLULAR

### WORLDPORT DUAL STANDARD CELLULAR

Small enough to fit in your pocket, whilst providing you with all your data communications needs both in and out of the office, the WorldPort Dual Standard Cellular Fax is the perfect choice for the mobile user.

### WORLDPORT PCMCIA

**WorldPort Dual Standard Cellular PCMCIA 2.0 Fax Modem**

Compatible with any portable equipped with a PCMCIA type II slot and powered directly by the computer. The ideal solution for anyone who will regularly need to transfer data from their portable computer.



WORLDPORT PCMCIA



FREE with every Sportster 28.8

• 30 days free trial with PIPEX DIAL TRIAL

• After 30 days, subscribe to PIPEX DIAL - the full version of PIPEX Internet for only £50 which includes a further 2 months free access to the Internet (normally £30)

- One month's free trial with COMPUSERVE
- Free access to the ACC call service. Save up to 25% on BT basic rates for national and international calls
- QuickLink II fax and data software
- Modem 9-25 pin serial cable and 9-25 pin serial converter for external Sportster
- Telephone cable

All modems supplied by Powermark plc are BAPT APPROVED



Technical Sales Order Lines

0181-951 3355  
(50 lines)

MODEMS

**HUGE STOCKS**  
Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

TURN THE PAGE FOR MORE

**UPGRADE DRIVE THRU**  
While you wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ

Tel: 0181-951 3355  
(50 lines)

Fax: 0181 905 6233

Email: sales@powermark.com



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices

Power



Mark®

Technical Sales  
Order Lines  
**0181-  
951 3355**  
(50 lines)

**EARLY BIRD**



**Catches the  
ROM!**

**FREE  
CD ROM**

**WITH EVERY  
TELEPHONE  
ORDER PLACED  
BEFORE 1.00PM**

When ordering just  
ask for your **FREE**  
CD ROM as it is  
not shipped  
automatically

**HURRY!  
STOCKS ARE VERY  
LIMITED**

**TURN THE PAGE  
FOR MORE**

**NEW! MEMORY  
LANE AGAIN**

Do you remember this  
Memory Lane from  
December 1993...?

Do you remember...  
... DEC Rainbow  
... BMX  
... Blakeys  
... How!



# MEMORY

**RACAL ISDN FEATURE**

**ISDN**

# RACAL

**ISDN**

*The UK Market Leader in ISDN*

New low cost, Plug and Play ISDN solutions

*The future now!*

*Superb quality and  
reliability with  
outstanding value. The  
DAP 6200's powerful  
features and  
astounding speed bring  
significant benefits at  
an amazingly low  
price!*

*Whether you're  
accessing the Internet,  
communicating with  
your office or into large  
file transfer and you  
believe time is money  
but thought ISDN was  
expensive -  
**THINK AGAIN!***

## DAP 6200 FEATURES

- Basic rate ISDN access
- High speed V24 data port
- Two analogue ports
- Speeds up to 57600 bps
- Sub-second connection time
- Calling line identification
- Multiple subscriber numbering

The DAP 6200 is ideally suited for PC applications which can greatly benefit from ISDN connectivity. Example applications include Internet access, Microsoft Mail, cc:Mail, Farsite Document Conferencing, Lotus Notes, etc.

The DAP 6200 is designed to simply connect to a PC serial comms port, and plug into the basic rate ISDN service.

DAP6200

£499

## ISDN APPLICATIONS

- Internet access
- E-mail access
- On-line teleworking
- Remote network access
- Simultaneous analogue and data
- Video conferencing



**Lower price  
£499**

**Data In/Out to COM port from  
RACAL DAP 6200 - up to 64  
Kbps. Connects in less than  
one second!**

**RACAL  
DAP 6200**

**At the same time use a  
standard telephone or fax  
machine on one of the analogue  
ports. Does not require ISDN  
telephone handset**



Racal Datacom, market leading manufacturer of ISDN access equipment, has extended its range of ISDN Digital Access Products (DAP) with the release of a new generation of intelligent ISDN terminal adapters, the DAP6000 series.

The first product in the series to be released is the DAP6200. This exciting new product is designed for very simple plug and play integrated ISDN access. Both data and analogue traffic can easily share a single basic rate ISDN line. It provides one high speed data port for connection to a PC serial port, plus two analogue ports for connection to traditional PSTN equipment such as telephones or fax machines. Any two of the three ports can be used simultaneously.

**29**

**DELIVERY  
CHARGES**  
See  
page 9

*A great  
new way  
to buy...*



See page 1

**EARLY BIRD  
Order Bonus**  
See above



Everyone at  
Powermark passes  
through our  
training college

# BANK

at Powermark

## HAYES MODEM FEATURE



ACCURA 288 V.34 + FAX

### ACCURA+FAX

Low cost fax modems with all of the quality and ease-of-use that comes with the Hayes name.

### OPTIMA+FAX

Offers outstanding performance with the ability to compress data twice as much as other fax modems.



## HAYES MODEMS

The industry standard

Model	V3.2bis	V3.2turbo	V34	MNP2-4	V4.2	V4.2bis	MNP5	Fax	Internal	External
HAAC14	●	●	●	●	●	●	●	●	POWERCUT!	£99
HAAC28	●	●	●	●	●	●	●	●		£175
HAOPT14/F	●	●	●	●	●	●	●	●		£249
HAOPPCM34	●	●	●	●	●	●	●	●		£197
HAOP28	●	●	●	●	●	●	●	●		£339
HAOP28/DUAL	●	●	●	●	●	●	●	●		£669
2 pack with free accelerator cards and upgrade to V.34										
HAULT4	●	●	●	●	●	●	●	●	POWERCUT!	£419
HAULTSD	●	●	●	●	●	●	●	●		£599
HAOPSP	●	●	●	●	●	●	●	●		£89
ESP high speed serial card, 1 port £59, 2 port £89										

## ARTISOFT FEATURE



Ideal as your first network



### LANTASTIC POWER SUITE NETWORK STARTER KIT

The easy-to-use LANtastic network integrated with Lotus cc:Mail e-mail, Lotus Organiser group scheduling and personal calendar, Cheyenne fax, data-comms and modem sharing software. Plus introductory Compuserve membership.

LANTASTIC POWERSUITE 2 NODE NETWORK STARTER KIT	£219
LANTASTIC ADD ON ONE NODE KIT	£115
LANTASTIC POWERSUITE SOFTWARE ONLY	
1 USER	£89
5 USER	£375
LANTASTIC 2 NODE NETWORK STARTER KIT (without Powersuite)	£194
LANTASTIC ADD-ON - 1 NODE KIT	£99
LANTASTIC OPERATING SYSTEM	
1 USER	£66
5 USER	£289
10 USER	£429
LANTASTIC UTILITY PACK	£249
ARTICOM	£69
ARTISAVE	£132

## XIRCOM FEATURE



### CREDIT CARD ETHERNET + MODEM II

- Simultaneous Ethernet/803.2 LAN plus 19,200 bps data and 14,400 bps send/receive fax modem operation in one slot
- Modem software will support telephone requirements in US and 14 European countries
- Includes terminal and fax software for Windows
- Performance modem communications via Xircrom's Modem Application Programming Interface (XMAPI)

- Serial port/UART emulation provides increased compatibility with all popular terminal and fax software
- Supports advanced PCMCIA features including HotSwap, Suspend/Resume and Integrated Power Management
- Includes Windows terminal and fax software

CEM2-10BT (TP)	£299
CEM2-10B2 (BNC)	£309
CEM2-10BC (COMBO)	£319

### PCMCIA ETHERNET

BNC	£125
TP	£109
COMBO	£145



### CREDIT CARD TOKEN RING ADAPTER IIps

- High-performance, memory-saving SmartRing software
- 16 or 4 Mbps software selectable ring speed
- Windows and DOS based installation program automatically configures PC and NOS setup
- Intuitive Windows based user utility for easy adapter management
- Allows 'hot' removal and reinsertion while preserving system status
- Supports both shielded & unshielded twisted pair Token-Ring cabling
- Compatible with the widest range of platforms

PS-CT2-16CTP (TP)	£299
-------------------	------



### POCKET ETHERNET ADAPTER III



- Universal connection for all notebook, laptop and desktop PCs
- Enhanced Parallel Port (EPP) capable
- Requires no internal expansion slots
- No jumpers or configuration switches to set
- Ultra-compact, ergonomic design for maximum portability and one hand installation
- Phantom power cable
- Small, lightweight power supply included

PE3-10B2 (BNC)	£185
PE3-10BT (TP)	£186
PE3-10BC (COMBO)	£208

Technical Sales Order Lines

0181-951 3355  
(50 lines)

MODEMS

**HUGE STOCKS**  
Guaranteed same day despatch on a virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
Use the red border to find these pages easily

We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While you wait installation service available. See page 3 for details.

**PERSONAL CALLS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355  
(50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices



Public Sector customers can purchase through HMSO by calling 01603 694153.



BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

Certificate no. FS 26953

Power



Mark®

**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**



**DELIVERY CHARGES**

**UK MAINLAND**  
Next working day courier delivery to your door

**SMALL ITEMS**

Examples: memory, sound/video cards, CD ROM titles, small software packages

**UP TO 3 ITEMS**  
£6.95 total

**4 ITEMS OR MORE**  
£1.95 for each additional item

**LARGE ITEMS**

Examples: CD ROM drives, monitors, multimedia kits, software suites

**1ST ITEM**  
£8.95

**EACH ADDITIONAL ITEM**  
£4.95

Call for rates outside UK mainland

**TURN THE PAGE FOR MORE**

**MOVIE MEMORIES II**

Another chance to read...

*The Cruel Sea++*

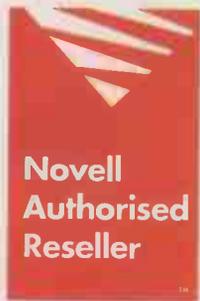
*Visual Basic Instinct*

*The Firm-ware*



# MEMORY

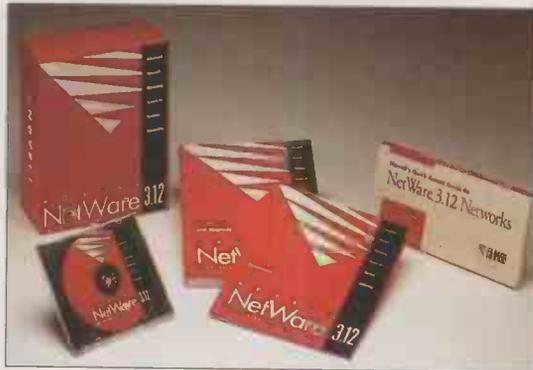
## NOVELL FEATURE



### INTRODUCING NOVELL NETWARE 4.1

NetWare 4.1 has all the advantages of previous versions of NetWare, plus gives you new capabilities designed to increase productivity, reduce costs, and simplify installing and maintaining your network.

- Additive licensing - 25 user + 10 user = 35 user licence
- NDS - NetWare Directory Services
- Single network log in for access to all resources
- Improved memory management and protection using both ring 3 and 0
- Enhanced security utilising RSA public/private key cryptography
- Remote management features



- Independent network auditing features
- Automatic file grooming and archiving
- All utilities in GUI format
- Support for over 250 printers
- New simplified installation
- Improved ITX WAN behaviour with enhanced routing of IPX, AppleTalk and IP
- Internationalisation via Multi-lingual language modules

### UPGRADES

Upgrades from any version to Netware 4.1

	Current	New 5	10	25	50	100	250	500
5	£185	£719	£1179	-	-	-	-	-
10	-	£355	£834	£1375	-	-	-	-
25	-	-	£567	£1064	£1886	-	-	-
50	-	-	-	£765	£1520	£Call	£Call	-
100	-	-	-	-	£1065	£Call	£Call	-
250	-	-	-	-	-	£Call	£Call	-

### FREE WITH EVERY COPY OF NETWARE

Lan Workplace 5 buy-one-get-one-free offer. Time Out (1996) full version of Net Connect. Groupwise Quicklook CD (offer ends 22/10/95) Limited offer - please ask for NOV2 when ordering

### NOVELL NETWARE 4.1 CD

5 USER	£439
10 USER	£1029
25 USER	£1529
50 USER	£1997
100 USER	£3279
250 USER	£Call

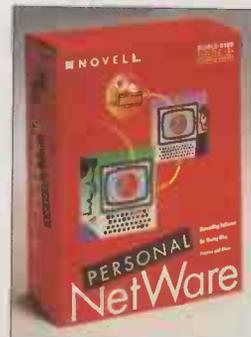
### NOVELL NETWARE 3.12

5 USER	£425
10 USER	£1009
25 USER	£1479
50 USER	£1969
250 USER	£Call

Call for CD ROM pricing

### PERSONAL NETWARE

- Share all your printers, drives (CD ROMs etc), directories and files



**PERSONAL NETWARE 5 PACK** £44 £189

## 3COM FEATURE



Compatible with commonly used operating systems, including Novell Netware, Microsoft LAN Manager, DECnet, DOS, PC-NFS, Banyan Vines and 3+Open.

### 3C503 RANGE

Standard 8-bit or selectable 16-bit card. Shared memory architecture and 8K buffer.

### 3C529 RANGE

MCA Etherlink III Cards.

### 3C509 RANGE

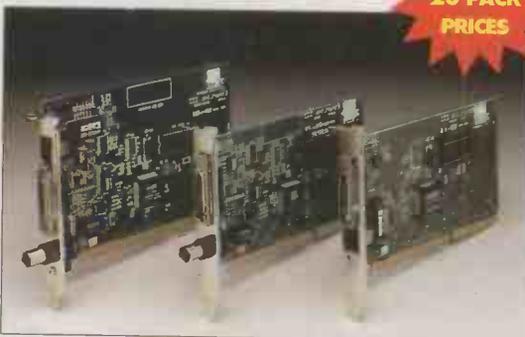
16-bit high performance, low component cards.

### 3C579 RANGE

32-bit EISA interface using Parallel Tasking Architecture.

The adapter uses the same drivers as the EtherLink III and is SNMP manageable when used with Linkwatch.

**CALL FOR 20 PACK PRICES**



### 3C509 RANGE

	BNC	RJ45	AUI	Unit	5 Pack
3C509	●		●	£72	£329
3C509TP		●		£72	£329
3C509C	●	●	●	£80	£339

### 3C529 RANGE

- MCA Etherlink III cards

	BNC	RJ45	AUI	Unit	5 Pack
3C529	●		●	£152	£669
3C529TP		●	●	£154	£669
3C529C	●	●	●	£139	£679

### 3C579 RANGE

- 32-bit EISA interface using Parallel Tasking Architecture

	BNC	RJ45	AUI	Unit	5 Pack
3C579	●		●	£149	£679
3C579TP		●	●	£149	£679

### 3C589 RANGE

- PCMCIA cards

	BNC	RJ45	AUI	Unit	5 Pack
3C589T	POWERCUT!	●		£107	£490
3C589C	POWERCUT!	●	●	£137	£634

### TOKEN RING PCMCIA

- AutoLink software
- LEDs for installation and trouble shooting

		Unit	5 Pack
3C689	TokenLink III 16/4	£299	£1399

### 3C590 RANGE

- PCI Bus Master adapters using parallel tasking architecture

	BNC	RJ45	AUI	Unit	5 Pack
3C590TP		●		£97	£419
3C590C	●	●		£106	£478

31



**DELIVERY CHARGES**  
See above

A great new way to buy...



See page 1

**EARLY BIRD**  
Order Bonus  
See page 29



Everyone at Powermark passes through our training college

## POWERMARK COMBO NETWORK ADAPTER FEATURE

Power



Mark

Networking

### MBNET PCMCIA

- Credit card sized PCMCIA Ethernet card
- Low power consumption. Use of EPA Energy Star components
- Uses NE2000 drivers
- Conforms to IEEE 802.3 and fits into Type I, II and III PCMCIA slots
- BNC/UTP auto-detection
- Supports NetWare, LAN Manager, Windows for Workgroups and Packet Driver for TCP/IP
- Two LED indicators

MBNETPCMCIA



It runs with NetWare



### MBNET2000C

- 35% faster than Novell NE2000
- Fully NE2000 compatible
- Jumperless or jumper configuration
- Automatic adapter configuration
- Auto detection for media
- Auto detection for ISA bus
- Supports 8 IRQs and 8 I/Os
- LED indicators
- Smart boot ROM support
- 16K on-board buffer

MBNET2000C £26

### MBNET2000C/P PLUG AND PLAY

- Improved performance by full-duplex capability (20Mbps) with full downward compatibility
- Incorporates Green Ethernet Chipset
- Includes McAfee anti-virus mechanism
- Full duplex design doubles the performance of standard NE2000 cards
- Plug and Play, auto-setup IRQ and I/O
- Configuration by jumpers or software



- Auto-detection for media
- Auto-detection for ISA bus
- Supports 8 IRQs and 8 I/Os
- Diagnostic program
- LED indicators
- Smart remote boot ROM support
- Uses NE2000 drivers - needs no additional drivers

MBNET2000C/P £36

Network experts available for specialist advice

### MBNET32PCI PLUG AND PLAY

- Ideal for high-performance system application requirements
- AUI, BNC and RJ45
- Complies to PCI local bus specification
- Supports Windows 95 Plug & Play function
- High performance Bus Master architecture with DMA Buffer Management Unit
- Low power consumption for Green PCs
- Comprehensive software drivers for most popular networking systems including Novell NetWare, Microsoft LAN Manager, Windows for Workgroups, Windows NT, SCO UNIX,
- Auto BNC and RJ45 detection

MBNET32PCI £69



MBNET32PCI

## SMC NETWORKING FEATURE

# SMC

### SMC EtherEZ Adapters

Superior plug and play Ethernet adapter approved for Windows 95

- Installs in less than 30 seconds
- Plug and Play capability means auto-configuration on power up
- All drivers are backward compatible with previous SMC adapters
- Lifetime Warranty

Windows 95 compatible



	Single	5 Pack
EtherEZ Adapter BNC	POWERCUT! £60	£279
TP	POWERCUT! £60	£259
Combo	POWERCUT! £68	£299

24 AND 50 PACKS ALSO AVAILABLE

### SMC Fast Ethernet Adapters

The SMC EtherPower 10/100 and Ether 10/100 adapters are 100Base-TX devices, designed for PCI or EISA bus computers.

### SMC ETHERCARD ELITE ULTRA

	Single	6 Pack
Elite 16 Ultra BNC	£59	£339
Elite 16 Ultra TP	£59	£339
Elite 16 Ultra Combo	£69	£386

### SMC ETHERPOWER PCI

	Single	5 Pack
EtherPower PCI TP	POWERCUT! £89	£415
EtherPower PCI Combo	£101	£499

### SMC ELITECARD PCMCIA

	Single	5 Pack
EliteCard PCMCIA TP	£85	£399
EliteCard Combo	£114	£553

### SMC ETHERCARD ELITE 32C ULTRA

	Single	6 Pack
Elite 32C Ultra Combo	£141	£769

### TIGER HUBS

	Number of Ports				
	TP	BNC	AUI	FL	
CX3	0	3	1	0	£209
TP6	6	0	1	0	£124
TP6B	6	1	0	0	£125
TP12	12	1	1	0	£249
CX6	1	6	1	0	£435
FL6	0	1	1	6	£Call

### Technical Sales Order Lines

**0181-951 3355**  
(50 lines)

NETWORKING

- HUGE STOCKS**  
Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.
- TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.
- FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.
- LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.
- TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.
- CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.
- FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

- UPGRADE DRIVE THRU**  
While you wait installation service available. See page 3 for details.
- PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
**Tel: 0181-951 3355**  
(50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com

Gold Card VISA MasterCard SWITCH  
Cards are not debited until despatch  
VAT at 17.5% will be added to all prices



Public Sector customers can purchase through HMSO by calling 01603 694153.

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades. Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**



**SMALL ITEMS**

Examples: memory, sound/video cards, CD ROM titles, small software packages

**UP TO 3 ITEMS  
£6.95 total**

**4 ITEMS OR MORE  
£1.95 for each  
additional item**

**LARGE ITEMS**

Examples: CD ROM drives, monitors, multimedia kits, software suites

**1ST ITEM  
£8.95**

**EACH ADDITIONAL ITEM  
£4.95**

Call for rates outside  
UK mainland

**TURN THE PAGE  
FOR MORE**



**MASTER  
QUIZZY**

Famous  
quiz  
show  
sayings...

Welcome to Double or  
Drop

**Crackerjack**

No hesitation,  
repetition, deviation...  
**Just A Minute**

# MEMORY

## TAXAN FEATURE

### MONITORS



• Taxan, market leader in display technology were the first manufacturer to introduce an energy efficient monitor compatible with the new



EPA Energy Star programme - the adopted 'green' standard for the PC industry

• All monitors are Macintosh compatible - cable available

	Size	Dot pitch	Resolution at up to:	Frequency	Tube		
400LR	14"	0.28mm	800 x 600	60Hz	Energy Star	POWERCUT!	£189
410LR	14"	0.28mm	1024 x 768	60Hz	Energy Star	POWERCUT!	£197
420LR	14"	0.28mm	1280 x 1024	60Hz	Standard	POWERCUT!	£239
<b>NEW</b> 580+LR	15"	0.28mm	1280 x 1024	60Hz	FST	POWERCUT!	£285
880LR	17"	0.28mm	1280 x 1024	60Hz	Energy Star, FST	POWERCUT!	£515
885LR	17"	0.26mm	1600 x 1200	65Hz	Energy Star, FST	POWERCUT!	£589
895LR	17"	0.25mm	1600 x 1200	67Hz	Trinitron	POWERCUT!	£795
1080LR	20"	0.28mm	1600 x 1200	65Hz	Energy Star	POWERCUT!	£879
2100LR	21"	0.30mm	1600 x 1200	72Hz	Diamondtron		£1499
<b>NEW</b> K10CV100	9.4"	0.30mm	640 x 480	72Hz	TFT LCD Panel Colour		£1999
<b>NEW</b> K10CV200	9.4"	0.30mm	640 x 480	72Hz	STN LCD Panel Colour		£1249



TAXAN ERGOVISION 2100LR



TAXAN ERGOVISION 580+LR



TAXAN ERGOVISION 410LR

### WINTURBO ACCELERATORS

- True 64-bit graphics and multimedia accelerator
- Up to 16.7 million colours at all resolutions from 640 x 480 to 1280 x 1024 with full graphics acceleration

#### GTS WINTURBO

ISA	2MB VRAM	£197
ISA	4MB VRAM	£339
VLB	2MB VRAM	£195
VLB	4MB VRAM	£341
PCI	2MB VRAM	£196
PCI	4MB VRAM	£339

### WINBOOST ACCELERATORS

#### GTS WINBOOST

ISA	1MB DRAM	£99
ISA	2MB DRAM	£138
VLB	1MB DRAM	£99
VLB	2MB DRAM	£138
PCI	1MB DRAM	£101
PCI	2MB DRAM	£138

Monitor experts available for specialist advice

## HITACHI MONITOR FEATURE

# HITACHI

Hitachi is one of the largest manufacturers of high resolution computer monitors, and is able to offer a complete range of models which will meet the needs of both home or small-business users, as well as the more demanding needs of the professional designer, publisher or DTP user.

All monitors offer the latest in screen ergonomics including tilt and swivel bases, anti-glare screen treatment, MPR-II low radiation, energy save function and flicker free resolution capability.

All monitors are IBM PC, Apple Macintosh compatible, and can connect to most workstations.



HITACHI 15MVXValue



HITACHI 17MVXValue

### 17MVXValue

- 17" Flatter Squarer Tube
- Superfine .26mm dot pitch
- Dynamic focusing gun for sharp focus in all areas
- Optimum flicker-free resolution of 1024 x 768 @ 75Hz
- PC & Mac compatible
- VESA, DPMS power save
- Microprocessor control for optimising image size, position and geometry
- MPR-II low emission
- Colour adjust facility
- 12 months on-site replacement warranty

Monitor experts available for specialist advice

	Size	Dot pitch	Resolution	Refresh	Tube	
15MVXValue	15"	0.28mm	1280 x 1024	60Hz	FST, Energy Star	£249
17MVXValue	17"	0.26mm	1280 x 1024	60Hz	FST, VESA-DPMS	£479
CM1711	17"	0.26mm	1280 x 1024	77Hz	FST, VESA-DPMS	£589
CM2096	20"	0.31mm	1280 x 1024	75Hz	Standard, VESA-DPMS	£899
CM2098	20"	0.28mm	1600 x 1200	72Hz	Standard, VESA-DPMS	£1139
<b>NEW</b> CM2111	21"	0.28mm	1600 x 1200	75Hz	FST, VESA-DPMS	£1469
<b>NEW</b> CM2112	21"	0.26mm	1600 x 1280	107Hz	FST, VESA-DPMS	£Call
CM2199	21"	0.26mm	1600 x 1280	80Hz	FST, VESA-DPMS	£1969

### 15MVXValue

- PC and Mac compatible (when supplied with appropriate Mac adapter)
- Supports resolution standards - VGA / SVGA / ESVGAs / XGA / 8514A / MacII, Mac Quadra
- High refresh rate in all modes
- Microprocessor control
- MPR-II compliant
- VESA-DPMS compliant

### CM1711M

This new multi-scanning colour monitor with 0.26mm dot pitch tube offers sharp and clear images right up to the bezel. Images are flicker free to over 75Hz for resolutions from 640 x 480 to 1280 x 1024, and screen adjustments are made by a microprocessor-based on-screen display. In a recent PC Magazine 'First Looks' review, this monitor was rated 12% better than the previous Editor's Choice.



**EARLY BIRD  
Order Bonus  
See page 29**



Everyone at Powermark passes through our training college

# BANK

at  
Powermark

## POWERMARK MONITOR FEATURE



New from Powermark - top quality monitors packed with leading edge features at very low prices.



MBMON15  
15" Monitor

### MBMON14

#### 14" LOW RADIATION MONITOR (MPRII)

Top quality, low radiation, non-glare, non-interlaced monitor. We have tested this monitor with some of the best known names and it has exceeded all expectations and comes out as one of the best for picture quality, image sharpness and vivid colours. With a maximum non-interlaced resolution of 1024 x 768 at 0.28 dot pitch this monitor will give you true image likeness in all your applications.

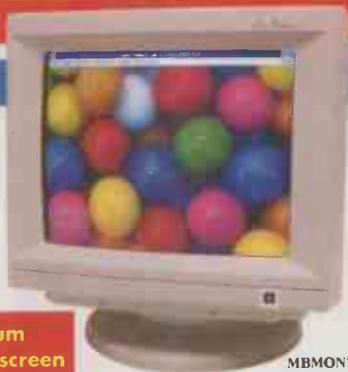
All Powermark monitors except 14" are MPRII compliant and feature EPA Energy Star power saving

15" minimum recommended screen size for Windows 95

### MBMON15

#### 15" FLATTER SQUARER TUBE MONITOR (MPRII)

Top quality, low radiation, non-glare, non-interlaced monitor with Energy Star power saving. Has the same picture quality as the 14" model but with a flatter squarer tube and Invar mask to give even crisper fuller screen images.



MBMON14  
14" Monitor

### MBMON17

#### 17" FLATTER SQUARER TUBE MONITOR WITH OSD

To really get the most out of Windows 95, choose Powermark's high quality 17" monitor with OSD (On Screen Display). With a maximum non-interlaced resolution of 1280 x 1024 at 0.28 dot pitch you can be sure that Powermark's fully featured 17" monitor will meet all your demands and at an unbelievably low price too!

EXCLUSIVE MONITORS AT LOW, LOW PRICES!

	Size	Dot pitch	Resolution	Frequency	Features	
MBMON14	14"	0.28mm	1024 x 768	88MHz	NG, TSB	£149
MBMON15	15"	0.28mm	1024 x 768	65MHz	FS, NG, IM, TSB	£208
MBMON17	17"	0.28mm	1280 x 1024	64MHz	FS, NG, IM, OS, TSB	£399
MBMON20	20"	0.28mm	1600 x 1280	82MHz	DF, IM, AS, TSB, DIG	£839
MBMON21	21"	0.28mm	1600 x 1280	82MHz	FS, DF, IM, TSB, DIG	£1149

KEY NG = Non-glare, FS = Flatter Squarer Tube, IM = Invar Mask, OS = On Screen Display, TSB = Tilt and Swivel Base, DIG = Digital Control, AS = Anti-Static, DF = Double Focus

## NOKIA MONITOR FEATURE

# NOKIA

In a world where energy consumption and conservation is continuously discussed in the media, Nokia has come up with an innovative approach to power consumption on their range of monitors. Nokia's "PowerSaver" is based on the NUTEK and VESA standards. This means that all their monitors meet the strictest industry energy emission regulations.

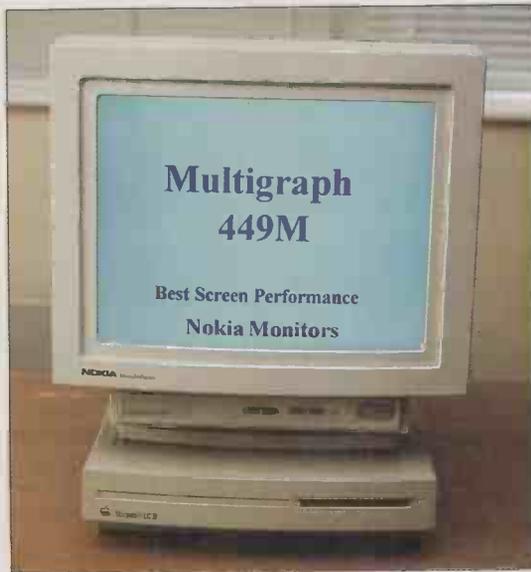
The broad range of monitors that Nokia manufacture means that they have a monitor to meet everybody's needs. For the graphics, CAD and DTP professional, the Multigraph 17" range offers a powerful mix of features and performance.

Other features such as the on-screen menu give an overview

about the actual user-mode and make programming of parameters very easy.

### NOKIA 449M

- 15" TRINITRON TUBE
- 0.25mm dot pitch
- 1024 x 768 @ 80Hz
- On screen menu
- Power saver option
- MPRII
- Minimum screen edge distortion



Model	Size	Dot pitch	Resolution	Frequency	Tube	
Multigraph 449M	15"	0.25mm	1024 x 768	80Hz	Trinitron	£385
Multigraph 447M	17"	0.25mm	1024 x 768	60Hz	Trinitron	£639
Multigraph 447X	17"	0.25mm	1280 x 1024	76Hz	Trinitron	£829
Multigraph 447M092P	17"	0.25mm	1024 x 768	76Hz	Trinitron	£799
Multigraph 445M	21"	0.28mm	1280 x 1024	65Hz	FS Invar	£1429
Multigraph 445X092P	21"	0.28mm	1600 x 1200	80Hz	FS Invar	£1799

Technical Sales  
Order Lines

0181-  
951 3355  
(50 lines)

MONITORS

## Another Case For The Backroom Boys To Investigate



Dear Backroom Boys,  
Although my computer is relatively old, I am reluctant to change it. Recently I was given a new graphics card and have been working with this over the last month. As a book-keeper, I deal with figures all day and I am tempted to increase the size of my monitor. Can I keep my working PC or do I have to think about a full replacement?

Distressed in Diss

Dear Distressed,  
A simple case; the answer is an upgrade. Powermark have a full range of monitors including their own brand. As a book-keeper you would benefit from Powermark's 17" range of monitors. Your existing system would probably accept this and you may want to think about other upgrades for your system. There are so many available, from memory to processors - speak to the specialists direct and save both time and money.  
Yours, The Backroom Boys

Send your investigations to The Backroom Boys, c/o Powermark plc, Premier House, Station Road, Edgware, Middlesex, HA8 7AQ or fax them to 0181 905 6233. You can also Email The Backroom Boys on: [bboys@powermark.com](mailto:bboys@powermark.com)

The Backroom Boys make every effort to investigate your problems, but they cannot guarantee to reply to everyone.

**Powermark plc**  
Premier House, 112 Station Rd,  
Edgware, Middlesex HA8 7AQ  
Tel: 0181-951 3355  
(50 lines)

Fax: 0181 905 6233

Email: [sales@powermark.com](mailto:sales@powermark.com)



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices

Public Sector customers can purchase through HMSO by calling 01603 694153.



BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

Power



Mark®

Technical Sales  
Order Lines  
**0181-  
951 3355**  
(50 lines)

# MEMORY

## GOLDSTAR MONITOR FEATURE



**GoldStar**  
Technology with the human touch

Consistent quality and reliability from an ISO9001 approved company

Key: NG = Non-Glare, AS = Anti-Static, DT = Dark Tint, FS = Flatter Squarer Tube, IM = Invar Mask, OS = Digital On-Screen Controls

Model	Size	Dot Pitch	Resolution up to:	Frequency	Features (see key)	
1462	14"	0.28mm	1024 x 768	87Hz	NG, AS, DT	£169
1468	14"	0.28mm	1024 x 768	60Hz	NG, AS, DT	£185
1505	15"	0.28mm	1024 x 768	60Hz	NG, AS, DT, FS, IM	£229
1527	15"	0.28mm	1280 x 1024	60Hz	NG, AS, DT, FS, IM, OS	£269
1727	17"	0.28mm	1024 x 768	60Hz	NG, AS, DT, FS, IM, OS	£469
2010	20"	0.28mm	1600 x 1280	60Hz	DF, AR, AS, IM, OS	£889

## ACCENT FEATURE



### ACCENT SPECIAL EDITION

Includes all of the features of Accent Express plus advanced support in - English, French, German, Spanish and Italian. Each language offers a spell checker, thesaurus, hyphenation, word-forward translation with the Berlitz Interpreter and keyboard maps. Accent Special Edition contains advanced word processing features and can import from or export to most popular word processing programs.



### ACCENT LANGUAGEWARE

Discover Accent LanguageWare and bridge the language barrier across international borders.

Accent offers you the ability to work effortlessly in over 30 languages simultaneously, with any PC and printer.

Accent speaks your customers' languages enabling you to write an entire letter or contract in their language or simply spell your customers' names and addresses correctly, from Russian letters to Turkish accent marks.

ACCENT/SE **ACCENT SPECIAL EDITION** £95

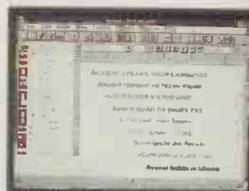
### ACCENT PROFESSIONAL

Accent Professional, the premier complete multilingual solution, as Accent Special Edition plus more. 17 spell checkers, 9 thesauruses, 12 language hyphenations, including Russian, Danish, Portuguese, Finnish and Dutch.

ACCENT/PRO **ACCENT PROFESSIONAL** £189

### ACCENT LANGUAGEWARE PRODUCT LINE

	Pro	Special Edition	Express
Typing Languages	Over 30	Over 30	Over 30
User Interface Languages	19	15	15
Interactive Keyboard Maps	Over 50	Over 50	Over 50
TrueType Fonts	Over 150	Over 80	30
On Line Help Languages	12	8	-
Spell Checker Languages	17	9	-
Thesaurus Languages	11	8	-
Hyphenation Languages	14	8	-
Berlitz Interpreter			
Word-for-Word Translation	5	5	-
Word Processing Features	Advanced	Advanced	Standard



### ACCENT EXPRESS

All the features of a traditional word processor plus the capability to create documents in over 30 languages. Accent Express can import and export text and graphics. Includes 50 keyboard maps for ease of use and authentic characters in any language.

ACCENT/EXP **ACCENT EXPRESS** £37

Exclusive to Powermark  
Buy Accent Express for only £24 with any other purchase

### ACCENT HOT PRESS

"Accent is the best multilingual word processor we've seen."  
PC Magazine, January 1995  
"If you're looking for a world-class correspondence program, I've got it. ... for those who must do electronic correspondence in many languages, I'd think this would be a godsend."  
Byte, January 1995

## Quicken

QUICKEN UK 4.0 FOR WINDOWS £26

The fastest, easiest way to organise your home and small business finances

Quicken organises all your finances in one place. It's easy to use, provides insight into your spending habits and helps you to plan for a better financial future.



NEW 4

CD ROM

QUICKEN 4 CD £26

New Quicken 4 CD for Windows uses multimedia to make it easier than ever to have your PC organise your finances.

On-screen Tutors show you Quicken's key features, talking you through the basics and making sure Quicken starts working for you in next to no time.

QUICKEN DELUXE HOME PACK FOR WINDOWS £45

QUICKEN DELUXE BUSINESS PACK FOR WINDOWS V4.0 £45

QUICKBOOKS UK 3 FOR WINDOWS £84

TURN THE PAGE FOR MORE

## EUROPRESS FEATURE

## EUROPRESS SOFTWARE

### 3D INTERIOR DESIGN

Helps you design the home of your dreams  
Granada TV's House Style 3D Interior Designer gives you practical help in planning your ideal home.



### 3D GARDEN DESIGNER 2

Helps you design the garden of your dreams

3D Garden Designer 2 takes full advantage of the vast scope offered by CD ROM.



### Creativity

Klik & Play £29  
Klik & Play Gamepack £5  
(Four customisable games on one CD)

### Education

Fun School 5 Dreamland age 4 to 7 £17  
Fun School 5 Space age 6 to 9 £17  
Fun School 5 Time age 8 to 11 £17  
Fun School 4 Under 5's £15  
Fun School 4 age 5 to 7 £15  
Fun School 4 age 7 to 11 £15  
Fun School Paint & Create 5 to 11 £17  
Fun School Spelling 7 to 16 £17  
Fun School Maths 7 to 11 £17  
Flying Fingers Typing Tutor £26

### Lifestyle

BBC Gardeners' World 3D Garden Designer 2 £21  
BBC Gardeners' World 3D Garden Designer £13  
Granada 3D Interior Designer £14

35

DELIVERY CHARGES See page 9

A great new way to buy...



See page 1

SOFTWARE WARRANTY  
Do check compatibility before ordering. Faulty software replaced through Powermark Customer Service. Opened software cannot be returned.

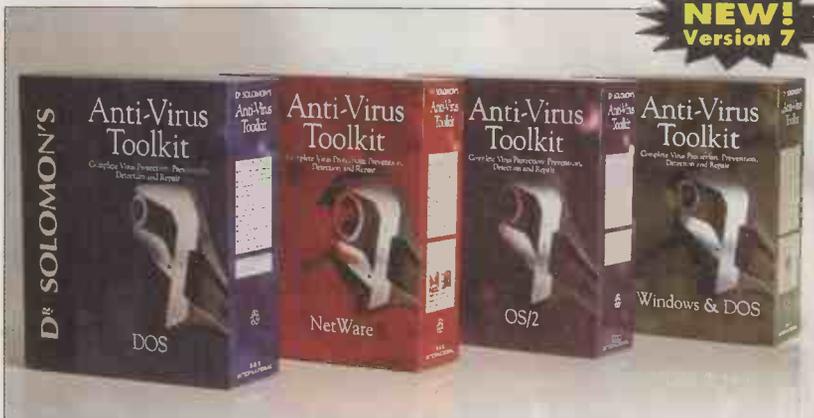


Everyone at Powermark passes through our training college

## Dr. SOLOMON'S FEATURE

### DR SOLOMON'S

**NEW!**  
Version 7



#### Dr. SOLOMON'S ANTI-VIRUS TOOLKIT

**Combat viruses in DOS, OS/2, Windows and Netware**  
The best answer to the serious problem posed by viruses. Each toolkit is made up of four programs geared to locate, identify and destroy existing viruses and then protect your system.

**FINDVIRUS** - Detects and identifies viruses in files, partition code and boot sectors using an extensive database of virus recognition information.  
**GENERIC DECRYPTION ENGINE** - An amazing program that can actually detect those viruses that mutate.  
**VIRUSGUARD** - This is the memory resident utility that is installed every time you restart your computer. It checks every

program for viruses before it is opened or copied.  
**VIVERIFY** - ViVerify is a unique program that finds new and undiscovered viruses by monitoring executable code changes.

DISK/AV/D	<b>ANTI-VIRUS TOOLKIT DOS</b>	£49
DISK/AV/W	<b>ANTI-VIRUS TOOLKIT WINDOWS</b>	£69
DISK/AV/M	<b>ANTI-VIRUS TOOLKIT NETWARE</b>	£239

#### Dr. SOLOMON'S PC ARMOUR

**PC Protection for IT Professionals**

An easy to use package which gives you back control over who uses your computer

- Boot-up password
- Program authorisation
- Hard disk boot protection

DISK/PA **PC ARMOUR** £41

**ATTENTION VOLUME USERS! SITE LICENSES AVAILABLE**  
Microsoft • Lotus  
Borland • Corel • S&S International • Novell • IBM

**Software experts available for specialist advice**

**Technical Sales Order Lines**  
**0181-951 3355**  
(50 lines)

**SOFTWARE**

## Aaron's Answers



Dear Aaron,  
Windows runs very fast on my friend's PC, even though we have identical models. All the configuration is the same, and nothing springs to mind. Why should this be, is it the machine that is at fault or is it just a quirk?

Bill Wildered

Dear Bill,  
Just a thought - Have you set the virtual memory option under EMM386 in the control panel? If not, change the setting to either permanent or temporary. Don't forget the 32-bit disk access option as well. Since your friend has the same machine, have you thought of a processor upgrade, memory upgrade and even Microsoft Windows 95? Then your friend will be envious of you!

Yours, Aaron

Send your questions to Aaron's Answers, c/o Powermark plc, Premier House, Station Road, Edgware, Middlesex, HA8 7AQ or fax him to 0181 905 6233. You can also Email Aaron on: aaron@powermark.com

Aaron makes every effort to answer your problems, but he cannot guarantee to reply to everyone.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ  
**Tel: 0181-951 3355**  
(50 lines)  
Fax: 0181 905 6233  
Email: sales@powermark.com

## TOUCHSTONE FEATURE



#### WIN'95 ADVISOR

**ARE YOU READY FOR WINDOWS 95?**  
Get the answers you need quickly and easily! Win'95 Advisor is designed to take all of the guesswork out of installing Microsoft Windows 95. Make the right decisions with Win'95 Advisor and install Windows 95 right the first time.

- Prepares your Windows 3.1 system for a fast, safe and easy upgrade
- Makes expert recommendations on hardware and software requirements
- Optimizes Windows 95 installation

WIN'95 ADVISOR £19



#### FASTMOVE!

**THE FAST, EASY WAY TO TRANSFER FILES**

- Shows you which files need to be updated
- Scans each file for viruses
- Synchronizes PCs with up-to-date files
- Simple interface for problem-free transfers
- Selects just the files you want
- Includes Windows and DOS versions
- Includes PC to PC transfer cable

FASTMOVE! £33



#### WINCHECK IT

**The all-in-one Windows problem solver!**  
**Includes Uninstall Utility!**  
Six reasons why you need the new all-in-one Windows problem solver

- **Clean up** - Make room for more programs and data files
- **Fix up** - Recovery that works even when Windows won't
- **Tune up** - Get the most out of your Windows system
- **Set up** - Simplify hardware and software installation
- **Uninstaller** - Get rid of unwanted Windows applications
- **Check up** - Be sure you don't have a hardware problem

**Includes Pentium Troubleshooter Kit**

WINCHECK IT £39

#### SET UP ADVISOR II

"If your planning a hardware upgrade, SetUp Advisor is a must have."  
Save hours of frustration when installing....

- Multimedia kits
- CD ROMs
- Fax/modems
- Sound cards
- Floppy drives
- Tape drives
- Scanners
- Network cards
- SCSI host adapters
- Graphic accelerator boards
- Serial/parallel port adapters and other devices

SET UP ADVISOR £17

#### CHECK IT PRO DELUXE

Advanced Diagnostic Toolkit  
Troubleshoot PC Problems!

- Diagnose hardware problems
- Find setup conflicts and assignments
- Compare system performance
- Document configuration details
- Create/recover system rescue disk
- Check for virus infections
- Install and test new equipment

CHECK IT PRO DELUXE £89  
CHECK IT PRO £59

**NO GREY IMPORTS!**



BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.

Certificate no. FS 26735

Gold Card  
VISA MasterCard  
Cards are not debited until despatch  
**VAT at 17.5% will be added to all prices**

# Power



# Mark®

**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

**Microsoft®  
SOLUTION PROVIDER**

Authorised Partner

As a Microsoft Solution Provider, Powermark plc can provide 'Select' agreements for volume purchases of Microsoft applications, systems and server products.

Contact our Microsoft Select team for details.

**Training Video  
for Microsoft  
Windows 95**

£19

or £16 when purchased with Microsoft Windows 95

“... and here's what some of our customers have said ...  
...the service and help I received from you all over the last few weeks has been nothing short of brilliant.  
...Your company has been brilliant and I will certainly use you again and recommend you whole heartedly to my friends in the future, THANK YOU.  
Mr & Mrs N Luxford  
Herts”

**MEMORABLE  
Ha Ha Ha  
GAGS**

Punchlines to old, old, old favourites

**So he swam back!**

**It's no longer in the suburbs!**

**The top is down!**

If you can't remember the stories to these then contact Quentin Quizzy and he'll be happy to oblige.

# MEMORY

## WINDOWS® 95 FEATURE

# Microsoft®

## Unlock the potential of your PC with Microsoft® Windows® 95

Microsoft Windows 95 makes everything you do with your computer faster and easier.

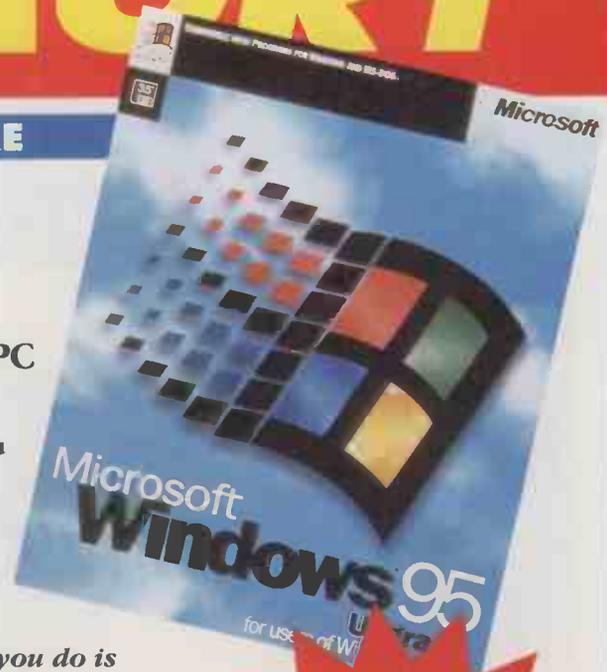
The Microsoft® Windows® 95 operating system will transform everything you do with your PC. Suddenly using a computer can be fast, easy and fun - with limitless possibilities!

### Microsoft® Windows® 95: Your open door to doing more

- Save time with an easier-to-use interface: long filenames; and one-click access to all of your programmes and documents with the Start button
- Plug and Play technology automatically connotes compatible disk drives, sound cards and more
- 32-bit, pre-emptive multitasking lets you run multiple programmes or perform multiple tasks simultaneously
- Gain built-in access to e-mail and faxes with Microsoft Exchange, and to the Internet with The Microsoft Network
- Full-motion video provides vividly realistic game play with big, fast, on-screen action

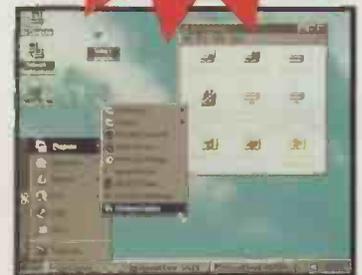
### Everything you do is easier and faster

- **Easier.** Navigate your system quickly with easy-to-use tools, including the Start button, taskbar, and Windows Explorer
- **Plug and Play.** Plug and Play frees you from manually setting up Plug and Play-compatible hardware devices such as CD-ROM drives and scanners
- **Long File Names.** More descriptive file names - up to 250 characters long
- **Faster.** Enjoy improved performance in all major areas, including faster file and disk access, and faster printing, thanks to the 32-bit architecture of Windows 95®
- **Compatible.** Works with your current software - 16-bit programmes and drivers for Windows, Windows for Workgroups, and MS-DOS are compatible with Windows 95®



# £55

when you purchase any other product over £29 (One upgrade at £55 per order. Offer applies to upgrade version only.)



### A world of new possibilities

- **Multitask.** Work on several tasks at once with fast, new 32-bit programmes that support pre-emptive multitasking and multithreading
- **The Microsoft Network.** Sign on to The Microsoft Network. It's an easy-to-use online service with e-mail, news, Internet access and more
- **One-Stop In-Box.** Microsoft Exchange is your one-stop in-box that makes it easy to view and work with such things as electronic mail from multiple sources, faxes, documents and bulletin boards
- **Network-Ready.** Windows 95 is network-ready, providing easy 32-bit access to network resources.
- **Mobile.** Get the most from your portable PC features such as Dial-up networking, Battery Monitor and Plug and Play support for PCMCIA cards and docking stations
- **Better Video.** Enjoy larger, smoother video than ever before for more fun multimedia experiences

**MICROSOFT WINDOWS 95  
UPGRADE 3.5" FLOPPY** £59  
**MICROSOFT WINDOWS 95  
UPGRADE CD ROM** £59

## MICROSOFT® PLUS! FOR WINDOWS® 95

### To give Windows® 95 even more space and style, add new Microsoft® Plus!

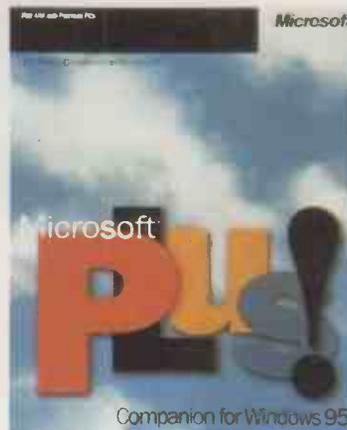
Introducing Microsoft® Plus! - the way to fully exploit the power of 486 and Pentium PCs.

A companion for the Windows® 95 operating system, Microsoft® Plus! adds space and style to your PC. With Microsoft Plus!, your computer is self-maintaining and is customisable with unique new desktop themes. Microsoft Plus! gives you outstanding data compression whether you have a 486 or Pentium computer. As an added bonus, you get fast, easy access to the Internet.

Microsoft® Plus! is packed with features that complement Windows® 95

- An intelligent new System Agent makes your PC self-maintaining
- Microsoft® Plus! has an enhanced version of DriveSpace that allows up to 50% more compression than Windows® 95 and more free disk space without any performance penalty
- Themes - 11 colourful themes, each with new fonts, icons, backgrounds, sounds, screen savers and colours
- For Internet users Microsoft Plus! includes an enhanced Internet Browser
- Pinball - a 3-D game designed for Windows 95 that looks, sounds and plays like the real thing
- Turn your computer into a Dial-Up Networking server that lets your small office or workgroup share data or send and receive mail remotely
- Font smoothing makes fonts easier to read

**MICROSOFT PLUS! 3.5" FLOPPY** £29    **MICROSOFT PLUS! CD ROM** £29



**DELIVERY CHARGES**  
See page 9

A great new way to buy...  
**MEMORABLE Gold Card**  
See page 1

**SOFTWARE WARRANTY**  
Do check compatibility before ordering. Faulty software replaced through Powermark Customer Service. Opened software cannot be returned.



Everyone at Powermark passes through our training college

# BANK

at **Powermark**

## WINDOWS® 95 FEATURE

### Microsoft®

#### MICROSOFT® WORD FOR WINDOWS® 95

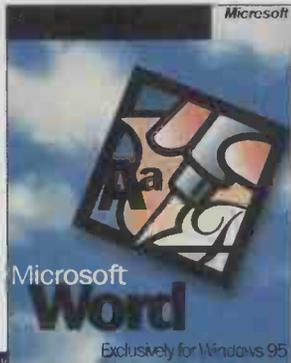
Microsoft® Word for Windows® 95 helps make everyday writing tasks more automatic and complex tasks simple. It also provides tools to create and distribute documents in an increasingly connected world.

Save time with Microsoft® Word for Windows® 95, with features like the integrated **Address Book** and grammatical **Find and Replace**.

- Get your work done faster with Word's full 32-bit support and the new interface and user assistance of "Windows® 95"
- Readily access addresses for letters, memos and faxes

Word for Win 95 £229  
Word for Win 95 1 SL £195  
Word for Win 95 UP CCP £82  
Word for Win 95

UP CCP 1 SL £70  
Word for Win 95 CUP £107



#### MICROSOFT® EXCEL FOR WINDOWS® 95

• Enhanced **IntelliSense®** technology, more intuitive help, and integration with Windows® 95 make your everyday spreadsheet tasks easier

- Significant performance improvements help you get your work done faster
- Powerful new analysis tools simplify a variety of complex tasks



Excel for Win 95 £229  
Excel for Win 95 1 SL £195  
Excel for Win 95 UP CCP £82  
Excel for Win 95  
UP CCP 1 SL £70  
Excel for Win 95 CUP £107

#### MICROSOFT® POWERPOINT FOR WINDOWS® 95

- Type a help request in your own words, and the **Answer Wizard** finds the answer



- Bring your presentation to life with extended animated builds, sounds and more!
- Take meeting notes and assign action items on the spot with the **Meeting Minder**
- Let a remote audience review your presentation over the network

#### PowerPoint for Windows 95

3.5" Disk £229  
1 Site Licence £195  
Upgrade CCP £82  
Upgrade CCP 1 Site Licence £70  
Competitive Upgrade £119

#### MICROSOFT® OFFICE FOR WINDOWS® 95

Microsoft® Office for Windows® 95. Easy access to powerful tools. For powerful accomplishments.

Microsoft® Office for Windows® 95 makes it easier than ever to focus on your job instead of your software.

In Microsoft® Office Standard for Windows® 95, you get: Excel, Word, PowerPoint® and the new Microsoft Schedule+. In Microsoft Office Professional, you get all these plus Microsoft Access.

- IntelliSense technology does routine tasks for you with enhanced AutoCorrect and much more
- Type a help request in your own words and the Answer Wizard gives you the answer you need

#### Office for Windows 95

3.5" Disk £334  
CD ROM £334  
1 Site Licence £284  
Upgrade CCP £139  
Upgrade CCP CD £139  
Upgrade CCP 1 Site Licence £118  
Competitive Upgrade £164  
Comp Upgrade CD £164



#### MICROSOFT® ACCESS FOR WINDOWS® 95

Access for Win 95 £229  
Access for Win 95 1 SL £195  
Access for Win 95 UP CCP £82  
Access for Win 95  
UP CCP 1 SL £70  
Access for Win 95 UP £107

#### MICROSOFT® SCHEDULE+ FOR WINDOWS® 95

Put time on your side with Microsoft® Schedule+ for Windows® 95  
Schedule+ for Win 95 £75  
Schedule+ for Win 95 1 SL £68

#### Office Professional for Win 95

3.5" Disk £431  
CD ROM £431  
1 Site Licence £368  
Upgrade CCP £205  
Upgrade CCP CD £205  
Competitive Upgrade £249  
Comp Upgrade CD £249

#### MICROSOFT® WORKS FOR WINDOWS® 95

Create professional documents easily and quickly with the essential tools in Microsoft Works.  
Provides the easy to use integrated tools you need - word processor, spreadsheet, database, drawing and communication tools to make everyday computing tasks easier and create professional documents for your business or home.  
Works for Windows 95 £56  
Works for Windows 95 and Bookshelf 95 bundle £Call

#### MICROSOFT® PUBLISHER FOR WINDOWS® 95

Create distinctive newsletters, brochures and flyers without any experience with Microsoft Publisher.  
Publisher for Windows 95 £62

#### KEY

CCP	Compliance Checking Product	MS	Microsoft Product
CD	CD ROM	SL	Site License
CUP	Competitive Upgrade	UP	Upgrade Version
DOS	DOS Version	Vxx	Version
		WIN	Windows Version

Technical Sales Order Lines

0181-951 3355  
(50 lines)

WINDOWS 95

**HUGE STOCKS**  
Guaranteed same day despatch on virtually all stock items for orders placed even up to 4.00pm.

**TECHNICAL SALES PEOPLE**  
Our sales people are the best. They are trained specialists in their chosen field - multimedia, memory of all types, mass storage, networking and communications.

**FINANCIAL STABILITY**  
Powermark plc has been supplying upgrades for over 5 years and has an annual turnover exceeding £18 million with a healthy balance sheet.

**LOW, LOW PRICES**  
We only supply products from leading manufacturers and at low, low prices too.

**TECHNICAL SUPPORT**  
Dedicated after sales technical support teams on line to help with installation.

**CORPORATE & PUBLIC SECTOR**  
We welcome orders from corporate, education and public sector organisations. Just fax or phone your order number.

**FULL MANUFACTURERS' WARRANTIES**  
All products supplied by Powermark plc carry manufacturers' warranties and of course full Powermark plc guarantees.

**TURN THE PAGE FOR MORE**

**UPGRADE DRIVE THRU**  
While-you-wait installation service available. See page 3 for details.

**PERSONAL CALLERS**  
Save on delivery charges - there's plenty of parking. Telephone first to check our stock position on the items you want. We're open from 9.00am to 6.00pm Monday to Friday. Saturdays: Sales from 9.30am to 4.00pm, Technical Support and Customer Service from 10.00am to 2.00pm.

#### Powermark plc

Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ

Tel: 0181-951 3355

(50 lines)  
Fax: 0181 905 6233

Email: sales@powermark.com

Education Packs available at very special prices

(Proof of status required)

Call our Education Sales Team for details

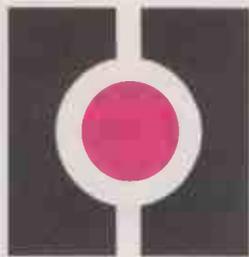


BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices

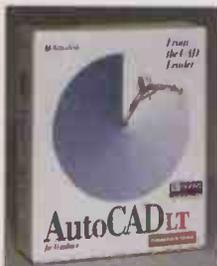


**Technical Sales  
Order Lines  
0181-  
951 3355  
(50 lines)**

## AUTODESK FEATURE

## AUTOCAD LT RELEASE 2

AutoCAD LT Release 2 for Windows is a full-featured, easy-to-use, 2D design and drafting package with extensive 2D drawing and editing tools, associative hatching and Aerial View.



AutoCAD LT V2 WIN £375  
AutoCAD LT V2  
WIN UP £95  
AutoSketch V2 WIN £99

**TURN THE PAGE  
FOR MORE**

## JUKEBOX HITS

Internet Surfin' USA  
Beach Boys

You've Got Me  
Hanging On An  
Initialisation String  
Chairman of the Board

SUN Arise  
Rolf Harris

When I'm Cleaning  
Windows  
George Formby



# MEMORY

## SOFTWARE FEATURE

### UTILITIES

386/MAXV7	386 Max V7	£41
CLEAN/STACKW	Clean Sweep & Stacker	
	For Win	£35
CMSS2SD/MS	Colorado Backup WIN	£29
CORE	Corel SCSI V2	£61
CORS/NW	Corel SCSI Network	
	Manager	£249
CHECKIP	Check It Pro	£59
WINCHECKIT-	Check It Set Up Advisor	£17
DISOLCHK/SET	Win Check It	£35
CHECRAW	Check It Analyst WIN	£52
CPANTID+SUBS	CP Antivirus DOS	£66
CPANTIW+SUBS	CP Antivirus WIN	£69
CPANTIV/NET	CP Antivirus For	
	Network	£469
DESQVIEW/27	Desqview 386 V2.7	£105
DRSOLAY/7D	Dr Solomon Antivirus &	
	Quarterly Update DOS	£49
DRSOLAY/W	Dr Solomon Antivirus &	
	Quarterly Update WIN	£69
DRSOLAY/NET-	Dr Solomon Antivirus	
	For Network	£239
DRSOL/PC	Dr Solomon PC Armour	£41
FASTBACK+6D	Fastback Plus V6 DOS	£85
FASTBACK+W	Fastback Plus WIN	£75
FIRSTAID/95	1st Aid for Windows 95	£39
NORTFIRST	Norton 1st Aid for	
	Windows	£35
NORDESKW-	Norton Desktop	
	V3 WIN	£89
NORDESKV1	Norton Desktop	
	V1 DOS	£49
NORCOMMSD	Norton Commander	
	V5 DOS	£49

### ATTENTION VOLUME USERS!

SITE LICENSES AVAILABLE  
Microsoft • Lotus • Borland • Corel • S&S  
• Novell • IBM • Claris

### LANDMARK SELL OUT!

**UNINSTALL-IT**  
Increases performance of  
PC by eliminating  
unwanted files  
Only £9

**Only £5  
with any purchase  
over £30**

### UTILITIES

NORSPEED	Norton Speedrive 4.0	£49
NORADM/MSXFS	Norton Administrator	
	for LAN 5 Pack	£299
NORDISKLOCK	Norton DiskLock V3	£79
NORU	Norton Utilities V8	£83
NORUUP	Norton Utilities V8 UP	£49
NORUFS	Norton Utilities	
	For Win 95	£79
NOREDIT2D	Norton Editor 2.2 DOS	£49
NORAV21	Norton Antivirus V3	
	WIN & DOS	£95
NORAV95	Norton Antivirus	
	For Win 95	£59

### UTILITIES

NORADM/MSXFS	Norton Antivirus For	
	Network	£439
NORBD	Norton Backup 2.2	
	DOS	£87
NORBUW	Norton Backup 3.0	
	WIN	£87
NORNAV95	Norton Navigator	
	For Win 95	£69
PCTOOLS/2W-	PC Tools V2 WIN	£75
PCTOOLS/95-	PC Tools Pro V9 DOS	£78
	More PC Tools	
	DOS WIN	£45
QEMM386	Qemm V7.5 DOS WIN	£45
QEMM7.5	Qemm V7.5	
	+ Stacker V4.0	£55
STACKER4/W	Stacker V4 DOS WIN	£65
STACKER4/UP-	Stacker V4 UP	£36
SUPERPRINT3.1	Superprint V3.1	£79
SYSTOS+OS2	Systos Plus for OS/2	£79
UNINSTALL	Uninstall V3.0 WIN	£36
UNINSTALL-IT	Uninstall IT	£19
WINDELETE	WinDelete	£37
WINPROBE	WinProbe	£29
XTREE	Xtree Gold V3 DOS	£86
XTREEG4W	Xtree Gold V4 WIN	£69
XTRENET3	Xtree Net V3	£259
XTREETOOL	Xtree Tools	
	For Network	£349

### SOFTWARE SUITES

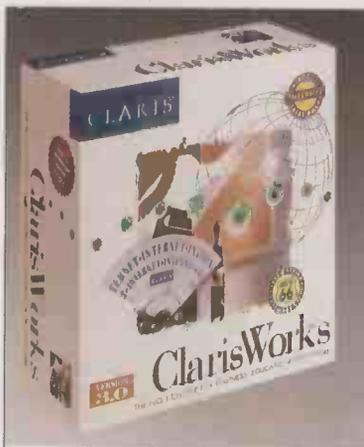
CA/SIMPLY/ACC	CA Simply Business	
	WIN	£59
LOTSS3.1	Lotus Smartsuite V3.1	
	WIN	£328
LOTSS3.1CD-	Lotus Smartsuite V3.1	
	WIN CD	£319
LOTSS1/1	Lotus Smartsuite 1 SL	£279
LOTSSP/UP	Lotus Smartsuite 3.5"	
	UP	£158
LOTSSP/UP	Lotus Smartsuite	
	UP CD	£169
LOTSSM4CD-	Lotus Smartsuite V4	
	for Win 95 WIN CD	£Call
LOTSYM3-	Lotus Symphony V3	£373
MSOFFICE	MS Office 4.2	
	Standard WIN	£325
MSOFF4.2SL	MS Office 4.2 1 SL	£294
MSOFF4.2CUP	MS Office 4.2 UP CCP	£161
MSOFF4.2CUPG	MS Office 4.2 CUP	£218
MSOFFICEPRO	MS Office 4.3	
	Professional	£423
MSOFF4.3SL	MS Office 4.3 1 SL	£362
MSOFF4.3CCP	MS Office 4.3 UP CCP	£245
MSOFF4.3CUP/COM	MS Office 4.3 CUP	£279
MSOFFICEAS-	MS Office Assistant	£59
MSOFFICEHWT	MS Office V4.2	
	for Windows NT CD	£339
MSWORKS3/3.5	MS Works V3 DOS	£79
MSWORKS3SD	MS Works V3 WIN CD	£79
MSWORKS3/SLW	MS Works WIN 1 SL	£74
WPFFWIN	PerfectOffice Standard	£265
WPFF	PerfectOffice UP	£119
WPFFOFF-	PerfectOffice	
	Standard CUP	£155

## CLARIS SOFTWARE FEATURE

### CLARISWORKS 3.0 FOR MAC AND WINDOWS

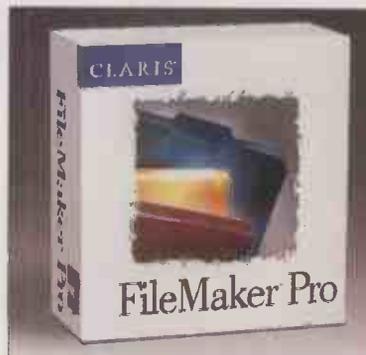
When you send your registration card to Claris they will send you Route 66 (Mac and Windows mapping software) absolutely FREE!  
ClarisWorks 3.0 software perfectly integrates all the functionality of five software applications into one easy-to-use programme: word processing, spreadsheet, database, graphics and painting. It is the perfect office alternative and it's compact, fast and friendly.

CLARISWORKS 3.0  
FOR MAC AND WINDOWS £97



CLARIS™

Simply powerful software.™



### CLARIS FILEMAKER PRO

Includes 6 ready-to-run applications:

- Contact Manager
- Lead Tracking Manager
- Project Manager
- Product Manager
- Expense Manager
- Invoicing System and 75 Clip Arts

CLARIS FILEMAKER PRO £84

### ACCOUNTS PACKAGES

MSMONEY-	MS Money V3 WIN	£27
SAGEFIN07	Sage Financial	
	Controller DOS V7	£329
SAGE/AC-07	Sage Accountant Plus	
	DOS V7	£249
SAGE/2+2AC/LAN	Sage Accountant Plus	
	LAN DOS	£397
SAGE/ACD7	Sage Accountant	
	DOS V7	£165
SAGE/BOOK7	Sage Bookkeeper	
	DOS V7	£55
SAGE/3FC	Sage +2 Financial	
	Cont WIN	£354
SAGE/4+2CLAN	Sage +2 Financial	
	Cont LAN WIN	£565
SAGE/BOOK7W-	Sage V3 +2 Bookkeeper	
	WIN	£84
SAGE/MWSE2	Sage Moneywise V2	£35
SAGE/INVA00	Sage Invoicing Add-On	£24
SAGE/INSAK	Sage Instant	
	Accounting V2.1 WIN	£87
SAGE/PR2DS	Sage Payroll DOS V5	£135
SAGE/PR2LAN	Sage Payroll LAN	£166
SAGE/PR2W	Sage +2 Payroll WIN	£127
TASBOOK/AC	Tas Books Accounting	£79

### PROJECT MANAGEMENT

CASUPER	CA Super Project	
	V4 WIN/OS/2	£459
MSPROJ95	MS Project V4.1	
	for Windows 95	£279
MSPROJ95CUPG-	MS Project V4.1 for	
	Windows 95 CUP UP	£85
MSPROJ95CUP-	MS Project V4.1	
	for Windows 95 CUP	£134
	Voucher	
MSPROJ95CUP-	MS Project 95 CUP	£89
MSPROJHELP-	Project Helper	£49
MSSCHV6-	Project Scheduler	
	V6 WIN	£565



**DELIVERY  
CHARGES**  
See  
page 9

A great  
new way  
to buy...



See page 1

**SOFTWARE WARRANTY**  
Do check compatibility before ordering.  
Faulty software replaced through  
Powermark Customer Service. Opened  
software cannot be returned.



Everyone at  
Powermark passes  
through our  
training college

## SOFTWARE FEATURE

### COREL FEATURE

#### COREL DRAW

<b>NEW!</b> COREL DRAW 6 FOR WINDOWS 95	
CD	£279
UPGRADE FROM V3/V4 CD	£224
UPGRADE FROM V5 CD	£149
COREL DRAW 3 CD	£42
COREL DRAW 3 DISKETTE ONLY	£69
COREL DRAW 4 WIN CD	£85
COREL DRAW 5 WIN CD	£279
COREL DRAW 3 TO 5 CD	£195
COREL DRAW 4 TO 5 CD	£115

#### COREL CD OFFICE COMPANION

Corel CD Office Companion is the perfect complement to your office suite with business graphics, Internet browser, fax, PIM, electronic reference, multimedia utilities, plus extensive clipart, font and photo libraries.

#### COREL CD OFFICE COMPANION



#### COREL STOCK PHOTO LIBRARY

• 200 CD ROMs, 20,000 photographs  
• Royalty free

#### COREL VENTURA 5

COREL VENTURA 5 WIN CD + 3.5"	£235
COREL VENTURA 5 WIN CD	£199
COREL VENTURA 5 CUP WIN CD + 3.5"	£139
COREL VENTURA 5 CUP WIN CD	£59

#### COREL FLOW

£469

£235

£199

£139

£59

£47

### WORD PROCESSORS

ACCENT/PROP	Accent Pro	£189
ACCENT/SE	Accent Special Edition	£89
ACCENT/EXP	Accent Express	£37
	Lotus Ami Pro V3.1 WIN	£84
LOTWRITE	Lotus Write WIN v2	£95
LOTAM/W	Lotus Word Pro 96	£95
MSWORD4/W	MS Word WIN V6	£221
MSWORD/W1SL	MS Word WIN 1 SL	£195
MSWORD6/DOS	MS Word V6 DOS	£172
MSWORD4/W/CUP	MS Word V6 WIN UP CCP	£78
MSWORD4/W/NT	MS Word V6.0 For Windows NT CD	£242
WP6.1/WIN	WordPerfect 6.2 WIN	£169
WP/DOS	WordPerfect DOS V6.1	£159
WP/WIN 2	WordPerfect 5.2 WIN LetterPerfect DOS	£25
WORDSTAR/UP	Wordstar V7 UP	£89
WORDSTAR/W	Wordstar V2 WIN	£29

### NAVIGATION PACKAGES

AUTOR+GBW/CD	MS Autoroute Express GB CD	£29
AUTOR/EXPEURW	MS Autoroute Express Europe V4	£29
AUTOR+GB6D	MS Autoroute Plus V7 GB DOS	£223
AUTOR+GBW	MS Autoroute Plus GB WIN	£275
AUTOR+GBW/CD	MS Autoroute Plus GB WIN CD	£348
AUTORD6B	MS Autoroute Database Editor V6	£92
AUTOR/MAP	MS Autoroute Mapbase GB	£288
NEXTBASE	Nextbase Explorer DOS	£59

### SPREADSHEETS

CASCALC/5.5D	CA Supercalc V5.5 DOS	£69
CASCALC/WIN	CA Supercalc WIN	£69
CASCALC/5.5LAN	CA Supercalc V5.5 LAN 3 User	£171
LOT123/W	Lotus 123 V5 WIN	£219
LOT123/1SL	Lotus 123 V5 WIN 1 SL	£195
LOT123D	Lotus 123 V4 DOS	£288
LOT123/4/1SL	Lotus 123 V4 DOS 1 SL	£247
LOT123/R2.4D	Lotus 123 R2.4 DOS	£247
LOT123/R2.4/1SL	Lotus 123 R2.4 1 SL	£212
LOT123/R2.4/LAN	Lotus 123 R2.4 LAN Server	£378
LOT123/GD005	Lotus 123 Go DOS	£98
LOT/IMPROV	Lotus Improv WIN	£92

### KEY

CCP	Compliance	DOS	DOS Version	UP	Upgrade
CD	Checking Product	LAN	Local Area Network	Vxx	Version
CD ROM	CD ROM	MS	Microsoft Product	WIN	Windows Version
CUP	Competitive Upgrade	SL	Site License		

### SPREADSHEETS

LOTS4/DUP	Lotus SmartSuite V4.0 WIN	£299
LOTS4/WCUP	Lotus SmartSuite V4.0 WIN CUP	£159
MSXCELS	MS Excel V5 WIN	£221
MSXCELS/SL	MS Excel V5 WIN 1 SL	£197
MSXCELS/20	MS Excel V5 WIN 20 SL	£Call
MSXCEL/COMPUG	MS Excel V5 WIN UP CCP	£78
MSXCELS/WINNT	MS Excel V5.0 for Windows NT CD	£242
BORLANDQPRO/SD	Quattro Pro V5.5 DOS	£49
BORLANDQPRO/6W	Quattro Pro V6 WIN 3.5" + CD	£155

### TIME MANAGEMENT

ACT/1ST	1st Act WIN	£79
ACT2/OWIN	Act V2 WIN	£146
CAUP/DATE	CA Up To Date WIN	£50
ECCO/SMHW	Ecco Simplicity WIN	£47
ECCO/PROW	Ecco Professional WIN	£125
LOTORG.1	Lotus Organiser V2 WIN	£83
LOTORG/UPG	Lotus Organiser V2 WIN UP	£49
MSCHED+W	MS Schedule+ WIN	£87

### CAD

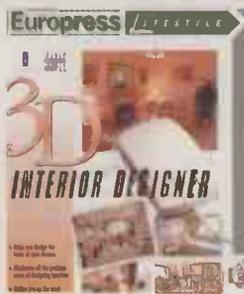
AUTOSKETCH/D	Autosketch V3 DOS	£87
AUTOSKETCH/D	Autosketch V2 WIN	£99
AUTOCAD/1T	AutoCAD LT V2 WIN	£369
AUTOCAD/1TUG	AutoCAD LT V2 WIN UP	£95
AUTOCAD/1AL	AutoCAD LT Int Architectural Library	£110
DESIGN2D/V6-	DesignCAD 2D V6 DOS	£175
DESIGNCAD2D/W	DesignCAD 2D WIN	£175
	DesignCAD 3D V4 DOS	£191
DRAFX/CADWP	Drafix Windows CAD V2.1	£45
DRAFX/CAD	Drafix Windows CAD Prof	£145
DRAFX/CADAL	Drafix Wincad Libraries Architectural Library	£109
FLOORPLAN/3D	Floorplan Plus 3D WIN	£63
FLOOR/+3DDP	Floorplan + 3D & 3D Design Plus	£179
TURBOCAD//	TurboCAD 3D V3.2DOS	£84
TURBOCAD/W	TurboCAD WIN	£53

## EUROPRESS FEATURE

### EUROPRESS SOFTWARE

#### 3D INTERIOR DESIGN

Helps you design the home of your dreams Granada TV's House Style 3D Interior Designer gives you practical help in planning your ideal home.



#### 3D GARDEN DESIGNER 2

Helps you design the garden of your dreams

Make your dream garden a reality with 3D Garden Designer 2, which takes full advantage of the vast scope offered by CD ROM.



#### Alice's Adventures in Wonderland

The world's best-loved children's story brought to life on your PC. Alice's Adventures in Wonderland £15

#### Education

Fun School 5 Dreamland age 4 to 7	£17
Fun School 5 Space age 6 to 9	£17
Fun School 5 Time age 8 to 11	£17
Fun School 4 Under 5's	£15
Fun School 4 age 5 to 7	£15
Fun School 4 age 7 to 11	£15
Fun School Paint & Create 5 to 11	£17
Fun School Spelling 7 to 16	£17
Fun School Maths 7 to 11	£17
Flying Fingers Typing Tutor	£26

#### Lifestyle

BBC Gardeners' World 3D Garden Designer 2	£21
BBC Gardeners' World 3D Garden Designer	£13
Granada 3D Interior Designer	£14

#### Creativity

Klik & Play	£29
Klik & Play Gamepack (Four customisable games on one CD)	£5

### Technical Sales Order Lines

**0181-951 3355**  
(50 lines)

SOFTWARE

## Aaron's Answers



Dear Aaron,  
I run a small business and I purchased a computer just over a year ago. Recently I was troubled to read of rising computer thefts and viruses. How can I protect this from happening to me?

Troubled in Tring

Dear Troubled,  
No problem, as this can be easily taken care of. Firstly, I suggest a tape backup system, so you can keep a copy of your valuable data off-site. Secondly, Powermark supplies a wide range of computer security products - Everything from floppy locks to sophisticated protection software. Finally, anti-virus software is changing all the time in order to keep up-to-date with the latest viruses. Dr. Solomon's software even comes with free quarterly updates for the first year.  
Yours, Aaron

Send your questions to Aaron's Answers, c/o Powermark plc, Premier House, Station Road, Edgware, Middlesex, HA8 7AQ or fax them to 0181 905 6233. You can also Email Aaron on: aaron@powermark.com

Aaron makes every effort to answer your problems, but he cannot guarantee to reply to everyone.

**Powermark plc**  
Premier House, 112 Station Rd, Edgware, Middlesex HA8 7AQ

Tel: 0181-951 3355

(50 lines)

Fax: 0181 905 6233

Email: sales@powermark.com

NO GREY IMPORTS!



Certificate no. BS 26535

BS5750 registered for the supply of computer, printer and workstation memory, processor and other upgrades.

Powermark plc is regularly assessed by the British Standards Institution to ensure compliance with the quality standard.



Cards are not debited until despatch  
VAT at 17.5% will be added to all prices



Mark

Technical Sales  
Order Lines  
**0181-951 3355**  
(50 lines)

... and here's what some of our customers have said ...

Many, many, thanks for what I can only describe as a brilliant service.

The memory arrived as promised, and the new 32MBs are installed and functioning properly with no problems at all. There is now no disk thrashing, even with my larger files and it is all so much quicker.

M Cunningham-Brown  
West Midlands

TURN THE PAGE FOR MORE

MEMORABLE ADS

What has a hazelnut in every bite?

Topic

For mash get Smash Cadbury's Smash spacemen

The bank that likes to say yes

TSB



# MEMORY

## SOFTWARE FEATURE

### FONTS AND CLIP ART

ADOTYPENGR	Adobe Type Manager WIN	£49
ADO+PACKW	Adobe Plus Pack WIN	£107
ADOSTREAM	Adobe Streamline WIN	£129
ADONART3	Corel Artshow 3	£15
ADONART4	Corel Artshow 4	£19
ADONART5CD	Corel Artshow 5 CD	£24
ADOGAL-	Corel Gallery V2	£44
ADONART5CD	Fontographer WIN	£355
ADGAL-	100 GST Fonts WIN	£14
ADGAL-	Key Clip Master Pro WIN CD	£34
ADGAL-	Key Colour Photo Pro WIN CD	£34
ADGAL-	Lotus Smartpics Freelance WIN	£84
ADGAL-	MS TrueType Font Pack 1	£46
ADGAL-	MS TrueType Font Pack 2	£46
ADGAL-	WP Clipart Premium CD	£50
ADGAL-	WP Clipart Office WIN & DOS	£22

Software experts available for specialist advice

### DESKTOP PUBLISHING

ADOCROZW	Adobe Acrobat V2 WIN	£129
ADOCROZW	Adobe Acrobat Pro V2 WIN	£289
ADOCROZW	V2 for Workgroups	£1108
DESIGN/PRESS-	Designworks and Pressworks V2 WIN	£69
FIRSTPRESS--	First Press WIN	£25
FIRSTPRESS--	First Press DOS	£25
FIRSTDESIGN-	First Design WIN	£25
INFOPUBLISH-	Info Publisher WIN	£145
MSPUBL	MS Publisher V2 WIN	£62
PAGEMKR/CW	PageMaker Classic WIN	£51
PAGEMKR/SW	PageMaker V5 WIN	£379
PAGEMKR/SWS	PageMaker V5 WIN	£1379
QUARKXP3W	5 User Quark Xpress V3.3 WIN	£559
SERIF/P6+3	Serif Page Plus V3.0	£49

### ANIMATION AND VIDEO

ADOPREM	Adobe Premiere WIN	£399
ADIMPACT	Add Impact WIN	£79
ANIMWORK	Animation Works Interactive	£88
ANIMWORK	Timeworks V3 DOS	£89

### DEVELOPMENT

DASYMETRIC	Asymetrix Toolbook WIN	£224
DASYMETRIC	Asymetrix Multimedia Toolbook V3	£499
BORDELPHI	Borland Delphi	£155
BORDEL/DIG	Borland Delphi CUP	£109
BORTASS	Borland Turbo Assembler	£57
BORVIS	Borland Visual Solutions	£49
BORC++20S2	Borland C++ V2 OS/2 CD	£299
BORPASCAL	Borland Pascal With Objects V7	£189
BORLAND	Borland Turbo C++ V3 For DOS	£55
BORLAND	Visual Edition WIN	£79
BORLAND	V4.5 WIN	£59
MSVB/PC++	MS Visual C++ V2 CD	£245
MSMAC6.11	MS Macro Assembler V6.11	£99
MSVISBASIC	MS Visual Basic V3 Standard WIN	£82
MSVISTOOL	MS Visual Tools Suite WIN	£179
MSVISECONT	MS Visual Control Pk WIN	£69
SYMANTC++STD	Symantec C++ Standard	£66
SYMANTC++PRO	Symantec C++ Professional	£228

### New from Microsoft

MSVISB4WIN-	MS Visual Basic V4 WIN	£62
MSVISB34E6G	MS Visual Basic V4 WIN UP	£39
MSVISBPA.0/3.5	MS Visual Basic Pro V4 WIN 3.5	£349
MSVISBPRO/4CD	MS Visual Basic Pro V4 WIN CD	£325
MSVISBSP3.4UG/CD	MS Visual Basic Pro V4 WIN UG CD	£67
MSVISBPAUG	MS Visual Basic Pro V4 WIN UG 3.5	£111
MSVISBSPENT	MS Visual Basic Enterprise V4 CD	£664

### OPERATING SYSTEMS

IBMPCDOSV7	IBM PC-DOS V7	£55
MSW3.1CCPUG	MS Windows V3.1 CCP UP	£37
MSW3.1REEL3.11	MS Windows V3.1	£61
MSWFGADD	MS Windows For Workgroups Add-On for DOS	£39
MSWGAO	MS Windows For Workgroups Add-On 3.11	£39
MSWGAO/11C	MS Windows For Workgroups Add-On 3.11 1 SL	£37
MSWGV3.11	MS Windows For Workgroups V3.11	£89
MSWVG3.11/SL	MS Windows For Workgroups V3.11 1 SL	£87
MSWINNT	MS Windows NT Winstation V3.5	£239
MSWINNT/SERY	MS Windows NT Server V3.5 CD	£475
MSDOS6.23	MS DOS V6.22 UP	£38
MSDOS6.22/SL	MS DOS V6.22 UP 1 SL	£36
NDOS7	Novell DOS 7	£49

### GRAPHICS & DESIGN

ADILLUSAW	Adobe Illustrator V4 WIN	£299
ADOBE/PHOTO	Adobe Photoshop V3 WIN	£395
ASTOUNDWZ	Astound V2 WIN	£159
CORPAINTS	Corel Photo-Point 5 Plus CD	£56
DESIGNWK	Designworks WIN CD	£75
MICGRAFX/CH	Harvard Draw Micrografx Charisma WIN	£289
MICGRAFX/GRAPHICS	Micrografx Designer V5 WIN	£181
MICGRAFX/DRAW	Micrografx Draw WIN	£270
MICGRAFX/PUB	Micrografx Picture Publisher WIN	£66
MSPOWER	MS Powerpoint 2.25	£277
ALDUS/PHOTO	MS Powerpoint Photofinish WIN	£225
ALDUS/PHOTO	Photostyler V2 WIN	£55
ALDUS/PHOTO	Photostyler V2 WIN	£370

### NETWORKING

INTLANDES-	Intel LANdesk Manager 1 V2.01 Server CD	£669
INTLANVIR-	Intel LANdesk Virus Protect	£499
INTLANCON-	Netware Connect 2 Port	£279

See Novell feature on page 31 for full product listing

### OCR

OMNIPAGE/DIR	OmniPage Direct 2	£74
OMNIPAGE-WIN	OmniPage WIN	£379
OMNIPAGEV5-	OmniPage V5	£279
OMNIPAGEPROV5UG	OmniPage Pro V5 UP	£129
WORDSCAN/PCR	Wordscan Plus OCR V4	£390
WORDSCAN/PCR	Wordscan Plus V4 UP	£129
TEXTBRIDGE/0	Textbridge OCR V3.0	£35
TEXTBRIDGE/P	Textbridge Prof	£269
TEXTBRIDGE/PCUP-	Textbridge Prof CUP	£189

## IBM OS/2 WARP FEATURE

# OS/2 WARP



### 45 Ways to Get Warping with IBM CD Showcase

- Includes full version of Ami Pro for OS/2
- Galactic Civilisation, SimCity, Tensor, The Cosmos, Casino Game Pack, Microlearn game Pack
- Lotus Smartsuite for OS/2, Describe word processor, Mesa Spreadsheet

### Lotus Smartsuite Version 2.0 for OS/2 and OS/2 Warp Version 3

Consists of the Lotus SmartCenter, Ami Pro Bonus Pack Macros for OS/2 Lotus 1-2-3, 1-2-3 File Translator, Freelance Graphics File

- BitMaps Unlimited, WipeOut, SystemSounds, Gammatech utilities for OS/2
- Shareware: Hobbes, Vogel, Roids, Chomp, Dungeon Chess for OS/2

IBM CD SHOWCASE £9.99 (when purchased with OS/2 Warp)

For users without MS Windows, these versions support most Windows based applications:

WIN FLOPPY	£127
WIN CD	£111
WIN FLOPPY UPGRADE	£79
WIN CD UPGRADE	£69

\*At full retail price

Translator, Freelance Graphics SmartMaster sets and REXXLink for 1-2-3

3.5" FLOPPY £229

3.5" FLOPPY UPGRADE £139



DELIVERY CHARGES See page 9

A great new way to buy...



See page 1

SOFTWARE WARRANTY Do check compatibility before ordering. Faulty software replaced through Powermark Customer Service. Opened software cannot be returned.



Everyone at Powermark passes through our training college



# HARD DISKS

UK's best combination of value, service and support from Allgem Ltd.

7 Day Money-Back Guarantee

On all hard drives for your complete peace of mind with...

Unlimited Free Technical Support

Just a phone call away where you have...

Mass Storage Experts

Who can solve any problems you may have. So why not ring Allgem's...

Friendly & Helpful Sales Team

To discuss your requirements and with our...

Fast Dispatch

You will have that extra capacity you need quickly from Allgem, an...

Established Company

Which is committed to hard drives and your future with Allgem.



## IDE HARD DRIVES

IDE is the industry standard and is fast and easy to install. All drives listed below are mode 3 or higher and capable of giving data transfer rates in bursts of up to 13.5 Mb/s.

Make	Model	Capacity	Access	Cache	Size	Wrntly	Price/Mb	Price
<b>500Mb and up</b>								
Maxtor	7540AV	540Mb	12.0ms	32k	3.5" 1"	2 yrs	£0.19/Mb	£105
Conner	CF5540A	540Mb	14.0ms	64k	3.5" 1"	2 yrs	£0.20/Mb	£109
Quantum	FB540AT	540Mb	12.0ms	128k	3.5" 1"	2 yrs	£0.21/Mb	£111
West. Digit.	WD2540	540Mb	12.0ms	64k	3.5" 1"	3 yrs	£0.19/Mb	£116
Fujitsu	M1603AT	544Mb	10.0ms	256k	3.5" 1"	3 yrs	£0.19/Mb	£105
Seagate	ST3660A	545Mb	14.0ms	128k	3.5" 1"	3 yrs	£0.20/Mb	£111
IBM	85G3863	548Mb	12.0ms	96k	3.5" 1"	2 yrs	£0.21/Mb	£115
<b>600Mb and up</b>								
These Drives come with free software to overcome the 528Mb BIOS barrier (except Quantum - add £33 for software if required)								
West. Digit.	WD2635	635Mb	11.0ms	64k	3.5" 1"	3 yrs	£0.18/Mb	£113
Conner	CF5635A	635Mb	14.0ms	64k	3.5" 1"	2 yrs	£0.19/Mb	£118
Quantum	LT730AT	730Mb	11.0ms	128k	3.5" 1"	2 yrs	£0.17/Mb	£124
Quantum	TB850AT	850Mb	14.0ms	128k	3.5" 1"	2 yrs	£0.15/Mb	£122
Conner	CF5850A	850Mb	14.0ms	128k	3.5" 1"	2 yrs	£0.15/Mb	£130
Seagate	ST5850A	850Mb	12.0ms	256k	3.5" 1"	3 yrs	£0.16/Mb	£136
West. Digit.	WD2850	851Mb	10.0ms	64k	3.5" 1"	3 yrs	£0.16/Mb	£132
Maxtor	7850AV	853Mb	12.0ms	64k	3.5" 1"	2 yrs	£0.15/Mb	£126
<b>1Gb and up</b>								
Maxtor	71050A	1,000Mb	12.0ms	256k	3.5" 1"	2 yrs	£0.17/Mb	£173
IBM	84C8998	1,000Mb	10.5ms	448k	3.5" 1"	3 yrs	£0.23/Mb	£229
Quantum	FB1080AT	1,080Mb	12.0ms	128k	3.5" 1"	2 yrs	£0.15/Mb	£166
Fujitsu	M1606AT	1,090Mb	11.0ms	512k	3.5" 1"	3 yrs	£0.14/Mb	£157
IBM	36G6850	1,200Mb	8.5ms	512k	3.5" 1"	5 yrs	£0.29/Mb	£344
Maxtor	71260A	1,260Mb	12.0ms	256k	3.5" 1"	2 yrs	£0.13/Mb	£165
Conner	CF51275A	1,275Mb	14.0ms	64k	3.5" 1"	2 yrs	£0.13/Mb	£172
Conner	CFA1275A	1,275Mb	12.0ms	256k	3.5" 1"	2 yrs	£0.20/Mb	£261
West. Digit.	WD31200	1,282Mb	10.0ms	64k	3.5" 1"	3 yrs	£0.14/Mb	£182
West. Digit.	WD31600	1,600Mb	10.0ms	128k	3.5" 1"	3 yrs	£0.16/Mb	£262
Maxtor	71626AP	1,620Mb	12.0ms	256k	3.5" 1"	2 yrs	£0.19/Mb	£309

## SCSI HARD DRIVES

For larger and more powerful systems SCSI drives are more desirable. SCSI gives you the advantage of having devices externally as well as internally up to a total of seven on a chain. Also you have the option of not only hard disks but high performance scanners, tape backup, optical, CD Rom, etc. N.B. you must have a SCSI interface to run SCSI devices.

Make	Model	Capacity	Access	Cache	Size	Wrntly	Price/Mb	Price
<b>700Mb and up</b>								
Quantum	LT720S	730Mb	11.0ms	128k	3.5" 1"	2 yrs	£0.22/Mb	£157
Quantum	TB850S	850Mb	14.0ms	128k	3.5" 1"	2 yrs	£0.19/Mb	£165
<b>1Gb and up</b>								
Conner	CFP1080S	1,000Mb	11.0ms	256k	3.5" 1"	3 yrs	£0.22/Mb	£222
IBM	84C8901	1,000Mb	10.5ms	448k	3.5" 1"	3 yrs	£0.29/Mb	£289
Quantum	FB1080S	1,080Mb	12.0ms	128k	3.5" 1"	2 yrs	£0.23/Mb	£249
IBM	74G7043	1,080Mb	8.0ms	512k	3.5" 1"	3 yrs	£0.30/Mb	£327
Fujitsu	M1606S	1,090Mb	11.0ms	512k	3.5" 1"	3 yrs	£0.18/Mb	£199
HP	C3724S	1,200Mb	9.5ms	512k	3.5" 1"	5 yrs	£0.26/Mb	£308
<b>2Gb and up</b>								
IBM	86G102	2,000Mb	9.2ms	512k	3.5" 1"	5 yrs	£0.35/Mb	£699
Conner	CFP2105S	2,100Mb	8.5ms	512k	3.5" 1"	5 yrs	£0.23/Mb	£482
Quantum	2100S	2,100Mb	9.5ms	512k	3.5" HH	5 yrs	£0.23/Mb	£493
Micropolis	MIC4221	2,100Mb	8.5ms	512k	3.5" HH	5 yrs	£0.24/Mb	£499
HP	C3725S	2,100Mb	9.5ms	512k	3.5" 1"	5 yrs	£0.24/Mb	£499
Micropolis	MIC4221 AV	2,100Mb	8.5ms	512k	3.5" HH+	5 yrs	£0.27/Mb	£577
Fujitsu	M2932S	2,110Mb	10.0ms	512k	3.5" HH	5 yrs	£0.22/Mb	£466
Conner	CFP2107S	2,110Mb	8.5ms	512k	3.5" 1"	5 yrs	£0.24/Mb	£510
Quantum	XP3210S	2,150Mb	8.5ms	1,024k	3.5" 1"	5 yrs	£0.26/Mb	£533
IBM	74G7044	2,160Mb	8.0ms	512k	3.5" 1"	5 yrs	£0.33/Mb	£707
<b>4Gb and up</b>								
Conner	CFP4207S	4,220Mb	9.0ms	512k	3.5" HH	5 yrs	£0.18/Mb	£765
Quantum	GP4280S	4,280Mb	8.6ms	512k	3.5" HH	5 yrs	£0.17/Mb	£710
Micropolis	MIC3243	4,300Mb	8.5ms	512k	3.5" HH	5 yrs	£0.17/Mb	£737
Micropolis	MIC3243 AV	4,300Mb	8.5ms	512k	3.5" HH	5 yrs	£0.18/Mb	£789
Quantum	XP34300	4,300Mb	8.0ms	2,048k	3.5" HH	5 yrs	£0.22/Mb	£944
IBM	74G7045	4,320Mb	8.6ms	512k	3.5" HH	5 yrs	£0.24/Mb	£1,056
Fujitsu	M2934S	4,350Mb	10.0ms	512k	3.5" 1"	5 yrs	£0.16/Mb	£688
<b>9Gb and up</b>								
Micropolis	MIC1991	9,100Mb	12.0ms	512k	5.25" FH	5 yrs	£0.15/Mb	£1,399
Micropolis	MIC1991 AV	9,100Mb	12.0ms	512k	5.25" FH	5 yrs	£0.16/Mb	£1,468
<b>Wide Drives</b>								
Make	Model	Capacity	Access	Cache	Size	Wrntly	Price/Mb	Price
IBM	86G106	2,800Mb	9.2ms	512k	3.5" 1"	5 yrs	£0.34/Mb	£677
Conner	CFP2105W	2,100Mb	8.5ms	512k	3.5" 1"	5 yrs	£0.25/Mb	£532
Micropolis	MIC4221W	2,100Mb	8.5ms	512k	3.5" HH	5 yrs	£0.29/Mb	£599
Conner	CFP2107W	2,110Mb	8.5ms	512k	3.5" 1"	5 yrs	£0.27/Mb	£577
IBM	74G7004	2,160Mb	8.0ms	512k	3.5" 1"	5 yrs	£0.34/Mb	£739
Conner	CFP4207W	4,200Mb	9.0ms	512k	3.5" HH	5 yrs	£0.20/Mb	£837
Micropolis	MIC3243W	4,300Mb	8.5ms	512k	3.5" HH	5 yrs	£0.19/Mb	£818
IBM	74G7005	4,320Mb	8.6ms	512k	3.5" HH	5 yrs	£0.25/Mb	£1,080
Micropolis	MIC1991W	9,100Mb	12.0ms	512k	5.25" FH	5 yrs	£0.17/Mb	£1,520

## ADAPTEC CONTROLLERS

Model	Name	Max Xfer Rate	Flyp	Drivers	External Connector Type	Price
<b>ISA Bus</b>						
AHA1505 kit	Total CD	5Mb/s	no	1	25 pin apple	£69
AHA1522 kit	SCSI Director	10Mb/s	yes	1 2 3 5	50 pin centronics	£100
AHA1542 kit	SCSI Master	10Mb/s	yes	1 2 3 5	50 pin centronics	£164
<b>EISA Bus</b>						
AHA2742 kit	EISA SCSI Master	10Mb/s	yes	1 2 3 4 5	50 pin micro D	£238
AHA2742W kit	EISA Wide SCSI Int	20Mb/s	yes	1 2 3 4 5	68 pin wide	£357
<b>MCA Bus</b>						
AHA1640 kit	SCSI Channel	5Mb/s	no	1 2 3 5	50 pin micro D	£190
<b>VL Bus</b>						
AHA2842UL kit	SCSI Master II	10Mb/s	yes	1 2 3 4 5	50 pin micro D	£154
<b>PCI Bus</b>						
AHA2940 kit	PCI SCSI Master	10Mb/s	no	1 2 3 4 5	50 pin micro D	£192
AHA2940W kit	PCI Wide SCSI Int	20Mb/s	no	1	68 pin wide	£192

## WESTERN DIGITAL CONTROLLERS



**- GUARANTEED COMPATIBILITY**  
Call within 30 days and Western Digital will fix it or return your money.  
- Select boot drive  
- Core! SCSI V2 full version bundled free!  
- 5 year warranty  
- FLEX ware for fine tuning your PCI interface  
- Up to 24% faster than some other leading brands  
- Flash RAM BIOS  
Get upgrades direct from Western Digital's bulletin board

Model	Max Xfer Rate	Flyp	Drivers	External connector type	Price
<b>PCI Bus</b>					
WD7193	10Mb/s	1 2 3 4 5		50 pin micro D	£156
WD7197	20Mb/s	1 2 3 4 5		68 pin wide	£187
WD7296	20Mb/s	1 2 3 4 5		68 pin wide	POA
<b>Key to Drivers</b>					
1 - Dos/Win	2 - Netware	3 - OS/2	4 - NT	5 - Unix	

## TAPE BACKUP

Never have more not back up than you can afford to lose. (Awkward sentence - frightening thought!)

Make	Model	From	Capacity To	In/Ext	Price
HP	CI520F	2Gb	—	ext	£680
HP	CI52F	2Gb	—	int	£573
HP	HP35470	2Gb	—	int	£538
HP	HP35470 ext	2Gb	—	ext	£636
HP	CI521F	4Gb	—	ext	£766
HP	CI526F	4Gb	8Cb	int	£650
HP	HP35480	4Gb	8Cb	int	£622
HP	HP35480	4Gb	8Cb	ext	£721

## SCSI DAT - DDS2

Make	Model	From	Capacity To	In/Ext	Price
Sony	SDT5200	4Gb	—	int	£558
Sony	SDT5200 ext	4Gb	—	ext	£626
HP	CI528F	4Gb	16Cb	int	£789
HP	CI529F	4Gb	16Cb	ext	£913
HP	HPC1533	4Gb	16Cb	int	£722
HP	HPC1533 ext	4Gb	16Cb	ext	£799
HP	HP35470	4Gb	16Cb	int	£616
Sony	SDT5000	4Gb	16Cb	ext	£672
Sony	SDT5000 ext	4Gb	16Cb	ext	£672
HP	HPC1553	24Gb	96Cb	int	£1,557
HP	HPC1553 ext	24Gb	96Cb	ext	£1,699

## PANASONIC PD

This new device is a combined quad speed CD Rom and also a 650Mb rewritable optical.

Model	Price
LF1004B	£493.00
LF1004BK	£544.00
LF1000E	£614.00
LF10004EK	£676.00
LMR650E	£39

## MICROPOLIS MICRODISKS

Model	Capacity	Price/Mb	Price
MDLT1200	2,100.00Mb	0.32/Mb	£675
MDLT4300	4,300.00Mb	0.20/Mb	£861
MDLS9100	9,100.00Mb	0.18/Mb	£1,666
<b>A/V Audio Visual Drives</b>			
MDAV2100	2,100.00Mb	0.34/Mb	£715
MDAV4300	4,300.00Mb	0.21/Mb	£913
MDAV9100	9,100.00Mb	0.19/Mb	£1,727

## CD ROM

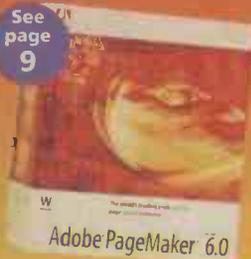
Make	Model	Access	Cache	Xfer Rate	In/Ext	Price
<b>IDE</b>						
<b>Dual Speed</b>						
Aztec	CDA268-03i	315ms	256k	300.00 Kb/s	Int	£62
Goldstar	GCDR520B	230ms	64k	300.00 Kb/s	Int	£70
<b>Quad Speed</b>						
Aztec	CDA468-02i	235ms	256k	600.00 Kb/s	Int	£100
Sony	CDU76E	—	—	600.00 Kb/s	Int	£115
Goldstar	GCDR540B	190ms	128k			

## PageMaker Version 6

The World's best known DTP software - now fully updated and improved.

**£429<sup>45</sup>**

See page 9



## Disney Print Studio

Create banners, invitations, letterheads with all your favourite Lion King characters.

**£29**

See page 13



## Paradox 5.0

The standard in Windows fully relational database development. Now, for a limited period, available at this incredible price. Includes FREE CompuServe membership.

**£94<sup>95</sup>**

See page 27



# SOFTWARE WAREHOUSE

Software Warehouse - 'Everything for your PC - Nextday!' Issue 18

## Fury<sup>3</sup>

The first Windows 95 game from Microsoft. A flight action game that's even better than an arcade game! We recommend it!



**ONLY £29<sup>95</sup>**

See page 6

## Dual Spin CD-ROM Drive

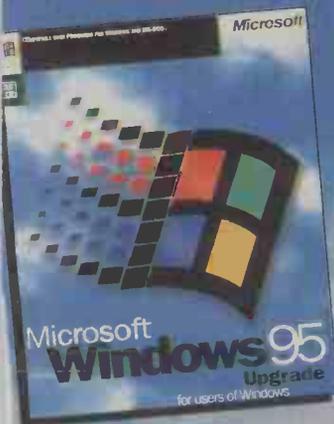
Full Creative Labs product including Theme Park & FIVE great games on CD!

See page 11

**ONLY £39<sup>95</sup>**  
No, it's not a misprint!



"Our best Christmas offer!"  
The Leisure Salesteam



## Windows 95

Order your copy of Windows 95 from Software Warehouse now and if you spend over £50 on any other product get it for just £54.95!

**FROM £54<sup>95</sup>**

See page 2

Microsoft

## 32 PAGES of Software & Peripheral Best Buys!

★ NEW Easy-find Listings

★ Over 380 New Products

★ NEW Leisure Listings

★ Lowest Prices Guaranteed\*

★ FREE Gift with Every Order\*

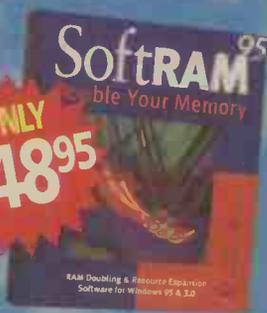
★ Overnight Delivery £6.95

## SoftRAM

Double your PC's memory for under £50! If your PC needs more memory to run Windows 95 / Windows 3.1 applications then SoftRAM is safe, cost-effective answer.

See page 23

**ONLY £48<sup>95</sup>**



## Serif PagePlus 3

NEW Version of the best-selling DTP software. Now includes enhanced colour and type capabilities as well as Internet Home Page authoring tools! All for under £30 - Amazing!!!

See page 10



**NEW WINDOWS 95 VERSION ONLY £29<sup>95</sup>**



Order 8am - 8pm Monday to Friday



Credit card charged on day of shipment



Massive software & peripherals stocks



Buy mailorder or at our retail stores



Order it before 4pm & use it tomorrow!



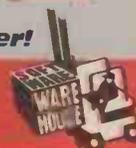
World's Best Software Supplier 1995 by the readers of PCW Magazine

A massive 39,000 items in stock across 4000 different product lines. Nobody delivers faster!



To Order By Telephone Call **01675 466 467**

For ordering information and terms & conditions, see page 32.



## Welcome to our new catalogue

Over the past two months we have received over 2000 responses to our customer satisfaction charter. You told us you wanted a wider range of products and a way of finding the product you want, fast. So here is our answer - Fast find listings, over 2000 different products and over 380 new ones.

**Key** CO.008 Colorado Jumbo DJ50 1400Mb Int (P3) £238

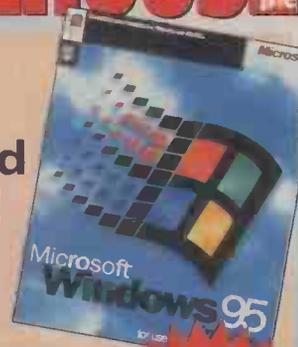
All products highlighted in pink are featured later in our catalogue - the page number is shown in brackets



Steve Bennett

## Our Special Windows 95 offer extended till Christmas!

If you order any other product valued over £50 then you can buy Windows 95 from Software Warehouse for just £54.95 plus VAT and delivery. But hurry, this offer is limited and must end 31st of December 1995.



Only **£54.95**

## PERIPHERALS LISTINGS

### PROCESSORS

INT019	Intel 486 to Pentium 63Mhz (P28)	£175
INT018	Intel 486 to Pentium 83Mhz	£198

### TAPE BACKUP

COL010	Colorado Trakker JT35/350Mb Ext.	£152
COL006	Colorado DJ35/350Mb Int	£79
COL007	Colorado Jumbo 700 Mb Int	£129
COL008	Colorado Jumbo DJ50 1400Mb Int	£238
COL011	Colorado Trakker 700Mb Ex	£199
COL012	Colorado T1000 800Mb Int	£138
EXA001	Exabyte 2501c 2Gb Int	£559
EXA002	Exabyte F51Ge 2 Gb Ext	£689
EXA003	Exabyte 4200c Int 4mm Dat	£865
EXA004	Exabyte 4200c Ext 4mm Dat	£1235
IOM005	Omega Tape250 Parallel	£149
TAN001	Tanberg Panther 250MegInt	£543
TAN002	Tanberg Panther 250Mg Ext	£640
WAN001	Wangdat 3100 2Gb Internal Scsi	£565
WAN002	Wangdat 3200 4Gb Internal Scsi	£620
WAN003	Wangdat 3400 8Gb Internal Scsi	£645
WAN004	Wangdat 3100 2Gb Ext Scsi	£643
WAN009	Wangdat 3200 4Gb Ext Scsi	£685
WAN10	Wangdat 3400 8Gb Ext Scsi	£780

### MULTIMEDIA KITS

SOU019	Gameblaster Cd Kit 4X	£288
SOU020	S/Blast Cd16 Discovery 4X	£265
SOU100	Soundblaster Home Cd Kit	£279

### SOUND CARDS

SOU018	Creative S/Blaster Awe32 IDE	£159
SOU027	Creative S/Blaster Awe32 Value IDE	£122
SOU015	Creative S/Blaster 16 Value IDE	£60
SOU017	Creative S/Blaster 16 Pro Adsp	£108
GRA013	Gravis Ultrasound Max	£133
MIR010	Miro Pcm 1 Pro (P29)	£128
MIR011	Miro Soundwave 16 Bit WAV	£88
MIR014	Miro PCM10 Sound Card	£81
MIR012	Miroconnect 34 Wav (P29)	£280
NovDec	Orchid Nu! Sound PnP	£CALL
NovDec	Orchid Wave Booster 2Mb	£CALL
NovDec	Orchid Wave Booster 4Mb Fx	£CALL
POR001	Portable Sound Plus	£129
PR116	Primax Bravo 16 Bit Fm	£63
PR117	Primax Wavetable 32	£95

### SPEAKERS

SPK004	Altec Ac50 Speakers	£64
SPK005	Altec Ac150 Subwoofer	£87
LAB002	Labtech Power Speakers	£19
MIC009	Microphone	£24
PR1053	Primax 60W Pmpo	£29
PR1054	Primax 120W Pmpo	£43
PR1055	Primax 240W PMP0 Speakers	£49
PRO008	Rom Digital Speakers	£29
SFE001	Screenbeat Speakers (203)	£12
YAM002	Yamaha M10 Speakers	£44
YAM001	Yamaha 103 with Sub Woofer	£79
SPK001	Zi-Fi Stereo Speakers	£25
SPK002	Zi Fi Proff. Speakers (P30)	£29

### JOYSTICKS

CHF001	CH Flight Stic	£28
CHF002	CH Flightstick Pro	£48
GRA010	Gravis Gamepad	£24
GRA011	Gravis Analogue Pro	£31
SOU101	Joystick Splitter Cre/Lab	£12
LOG025	Logitech Wingman	£24
LOG026	Logitech Wingman Extreme	£34
MAC006	Mach 1 Plus Joystick	£17
MIC349	MS SideWinder (P6)	£23
MIC350	MS SideWinder & Fury	£40
PR1052	GamePad 2 Player - 1A Red	£34
PR1121	Game Controller 1 Player	£27
JOY002	Quickshot Warrior 5 Pc	£12
JOY007	Quickshot Apache 1	£9
JOY018	Quickshot Starfighter 5	£9
JOY019	Quickshot Super Warrior 5	£14
JOY003	Soncom Fx 2000 For Pc	£15
TOR002	Turnado Analogue Joystick	£9

### GRAPHICS CARDS

928001	928 Movie Vid/Log VLB Imb	£139
928002	928 Movie & Sound ISA 1Mb	£169
928003	928 Movie 1 Meg Ram U/G	£69
928004	928 Movie Vid/Log ISA 1Mb	£139
BAH001	Bahamas PCI 64Bit 1MbDram	£109
BAH002	Bahamas VLB 64Bit 1MbDram	£105
BAH003	Bahamas PCI 64Bit 2MbDram	£154
BA1001	Bali Card 32Bit PCI 1Dram	£79
BA1002	Bali Vesa 32Bit 1Mb Dram	£79
BAR001	Barbados PCI 64Bit 2Vram	£210
CAPO01	Captivator Pro	£169
CAPO02	Captivator Pro & Tv	£219
SOU022	Creative Tv Coder	£119
DIA012	Dia/Stealth 64Dram 1Mb VLB	£85
DIA013	Dia/Stealth 64Dram 1Mb PCI	£85
DIA014	Dia/Stealth 64Vram 2Mb VLB	£199
DIA015	Dia/Stealth 64Vram 2Mb PCI	£199
DIA016	Dia/Stealth 64Video 2Mb Vram VLB	£199
ORC012	Fahrenheit 64 VLB or PCI 1mb	£139
ORC034	Fahrenheit Pro VLB or PCI 4Mb	£139
ORC035	Fahrenheit Pro VLB or PCI 2Mb	£225
ORC036	Fahrenheit Pro VLB or PCI 1Mb	£295
Due Dec	Fahrenheit Pro Video 2Mb VLB New!	£CALL
Due Dec	Fahrenheit Pro Video 2Mb PCI New!	£CALL
Due Dec	Fahrenheit Pro Video 4Mb PCI New!	£CALL
FAS011	Fast Movie Machine Pro	£289
FAS012	Fast Mjpep Option	£289
FAS014	Fast FPS 60	£489
GRA01X	Grafixstar 300 VLB or PCI 1Mb	£99
GRA02X	Grafixstar 300 VLB or PCI 2Mb	£139
GRA01Y	Grafixstar 500 VLB or PCI 1Mb	£135
GRA015	Grafixstar 700 VLB or PCI 2Mb	£269
GRA02X	Grafixstar 700 VLB or PCI 4Mb	£389
GRA01X	Grafixstar 300/500 1Mb Ug	£59
HAP001	Happagee Celebrity Tv/Txt (P30)	£269
HAP002	Happagee Win/Tv Prisma (P30)	£149
HER01X	Hercules Term. VLB-64 or PCI 2Mb	£249
HER01x	Hercules Term. VLB-64 or PCI 4Mb	£379
ORC01x	Kelvin 64 VLB, ISA or PCI 1Mb	£95
ORC01x	Kelvin 64 VLB, ISA or PCI 2Mb	£119
MAT010	Matrox Impr. Plus PCI 2Mb	£269
MAT011	Matrox Impr.Plus ISA 2Mb	£287
MAT008	Millenium/21 2MbWram PCI PnP (P29)	£249
MAT009	Millenium/41 4MbWram PCI PnP (P29)	£349
MIR00X	Miro Video 20Tc Live VLB or PCI	£315
MIR004	Miro Video Dc1+Premier	£399
MIR005	Miro Video Dc1+Studio	£299
MIR00X	Mirovideo 12Pd 2Mb Dram VLB or PCI	£134
MIR002	Mirovideo12Pd 1Mb Dram VLB (P29)	£99
FAS006	MJPEG Extension For MM II	£289
FAS009	MJPEG Extension For MM Pro	£289
FAS005	Movie Machine II Int Lcner	£489
MOV008	Movie Machine II Power Pk (P29)	£980
MPE001	MPEG Player - Videologic	£209
FAS007	MPEG Extension For MM II	£239
FAS015	MPEG Extension For FP/560	£239
STB016	Nitro Cirrus 5434 1Mb ISA	£95
STB01X	Nitro Cirrus 5434 2Mb PCI or ISA	£139
ROM003	Rombo Media Pro Plus	£189
ROM004	Rombo Media Pro Hi - Res	£209
STB01X	STB P/Graphics PCIorVLB-64 2Mb(P29)	£149
STB01X	STB Veloc. VLB or PCI -64 Mpeg 2Mb	£219
STB01X	STB Veloc VLB or PCI 64 Mpeg 4Mb	£329

### CD-ROM DRIVES

AZT001	Aztech 6X Int Speed Drive (P11)	£139
SOU102	Creative 563 -2X & Theme Park (P11)	£40
SCM011	CD 952 Pcmcia Drive	£220
NEC005	Enhanced Ide I/F For Cd's	£29
GOL002	Goldstar Dual Speed E. Ide	£69
GOL003	Goldstar Quadspeed Cd Rom	£119
KOD002	Kodak Pcd225 Cd Recorder	£149.96
NEC040	Nec 4X Speed E/IDE Drive	£119
NEC044	Nec 4X External Quad Spd	£399
NEC045	Nec 6X Internal	£259
NEC046	Nec 6X External	£365
PAN001	Panasonic CR 562 Dualspeed	£49
PAN008	Panasonic 4X Internal full kit (P11)	£199
PAN007	Panasonic 4X PD	£494
PAN009	Panasonic 4X PD with SCSI I/F (P11)	£545
CDR020	Philips CDD 521 Cd Recorder	£2657
CDR010	Pioneer DRM-624X Dual 6Disk	£489
CDR011	Pioneer DRM-604X 45pd 6Disk	£997
CDR012	Pioneer DRM-1804X 45pd 18Disk	£1428

### MICE

PR111X	3 Button Serial Blue, White or Red	£9
STY001	Imsi Pc Stylus (Ps2)	£29
STY001	Imsi Stylus Mouse	£15
STY002	Imsi Stylus (Serial)	£29
MOU005	Imsi Mini Trackball	£25
MOU006	Imsi Serial Pebble Mouse	£25
LOG02X	Logi Mousman Sensa Wood or Pearl	£38
LOG02X	Logi Mousman Sensa Leopard or Black	£38
LOG030	Logi Mousman Sensa Black	£38
LOG03X	Logi Chroma Mouse Orange or Blue	£24
LOG03X	Logi Chroma Mouse Blue or Green	£24
LOG003	Logitech Cordless Mouse	£53
LOG010	Logitech Trackman II	£42
LOG020	Logitech Pilot Mouse II	£17
LOG022	Logitech Pilot II Ps/2	£18
LOG015	Logitech Pilot Trackball	£29
LOG035	Logitech My Mouse	£22
LOG036	Logitech Trackman Voyager	£48
LOG037	Logitech Trackman Vista	£43
LOG038	Logitech Trackman Live	£99
LOG011	Logitech Trackman Portable	£32
LOG039	Logitech Mousman Combo	£34
MIC020	Ms Home Mouse (Serial) '95	£21
MIC031	Ms Mouse Ps2/Serial Combo '95	£35
PET001	Petmouse Ps2 Version	£14
PET002	Petmouse Serial	£14
PR111	Primax Hand Track M8&Ps2	£22
PR112	Primax Low Cost Mouse	£6

### PCMCIA

PCM007	Ethernet Coax	£199
PCM008	Ethernet 10 Base T	£149
INT007	Intel Pcmcia Fax 24/96	£199
MIT008	Mitsumi PCMCIA Dual Speed	£215
PAC012	Pace Microlin Fxbn24 Pcmci	£169
PAC011	Pace Microlin Fxbn32+Pcmci	£239
PS1001	Pision PCMCIA V32 14.4 Gold (P15)	£158
PS1002	Pision PCMCIA V34 28.8 Gold Card	£189
PS1003	Pision PCMCIA Gold Drive(Adaptor)	£89
CYB004	Quad Speed 4X No Sound	£349
CYB006	Quad Speed 4X With Sound	£489
PCM009	SCSI Card	£169
PCM013	Toshiba T4900CT 16Mb	£654
USR004	Worldport 14.4 & PCMCIA	£224
USR005	Worldport V34 PCMCIA	£199

### NETWORK CARDS

WNC002	Ce-Lan 2000Combo Win95P8P	£39
WNC003	Ce-Lan PCMCIA Type II combo	£79
WNC001	Ce-Lan Ne2000 Combo	£25
WNC004	Ce-Lan Pocket Ethernet Combo	£63
ETH004	Ethernet Card 8 Port Hub	£29
GEN010	Genius GE2000 II Combo	£259
GEN011	Genius 2500 PCI Bus Combo	£74
GEN012	Genius Pocket Combo E3000	£59
GEN013	Genius PCMCIA Combo	£98
GEN014	Genius GH4080 8 Port Hub	£98
KIN015	Kingston 10B-T 16Bit ISA	£39
KIN018	Kingston NE2000 ISA Combo	£39
KIN019	Kingston EISA NE3200 Combo	£139
KIN020	Kingston Pocket Lan Combo	£149
KIN021	Kingston PCMCIA 10 Base T	£129
KIN022	Kingston PCMCIA 10 Base 2	£129

### ROLAND SOUND

ROL010	Intelligent Midi Interf	£79
ROL011	Inter. & Gm Daughterboard (P12)	£214
ROL012	Inter. & Gs Daughterboard	£289
ROL001	Keyboard Controller	£139
ROL002	"Keyboard, Sounds, Spks&Int"	£199
ROL003	Single Powered 5pk 15Watt	£99
ROL013	Sound Canvas Module	£489
ROL014	Sound Canvas Module	£279
ROL015	Sound Card Pcmcia Type II	£289
ROL004	Stereo Powered Speakers (P12)	£139

### HAND SCANNERS

DEX089	DeKxa Colour Handheld	£129
GEN020	Genius Scanmate 256	£59
GEN021	Genius Scanmate Colour Se	£119
PR102	Primax 256 Greyscale	£55
PR103	Primax Colour Scanner	£89
PR104	Primax Colormobile Direct	£139

PR105	Primax Datapen (P31)	£119
PR120	Primax Colormobile Office	£169
LOG013	Scanman Easy Touch	£99
LOG006	Scanman 256	£78
LOG007	Scanman Colour	£149

### SCANNERS

LOG016	Logitech Powerpage	£286
LOG040	Logitech Scanman Pagescan Colour	£299
SCA002	Microtek Scanner II (P31)	£299
MUS001	Mustek 600	£319
MUS002	Mustek 1200	£449
PAG030	Umax Page Office (P31)	£230
VIS001	Paperport By Visioneer	£299
PR127	Primax Flatbed Scanner	£289
SIC001	SIC Colour Page (P31)	£199
UC1260	UC1260 Flatbed Scanner	£899
VIS050	Vista T630 Flat Bed Scanner (P31)	£299
VIS052	Vista 58	£539

### MEMORY

(SEE PAGE 23)

SIM021	1Mb x 9, (1MB) 70ns, 30 Pin, 3 Chip	£29
SIM022	4Mb x 9, (4MB) 70ns, 30 Pin, 3 Chip	£99
SIM023	1Mb x 32 (4MB) 72 Pin	

# SOFTWARE WAREHOUSE

# LEISURE LISTINGS

## THE COMPLETE LEISURE LISTINGS!

### LEISURE LISTINGS A - Z

20T001	20th Century Almanac	£6	144635	Lawnmower Man	£39
THR001	3D Body Adventure (Cd)	£19	SOF024	Learning Powerpack	£17
DINO02	3D Dinosaurs Adventure	£24	LEI001	Leisure Suit Larry	£28
SFT001	5ft 10 Pak Vol 2 Cd Games	£22	141608	Leisure Suit Larry V1	£28
HARD18	A Hard Days Night	£25	LEM001	Lemmings	£15
ACE001	Acas Of The Pacific	£22	173159	Lemmings (All New World)	£28
GSP009	Address Book	£12	LEM002	Lemmings 2 (The Tribes)	£23
ADI002	Adi French 12/13	£16	SDF036	Leonardo The Inventor	£20
ADI003	Adi Gcse English	£22	UN001	Links Pro Golf (386)	£27
ADI001	Adi Math Gcse	£17	LT001	Little Big Adventure Cd	£32
VGO13	Adventures Storybookland	£13	LDR002	Lords Of Midnight Cd	£21
SOF023	After Hours Powerpack	£18	LOT099	Lottery (Expert Range)	£8
EUR001	Alice In Wonderland Cd	£14	VGO16	Lottery For Windows	£19
INF006	Alone In The Dark 2	£18	LOT083	Lottery Trend Analysis V2	£8
INF007	Alone In The Dark 3 (Cd)	£13	LOT100	Lotto Win	£15
CDT008	Animals Mpc	£30	ATT008	Macbeth (Bbc Shakes) Cd	£29
AST003	Astronomer (Expert Range)	£14	MAR005	Mario Is Missing (Cd)	£6
FLY001	B17 Flying Fortress	£14	MAS004	Mask The Origin	£17
GAR002	BBC Gardeners World 3D 2	£18	175968	Master Of Magic	£34
BOD009	BodyWorks V4 (Page 3)	£13	MAT002	Math Rescue	£2
143702	Beethoven's Fifth	£25	MAT001	Maths Blaster Plus	£25
BET001	Betrayal At Kronard	£19	MAV002	Mavis Beacon V2 Windows	£21
CAK002	Cakewalk Home Studio	£69	141020	Mega Race	£28
CAK001	Cakewalk Professional	£198	CAT002	Multimedia Cats	£31
EXP012	Casino & Screen Saver Cd	£12	RMG011	Multimedia Cats Cd	£31
CAS001	Casino by Expert	£12	MY5001	Myst	£30
FRE003	Cd Micro French (To Gcse)	£28	NET001	Network Q Rac Rally Cdrom	£13
MAT001	Cd Micro Maths 11 To Gcse	£28	173873	Oxford Business Shelf	£26
CHE006	Chessmaster 4000	£22	173924	Oxford Compendium	£51
AND001	Classic Library By Androm	£25	149930	Oxford Dict Of Quotations	£35
SOF031	Classroom Powerpack	£26	173854	Oxford Language Shelf	£26
173267	Comanche	£35	173910	Oxford Reference Shelf	£51
COM005	Comanche Overkill Maxi	£28	173835	Oxford Science Shelf	£26
CORxxx	Corel Adventures With Eddison	£25	173816	Oxford Study Shelf	£26
CORxxx	Corel Arcade Mania	£29	149732	Oxford Thesaurus	£35
CORxxx	Corel Bernard of Hollywood Marilyn	£29	173888	Oxford Writers Reference	£26
COR066	Corel Wild Cards	£19	PER011	Personal Roots	£8
COR130	Core All-Movie Guide	£29	PET003	Peter Gabriel Explorer Cd	£35
COR149	Corridor 7 (Cd)	£18	PGA002	Pga Tour Golf 486 Cd	£35
CRA002	Crayola Amazing Art Adventure	£21	PIN002	Pitfall Dreams Deluxe	£21
CRA001	Crayola Amazing Art Adventure Cd	£20	PT001	Pitfall	£28
CRA003	Crayola Art Stu 6/12Yr Cd	£20	PRID04	Prince Interactive	£31
CRA004	Crayola Art Studio 6/12Yr	£20	PSY001	Psycho Pinball Cd	£24
135759	Cute N' Cuddles	£21	127555	Putt Putt Fun Pack	£24
151840	Cyberia	£35	127560	Putt Putt Joins Parade	£28
179780	Cyberwar	£35	179403	Random Hse Kids Enc	£28
DAR001	Darkforces	£29	RSO10	Ready Set Grow (P13)	£28
DAV001	David Bowie Video Collec	£16	REB001	Rebel Assault Cd	£31
DAW001	Dawn Patrol (Cd)	£28	RED001	Redshift	£34
DAY001	Day Of The Tentacle.Disk	£17	RSI326	Rise Of The Robots (Cd)	£29
DES011	Descent (Cd)	£25	COM020	Rock 'N' Roll Your Own	£19
DES010	Desert Strike (Cd)	£22	ATT007	Romeo & Juliet BBC Cd	£30
DIE001	Diet Windows	£8	158801	Ruff's Bone	£12
DIO001	Directors Lab	£33	SAM003	Sammys Science Hse(2-10Years)	£25
DOC001	Doctors Bk Home Remedies	£25	SCIO01	Science Adventure II	£28
DOG001	Dogfight	£27	153390	Scoter's Magic Castle	£25
176104	Doom & More	£11	SEA001	Seawolf	£28
DOO002	Doom 2	£17	SEC001	Secret Weapons Luftwaffe	£12
DOO003	Doom 2 On Cd	£37	INF008	Shadow Of The Comet	£25
SOF025	Dtp Add-Ons Powerpack	£17	INF009	Shadow Of The Comet (Cd)	£23
UNO004	Dune & 7th Guest Bundle	£31	AND002	Shakespeare By Andromeda	£24
DUN002	Dune 2 The Game	£9	SOF030	Shakespeare Powerpack	£17
DUN001	Dune Cd Rom	£33	SHE001	Sherlock Holmes	£25
SOF032	Early Education Powerpack	£17	126820	Sherlock Holmes Vol 2	£35
EAS007	Easy Tutor /Learn Win 95	£21	126849	Sherlock Holmes Vol 3	£35
127983	European Monarchs	£35	SIM007	Sim City Enhanced	£10
EYEO03	Eye Of The Beholder 3	£11	SIM005	Simcity 2000	£23
EZ001	Ez Internet From Imsi	£24	SIM006	Simcity 2000 On Cd	£33
F14001	F-14 Fleet Defender (Cd)	£24	167800	So I've Heard/Beethoven	£15
F15001	F15 Strike Eagle 3	£27	SOF004	Software Audio Workshop	£366
FAL002	Falcon Gold	£27	140012	Sound Track	£28
FAM001	Family Tree Maker (Win)	£37	AND003	Space Encyclopaedia	£22
FI001	Fifa International Soccer	£25	SOF029	Space Powerpack	£17
FI001	Fitness Partner	£33	SPA001	Space Quest 5	£25
144476	Flight Sim Toolkit	£35	SPA004	Space Quest 6 Cd	£25
FUL001	Full Throttle (Cd)	£30	162830	Space Quest Anthology 1-5	£32
FXF001	Fx Fighters	£24	127201	Space Quest Iv	£32
GAM003	Gamepack 3 (Cd)	£11	SPE002	Spelling Fair	£19
GAR001	Gardener's World	£11	STA023	Startrek/Nex Gen Interact	£25
EUR004	Gone Fishin'	£12	SWA001	Swamp Gas Visits Europe	£12
GUN001	Gunship 2000	£12	TFK001	T.F.X (Disk)	£27
162597	Harry And The Haunted Hse	£25	TFK002	T.F.X. (Cd)	£9
SOF026	Health Powerpack	£17	TAL001	Tales Of Peter Rabbit	£13
THE003	Holy Bible By King James	£26	TAN003	Tank Commander	£25
161062	How To Use Your Computer	£35	TEM001	Temptation	£21
ATT002	Hutchinsons Encyclopaedia (P13)	£33	176087	The Complete Bible	£31
INF005	Ierno (Cd)	£35	THE002	Theme Park (P11 With FREE CD Drive)	£29
SOF033	Infopedia	£29	THE004	Theme Park (Disk)	£28
INS002	Instant Astrologer	£16	THI005	Thinkin Things (4-8 Yrs)	£12
GSP002	Instant Recipes	£11	THI007	Thinkin Things (4-8Yrs)	£12
134953	Interactive Lovers Guide	£25	THI006	Thinkin Things 2(6-12Yrs)	£12
COM0410	Intro To Classical Music	£22	TEO01	Tie Fighter	£12
ATT004	Intro/Classical Music Cd	£37	THI015	Times 2000	£62
ATT012	ITN European Video Atlas	£28	TIM013	Times World Map&Database	£31
168470	ITN World News 1993	£28	TOR003	Tornado (Disk)	£19
VIC008	Jackpot For Windows	£8	SOF019	Total Health/Body&Mind Cd	£28
ROL009	Jazz 1 Phrases Doremix	£16	TW001	Totally Twisted/Aft Dark	£17
126745	Jets & Props	£33	127512	Transport Tycoon	£32
152504	Jetsl	£38	TYP005	Typing Windows	£35
JFK001	JFK Assassination	£31	UND002	Under A Killing Moon Cd	£39
127184	Jones In The Fast Lane	£32	173178	Vietnam	£38
EUR002	Journey To Centre Earth	£12	ATT010	Viking Opera Guide	£30
JUS002	Just Grandma & Me	£27	VRO002	Vroom Bks 4 Footed Friend	£19
SOF035	Key Healthy Indulgence (P13)	£25	VRO001	Vroom Books Stradlwackius	£19
KID002	Kid Pix (2)	£23	SOF028	Weekend Powerpack	£17
KID001	Kid Works 2	£30	127485	Who Killed Sam Rupert	£25
GSP010	Kids Fonts	£8	GSP003	Wine Cellar	£11
176138	Kids Fun House	£11	160341	Woodstock 25th Anniversary	£21
176142	Kids School House	£11	WOR054	Word Rescue	£4
SOF027	Kids Stuff Powerpack	£17	153649	World Beat	£33
KID003	Kids Zoo	£29	ATT005	World War 2 Archives Cd	£69
KIN003	Kings Quest V7 On Cd	£28	ATT006	World War 2 Encyclopaedia	£Call
LAB004	Labels (Expert Range)	£8			

### MICROSOFT

MIC352	3D Movie Maker for Win '95	£29
MIC265	Ms 500 Nations	£22
MIC177	Ms Ancient Lands	£22
MIC102	Ms Arcade	£12
MIC123	Ms Art Gallery (Win) Cd	£25
MIC266	Ms Autoroute Exp Uk & Ire	£29
MIC267	Ms Autoroute Exp UK & Ire	£39
MIC344	Ms Autoroute Express Eur 3.5"	£39
MIC345	Ms Autoroute Express Europe Cd	£49
MIC104	Ms Beethoven: Mpc	£22
MIC180	Ms Best Of Entertainment Pk	£12
MIC264	Ms Bookshelf 1995	£42
MIC213	Ms Cnemania 1995	£33
MIC353	Ms Cnemania 1996 for Win '95 (P6)	£20
MIC245	Ms Composer Collection	£33
MIC269	Ms Cooking Guide Cd	£22
MIC268	Ms Creative Writer On Cd	£22
MIC268	Ms Creative Writer V1.0	£22
MIC354	Ms Creative Writer & Fine Artist CD	£39
MIC103	Ms Dangerous Creatures	£22
MIC078	Ms Dinosaurs On Cd Rom	£22
MIC351	Ms EasyBall & Exporapedia (P6)	£25
MIC263	Ms Dogs On Cd	£22
MIC207	Ms Encarta 1995	£59
MIC347	Ms Encarta 1996 (P6)	£59
MIC261	Ms Explorapedia (Nature)	£22
MIC311	Ms Explorapedia(People)Cd	£22
MIC209	Ms Fine Artist On Cd	£22
MIC124	Ms Fine Artist V1.0	£22
MIC216	Ms Flight Sim Caribbean	£12
MIC271	Ms Flight Sim V5.1 (Cd)	£27
MIC215	Ms Flight Simm Japan Scrc	£12
MIC270	Ms Flight Simulator 5.1	£25
MIC134	Ms Fury (P6)	£29
MIC350	Ms Fury & SideWinder	£20
MIC349	SideWinder Joystick (P6)	£34
MIC169	Ms Golf (Disk)V2.0	£22
MIC310	Ms Golf 2.0 Cd	£22
MIC171	Ms Golf Banff	£12
MIC170	Ms Golf Pinehurst	£12
MIC203	Ms Golf Course Mauna Kea	£12
MIC211	Ms Human Body On Cd	£27
MIC312	Ms Leopard Got It'S Spots	£22
MIC066	Ms Mozart: Mpc	£19
MIC348	Ms Music Central for Win '95	£28
MIC077	Ms Musical Instruments	£22
MIC142	Ms New York Flight Sim Scene	£12
MIC268	Ms Oceans On Cd	£22
MIC143	Ms Paris Flight Sim	£12
MIC200	Ms Schubert-Trount Quintet	£22
MIC212	Ms Solar System On Cd	£27
MIC201	Ms Space Simulator	£25
MIC214	Ms Strauss Cd	£22
MIC186	Ms Stravinsky: MPC	£22
MIC313	Ms The Ultimate Robot Cd	£22
MIC210	Ms Ultimate Haunted House	£22
MIC262	Ms Wine Guide	£22

### DISNEY CDs

DIS004	Lion King Screen Savers (P13)	£25
DIS008	Mickey & Crew Screen Savers	£25
DIS005	Lion King Print Studio	£35
DIS007	Mickey & Crew Print Studio	£35
DIS006	Lion King Animated Story Book	£40
DIS009	Aladdin Activity Centre	£40

### DORLING KINDERSLEY

DOR010	D.K /Ultimate Sex Guide	£26
DOR002	D.K Amazing Dictionary	£25
DOR009	D.K Encyclopaedia Nature (P12)	£29
DOR005	D.K Eyewitness Enc Science	£34
DOR007	D.K History Of The World (P12)	£28
DOR008	D.K P.B. Bears Birthday	£22
DOR001	D.K Stowaway	£25
DOR004	D.K The Way Things Work	£38
DOR003	D.K Ultimate Human Body	£38
DOR006	D.K World Reference Atlas (P12)	£40

### VIRGIN

3.5	Aladdin	£19
CD	Ascendancy	Call
CD	Beneath A Steel Sky	£27
3.5	Beneath A Steel Sky	£27
3.5	Caesars Palace Windows	£24
3.5	Cannon Fodder 2	£24
3.5	Command and Conquer Cd	£29
3.5	Cool Spot	£29
CD	Creation Shock	£34
CD	Digital Dreamware	£14
CD	Dune	£33
CD	Eleventh Hour	£29
3.5	Hand Of Fate	£27
CD	Harpoon Classics	£20
3.5	Heart Of Darkness	£0
3.5	Hokum KA-50	£24
3.5	Indy Car Racing	£20
3.5	Indy Car Tracks	£12
3.5	Lands Of Lore	£25
CD	Legend Of Kyranid 3	£24
3.5	Mortal Combat	£20
3.5	Nascar	£27
3.5	Overlord	£29
CD	Rebel Assault 2 (P12)	Call
CD	Screamer	£20
CD	Shuttle	£34
3.5	Terminator 2 Coin Op	£20
CD	The Dig(P12)	£29
CD	Tilt Cd	Call

### OCEAN

CD	Central Intelligence	Call
3.5	European Champions	£19
CD	Inferno	£31
CD	Jurassic Park	£27
3.5	Robocop 3	£20
3.5	Ryder Cup	£20
3.5	Sim Ant For Windows	£24
3.5	Sleepwalker	£20
3.5	T.F.X	£27
CD	T.F.X.	£27

## THE COMPLETE BUSINESS LISTINGS!

### ACCOUNTS

WINDOWS VERSIONS	
QU001	Ca Simply Accounts v1.1A <b>£139</b>
QU002	Quidbooks V3 (P9) <b>£88</b>
QU003	Quicken 4 Del Home Pack <b>£45</b>
QU004	Quicken 4 Del Home Pack <b>£45</b>
QU005	Quicken V4 (Cd) (P9) <b>£27</b>
QU006	Quicken V4.0 (Win) <b>£28</b>
QU007	Quicktax 95 <b>£25</b>
SAG005	Sage Accountant V3 <b>£189</b>
SAG006	Sage Bookkeeper V3 <b>£82</b>
SAG007	Sage Accountant Plus V3 <b>£272</b>
SAG008	Sage Financial Controller 3 <b>£353</b>
SAG009	Sage Instant Accounting <b>£85</b>
SAG010	Sage Instant Business Pk <b>£134</b>
SAG011	Sage Instant Payroll <b>£69</b>
SAG012	Sage Moneywise 2 <b>£35</b>
SAG013	Sage Payroll For Windows <b>£139</b>
TAX001	Which7 Taxcalc <b>£29</b>

DOS VERSIONS	
PEG001	Pegasus Solo Accounts (P26) <b>£64</b>
PEG002	Pegasus Solo Payroll (P26) <b>£43</b>
QU001	Quicken (Dos) v6 <b>£32</b>
SAG027	Sage Accountant Plus V7 <b>£245</b>
SAG028	Sage Accountant V7 <b>£169</b>
SAG029	Sage Bookkeeper V7 <b>£55</b>
SAG013	Sage Financial Controller Multi User <b>£497</b>
SAG026	Sage Financial Controller V7 <b>£319</b>
SAG012	Sage Job Costing <b>£109</b>
SAG017	Sage Payroll III Network <b>£167</b>
STEO04	Sterling Payroll (Dos) v5 <b>£129</b>
TAS001	Tas Books 1 <b>£77</b>
TAS004	Tas Books Payroll <b>£78</b>
TAS002	Tas Multi User Multi Book <b>£199</b>

### CAD

WINDOWS VERSIONS	
THR003	3D Design Plus <b>£85</b>
THR004	3D FloorPlan + 3D Design <b>£79</b>
THR006	3D FloorPlan + Estimator <b>£75</b>
THR002	3D FloorPlan Plus <b>£45</b>
THR008	3D FloorPlan Plus CD (P22) <b>£44</b>
ALLO02	All Clear <b>£139</b>
AN006	Animator Studio (P22) <b>£249</b>
AUT025	AutoCAD LT (P22) <b>£353</b>
AUT034	AutoCAD LT U/G v1 to V2 <b>£95</b>
AUT036	AutoCAD LT v2 CD <b>£379</b>
AUT027	Autosketch v2 <b>£89</b>
AUT014	Autosketch Architect Library <b>£59</b>
AUT035	Autosketch Building Library <b>£59</b>
AUT013	Autosketch Electrical Library <b>£59</b>
EAS004	Easycad v4 <b>£79</b>
THR005	Estimator Plus <b>£55</b>
FAS004	Fastcad V6 (CadVance) <b>£355</b>
HOU001	Granada 3D House Designer <b>£15</b>
CGC001	Graphics Converter Gold <b>£29</b>
KEY002	Key Cad - Softkey <b>£28</b>
MAT007	Mathcad 6 Student Edition (P22) <b>£35</b>
MAT006	Mathcad Personal <b>£43</b>
MAT013	Mathcad V6.0 Plus <b>£339</b>
MAT012	Mathcad V6.0 Standard <b>£169</b>
PLA001	Planix (Office Space Planning) <b>£86</b>
PLA003	Planix Home Architect <b>£39</b>
SOF001	Spotlight Key Draw! Plus V3 <b>£28</b>
TUR017	Turbocad 10 User License <b>£159</b>
TUR018	Turbocad For Windows V2 <b>£53</b>
TUR021	Turbocad U/G To V2 <b>£29</b>
VIS038	Visual Cadd Comp Upgrade <b>£189</b>
XCA001	Xcad 3.0 (P22) <b>£369</b>
XCA002	Xcad Demonstration Disks <b>£9</b>

DOS VERSIONS	
AUT019	Autosketch V3 For Dos <b>£65</b>
FAS003	Fastcad (Dos) 3D <b>£355</b>
TUR019	Turbocad V3.2 (Dos) <b>£53</b>

### COMMUNICATIONS

WINDOWS VERSIONS	
CAR003	Carbon Copy V2.5 <b>£79</b>
CAR005	Carbon Copy V3 <b>£82</b>
COM002	Commonworks <b>£99</b>
COM012	Compuserve Value Pack (P14) <b>£28</b>
CRC001	Cross Talk <b>£89</b>
DAI017	Dial Pro <b>£99</b>
NOV065	Groupwise 5 User License <b>£299</b>
INT011	Internet In A Box <b>£95</b>
INT012	Internet Members Kit V2.0 (P14) <b>£40</b>
INT014	Internet Members Kit win cd (P14) <b>£40</b>
INT070	Lotus cc. Mail Grp Pk 10 Use <b>£446</b>
INT055	Lotus cc. Mail Mobile Rel 2.2 <b>£115</b>
INT123	Lotus Notes Server Win V3.3 <b>£249</b>
INT051	Lotus cc Mail 10 User Lic <b>£287</b>
INT067	Lotus Notes Win Client 3.3 <b>£289</b>
INT089	Lotus cc Mail Desktop <b>£70</b>
INT092	Lotus Notes Express <b>£133</b>
INT114	Lotus Notes Starter Pack <b>£579</b>
INT115	Lotus Notes Desktop Lic <b>£139</b>
INT131	Lotus Notes Server For NT 3.31 <b>£262</b>
INT130	Lotus Notes Client full for Windows <b>£275</b>
MIC335	Ms Mail Server/ Net V3.5 <b>£299</b>
MIC336	Ms Mail Pk Serv. 10Us V3.5 <b>£299</b>
MIC198	Ms Mhs Gateway <b>£412</b>
MIC199	Ms Post Office W/G U/G <b>£220</b>
NOR016	PC Anywhere Win V2 <b>£99</b>
NOR030	PC Anywhere Lan <b>£389</b>
NOR023	PC Anywhere Host 2 <b>£57</b>
NOR024	PC Anywhere Remote <b>£67</b>
PRO003	Procom Plus For Windows <b>£56</b>
QMO001	Qmodem Pro (Win) <b>£59</b>
QUA021	Quarterdeck Internet Suite (P15) <b>£69</b>
REA002	Reachout Host/View v 5 <b>£79</b>

REA003	Reachout Host For Modems <b>£59</b>
REA004	Reachout Modems Viewer <b>£57</b>
REA006	Reachout 10 User Lan Lic <b>£139</b>
REA007	Reachout/Network 5 User Lan <b>£145</b>
REF001	Reflections 4 / V4 Win <b>£238</b>
REF004	Reflections 1 / V4 (Win) <b>£249</b>
EWA003	Remote Winmail <b>£109</b>
SMA001	Smart Term 340Emulator V4 <b>£176</b>
TER001	Termite 3 Async Win/Dos <b>£169</b>
TER004	Termite 3.0+Net For Win <b>£239</b>
TER006	Termite 6 Single User <b>£169</b>
TER007	Termite V3 Async Comp U/G <b>£99</b>
WEB001	Web Author (3.5) <b>£1000XXX</b>
DEL022	Win/Pro V4.1 by Delrina Net 5t Kit U/G <b>£129</b>
DEL017	Wincomm Pro By Delrina <b>£56</b>
WIN039	Winfax Pro V4 <b>£55</b>
WIN040	Winfax Pro V4 U/G <b>£32</b>
WIN049	Winfax Net Start Kit V4.1 <b>£176</b>
WIN090	Winfax Scanner New User <b>£239</b>
WIN091	Winfax-Winfax Scanner U/G <b>£220</b>
DEL023	Winfax Pro Server V4 <b>£97</b>
WIN066	Winmail Network 5 User <b>£229</b>
WIN067	Winmail Network 10 User <b>£399</b>
WIN068	Winmail Network 50 User <b>£1299</b>

### DATABASE

WINDOWS VERSIONS	
ACT004	Act For Windows V2 <b>£138</b>
ACT007	Act V2 Lan Pack (4 Node) <b>£379</b>
ACT008	Act V2 10 User License <b>£129</b>
ACT005	First Act <b>£65</b>
ALP004	Alpha 5 For Windows Newll <b>£69</b>
ALP010	Alpha 5 Home & Bus. Edt (P26) <b>£40</b>
ASK001	Asksam <b>£93</b>
ASK002	Asksam V1 - V2 Upgrade <b>£54</b>
BOR023	Borland Reportsmith V2.5 <b>£59</b>
CLA002	Claris Filemaker Pro V2.1 <b>£80</b>
CLA005	Claris Filemaker Pro 2.1 5 User <b>£559</b>
DAT005	Database Express (Win) <b>£199</b>
DAT011	Database Developer <b>£1199</b>
DAT025	Database V5 <b>£98</b>
DBA006	Dbase For Windows V5.5 (P27) <b>£219</b>
DBA007	Dbase For Windows U/G (P27) <b>£89</b>
MIC038	Fox Pro 2.5 Mlp <b>£214</b>
MIC039	Foxpro 2.5 20Mlp <b>£3699</b>
KEY005	Key Database <b>£29</b>
KEY008	Key Database Plus <b>£29</b>
LOT062	Lotus Approach V3 <b>£81</b>
LOT063	Lotus Approach V3 U/G <b>£76</b>
MIC076	Ms Access Dev Tool Kit V2 <b>£225</b>
MIC148	Ms Access V2 <b>£218</b>
MIC174	Ms Access V2 Cep U/G <b>£81</b>
MIC258	Ms Access Solutions Pack <b>£36</b>
MIC282	Ms Access V2 Educational <b>£129</b>
MIC285	Ms Access For Windows 95 <b>£225</b>
PAR015	Paradox Runtime (Win) V5 <b>£239</b>
BOR021	Paradox V5. Devel Tools <b>£149</b>
PAR018	Paradox V5 (P27) <b>£95</b>
PAR019	Paradox V5 U/G & Comp U/G <b>£59</b>
Q&A002	Q & A For Windows <b>£142</b>
Q&A004	Q&A For Networks 3 User Lic <b>£259</b>
ADD004	Rapid Address Program <b>£149</b>
BOR026	Reportsmith Sql <b>£169</b>
SID004	Sidekick For Win '95 (P16) <b>£28</b>
SUP002	Superbase 4 V2 Developer <b>£499</b>
SUP005	Superbase V2.0 <b>£159</b>
SUP007	Superbase V2 Dev Edition <b>£606</b>
TRA008	Tracker (Stand Alone) <b>£189</b>
TRA009	Tracker 5 User Network <b>£599</b>
TRA010	Tracker 10 User Network <b>£1106</b>
BOR105	Visual Dbase For Win <b>£209</b>
MIC322	Visual Fox Pro V3.0 Prof <b>£312</b>
MIC324	Visual Fox Pro V3.0 Stan. (P7) <b>£199</b>

DOS VERSIONS	
ACT003	Act Server Suser <b>£598</b>
ACT002	Actl For Dos <b>£189</b>
REF002	Borland Reflex v2.0 <b>£182</b>
CLU013	Clipper Tools <b>£289</b>
CLU005	Clipper Release 5.2 <b>£289</b>
DAT024	Database V5 <b>£376</b>
DBA010	Dbase V5 For Dos <b>£376</b>
FOX014	Fox Pro V2.6 Std (Dos) <b>£71</b>
FOX016	Fox Pro V2.6 Prof. Dos <b>£279</b>
PAR013	Paradox V4.5 Comp/U/G Dos <b>£128</b>
PAR014	Paradox Runtime (Dos) <b>£99</b>
PAR017	Paradox Engine <b>£99</b>
Q&A001	Q&A V4.0 (Dos) <b>£215</b>

### DTP

WINDOWS VERSIONS	
ALD002	Aldus Persuasion V2 <b>£79</b>
ALD007	Aldus Persuasion V2.1 <b>£249</b>
BIF001	Bitstream Make-Up <b>£60</b>
COR044	Corel Ventura V5 U/G Cd (P20) <b>£60</b>
COR046	Corel Ventura V5 Cd <b>£199</b>
COR047	Corel Ventura V5 Floppy <b>£289</b>
CRE020	Creator <b>£79</b>
FIR003	First Press For Windows <b>£19</b>
FON001	Fonts Windows <b>£9</b>
GST001	GST Publishing Partners <b>£79</b>
GST002	GST Pressworks 2 <b>£25</b>
HAR024	Harvard Asap <b>£89</b>
ILL001	Illuminatus V3.0 <b>£85</b>
INT016	Internet Publishing Kit CD <b>£72</b>
MIC022	Micrografix Designer V4.1 <b>£287</b>
MIC073	Ms Publisher V2 <b>£65</b>
MIC165	Ms Publisher Design Pack <b>£29</b>
MIC171	Ms Publisher V3.0 3.5" (P5) <b>£65</b>
MIC318	Ms Publisher V3.0 Cd <b>£65</b>
PAG032	Page Plus for '95 <b>£30</b>
PAG021	Page Plus V3 Pub/Suite <b>£69</b>
PAG023	Page Plus Photo Plus <b>£29</b>
PAG027	Page Plus 3 Pub Suite Cd <b>£75</b>
PAG09X	Pagemaker V6 For Windows <b>£430</b>

PAG005	Pagemaker V5 20User Edu Ec <b>£1654</b>
PAG014	Pagemaker V5 Educational <b>£199</b>
PAG018	Pagemaker Classic <b>£55</b>
PAG011	Pageplus Artpack V1 <b>£26</b>
PAG012	Pageplus Font Pack <b>£26</b>
QUA014	Quark Express V3.3 (Win) <b>£559</b>

DOS VERSIONS	
FAN001	Fanatasia <b>£179</b>
TIM012	Timeworks V3 Dos <b>£55</b>

### GRAPHICS

WINDOWS VERSIONS	
FIR002	1st Design <b>£23</b>
3DD001	3D Designer <b>£229</b>
3DF001	3D F/X By Asymetrix <b>£99</b>
ADD003	Add Depth <b>£79</b>
ADD002	Add Impact <b>£69</b>
ADO008	Adobe Illustrator V4 <b>£345</b>
ADO006	Adobe Photoshop V3 <b>£382</b>
AO0014	Adobe Premier V4 <b>£348</b>
CON003	Conversion Artist 2 <b>£59</b>
CON002	Convolver <b>£99</b>
COR038	Corel Draw 3 On CD (P20) <b>£42</b>
COR012	Corel Draw 4 CD <b>£84</b>
COR003	Corel Draw 4 3.5" (P20) <b>£105</b>
COR018	Corel Draw 5 3.5" <b>£349</b>
COR030	Corel Draw 5 CD <b>£278</b>
COR033	Corel Draw 5 CD U/G from V4 (P20) <b>£115</b>
COR032	Corel Draw 5 3.5" U/G from v4 <b>£145</b>
COR019	Corel Draw 5 3.5" U/G from v3 <b>£254</b>
COR031	Corel Draw 5 CD U/G from v3 (P20) <b>£195</b>
COR122	Corel Draw 6 '95 CD (P20) <b>£260</b>
COR123	Corel Draw 6 U/G from 3 or 4 <b>£220</b>
COR124	Corel Draw 6 U/G from v5 <b>£142</b>
COR054	Corel Photopaint 5 Plus Cd <b>£48</b>
XAR001	CorelXARA New! <b>CALL</b>
COR040	Corel Sampler <b>£8</b>
DES012	Designer Powerpack C/U Cd <b>£139</b>
DES014	Designer Powerpack Cd <b>£345</b>
DES013	Designer Powerpack U/G Cd <b>£154</b>
DES009	Designworks V2 Win <b>£59</b>
DES015	Designworks V3.0 <b>£29</b>
VIS056	Double Vision <b>£30</b>
DAW007	Drawplus V2.0 (Cd) <b>£36</b>
ELO001	Elastic Reality <b>£249</b>
FLY003	Flying Fonts Win Cd <b>£153</b>
FRA007	Fractal Painter 3.0 <b>£296</b>
IMA001	Imagepals 2 <b>£143</b>
JAG001	Jaggies Are Gone <b>£69</b>
KAI001	Kai's Power Tools (Hsc950) <b>£89</b>
LOT069	Lotus Smartpics Windows <b>£84</b>
MAC009	Macromedia Director V4 <b>£750</b>
MAC010	Macromedia Freehand (P27) <b>£399</b>
MD003	Media Studio <b>£199</b>
PAG029	Monster Cd From Serif <b>£9</b>
MOR004	Morph For Windows <b>£89</b>
RMG010	Morph Movies On Cd <b>£37</b>
PAI003	Paintshop Pro (P22) <b>£50</b>
PAI004	Paintshop Pro + Kpt Se (P22) <b>£70</b>
PAI002	Pc Paintbrush + Paints <b>£25</b>
PER021	Perform For Windows <b>£47</b>
PHO002	Photofinish U/G <b>£25</b>
PHO001	Photofinish V3 <b>£29</b>
RAY001	Ray Dream Designer 3 <b>£189</b>
SIM009	Simply 3D Corel 3 Bundle <b>£62</b>
SIM008	Simply 3D 1.0 (P21) <b>£43</b>
VIS057	Simply 3D Superpack <b>£70</b>
HAR012	Spotlight <b>£89</b>
SUI001	Stupe Imaging <b>£204</b>
TOP004	Toplevel Fast Forms (P26) <b>£25</b>
TOP008	FastForms for Win '95 (P26) <b>£25</b>
TOP009	Toplevel Forms for Win '95 <b>£69</b>
TRU003	Truespace By Caligari (P21) <b>£149</b>
TRU004	Truespace V2.0 <b>£369</b>
VIS054	Visual Reality V1.5 (P21) <b>£300</b>
VIS055	Visual Reality V2.0 (P21) <b>£199</b>
WAL003	Walk Through Pro - Pc <b>£149</b>

### GRAPHICS CHARTING

WINDOWS VERSIONS	
ABC001	ABC Flowcharter V4 <b>£215</b>
ABC005	ABC Flowcharter V4 Lic <b>£189</b>
ABC002	ABC Flowcharter V4.0 C/U <b>£99</b>
ABC003	ABC Flowcharter V4.0 U/G <b>£99</b>
ABC007	ABC Graphics Suite C/U '95 (P19) <b>£99</b>
ABC006	ABC Graphics Suite Win '95 <b>£239</b>
COR034	Corel Flow <b>£37.25</b>
NowDec	Corel Flow V3 for '

## THE COMPLETE BUSINESS LISTINGS!

OFF002	Ca Super Office	£99
FRA004	Frameworks V4	£349
LOT006	Lotus Works V3	£85
SYM002	Lotus Symphony V3	£405
MIC061	Ms Works 3.0 For Dos	£84
PFS007	PFS 1st Choice	£29

### LANGUAGE

WINDOWS VERSIONS		
ASY003	Asymetrix Toolbook V3	£119
ASY002	Asymetrix Multimedia Tool	£489
BOR101	Borland C++ & D/Base Tool U/G CD	£149
BOR098	Borland C++ & Dbase Tool C/U CD	£187
BOR016	Borland C++ V4.5 CD	£222
BOR017	Borland C++ V4.5 CU CD	£99
BOR020	Borland C++ V4 Assembler	£54
TUR060	Borland Turbo Assembler	£58
BOR099	Borland C++ 4.5 U/G CD	£98
DEL006	Delphi By Borland CD	£155
DEL007	Delphi Client Server	£679
DEL008	Delphi C/U (P19)	£119
DEL009	Delphi RAD Pack	£125
MIC188	M.S. Visual Tools Suite	£175
MIC236	Ms Sgl Server 421A Win Nt	£658
MIC222	Ms Visual C++ V2 Cd Rom	£265
MIC225	Ms Visual Control Pack	£69
MIC240	Ms Visual C++ V2 Mlps	£465
MIC226	Ms Visual Basic V4 U/G	£38
MIC27	Ms Visual Basic V4 Std (P7)	£69
MIC28	Ms Visual Basic Pro V4 CD	£298
MIC185	Ms Visual Test 4.0 New!	£440
MIC29	Ms Vis/Basic Pro V4 U/G	£108
MIC30	Ms Vis/Basic Pro V4 U/G CD	£107
MIC31	Ms Vis/Basic Pro V4 CU	£199
MIC32	Ms Vis/Basic Pro V4 CU CD	£199
MIC33	Ms Vis/Basic Enterprise	£607
MIC34	Ms Vis/Bas Enterprise U/G	£359
SYM006	Symantec C++ V7	£149
TUR003	Turbo Pascal V1.5	£79
TUR064	Turbo C++ V4.5 For Win	£61
VIS039	Visual Express by CA	£243
DOS VERSIONS		
INF004	Informix Smartware liv2.6	£389
MIC146	Macro Assem V6.11 Win/Dos	£95
MIC004	Ms Macro Assembler V6.11	£95
MIC071	Ms Visual Basic 1.0 Std	£79
TUR005	Turbo C++ V3.0	£55
TUR008	Turbo Pascal V7.0	£75

### SPREADSHEETS

WINDOWS VERSIONS		
CRY002	Crystal Ball For Excel	£220
CRY003	Crystal Ball For Lotus123	£223
KEY010	Key Spreadsheet Plus	£25
LOT017	Lotus Improv	£92
LOT029	Lotus 123 V2.4 Lan Server	£387
LOT030	Lotus 123 Add License	£199
LOT061	Lotus 123 V5	£219
LOT108	Lotus 123 Trade Up	£88
EXC004	Ms Excel V5 Win	£224
MIC141	Ms Excel V5 Upgrade	£85
MIC286	Ms Excel For Windows 95	£225
MIC287	Ms Excel For Win 95 C/U	£107
MIC288	Ms Excel For Win 95 U/G	£82
QUA017	Quattro Pro V6	£149
SUP012	Supercalc (Win)	£68
SUP014	Supercalc Dos To Win U/G	£49
DOS VERSIONS		
LOT060	Lotus 123 V4	£287
QUA011	Quattro Pro V5.5 (Dos)	£45
SUP004	Supercalc For Dos	£68

### PROJECT MANAGEMENT

WINDOWS VERSIONS		
BUS003	Business Plan v2 by PlanIT (P17)	£89
ECC002	Ecco Professional	£148
ECC003	Ecco Professional 3 User	£329
ECC004	Ecco V3.0	£99
INS005	Inspiration	£99
KEY009	Key Project Win	£29
MAP013	Maps And Data 3.0	£339
MIC157	Ms Project 4.0 Win	£279
MIC184	Ms Project V4 Ctp U/G	£85
TAR001	On Target	£69
PER022	Performance Now!	£129
SUC001	Success. Biz Writer (Win)	£69
SUP003	Superproject Rel 3.0A	£479
TIM001	Symantec Timeline	£319

### UTILITIES

WINDOWS VERSIONS		
ARC008	Arcserve For Windows NT	£596
ARC002	Arcserve V5.01 Net.5 User	£165
ARC003	Arcserve V5.01 Net.10User	£337
ARC005	Arcserve 5.01 Net 50User	£643
ARC010	Arcsoft For Windows	£80
ACE002	Asymmetric Media Blitz	£49
BUB009	Bubblehelp	£14
CAL002	Calendar Creator Win	£25
CLE009	Cleansweep	£27
CLE010	Cleansweep 95 (P8)	£27
COR016	Corel Cd Power Pack	£25
COR062	Corel Cd Creator	£103
DAS004	Dashboard P5 For Win 95 (P16)	£29
SOL002	Dr Solomans Av (1/4Ly)	£70
SOL010	Dr Sol Antivir Monthly (P25)	£135
SOL008	Dr Solomans Audit/Manager	£298
FAR001	Farside Daily Planner	£49
FAS013	Fastmove	£39
FIR006	First Aid For Windows	£35
FRK007	First Aid 95 For Win 95 (P16)	£35

FOR018	Form Toolgold For Win (P26)	£30
FRA006	Franklin Ascend	£132
GAM002	Game Runner (V2)	£39
LAB003	Labels Unlimited	£29
LAP007	Laplank For Windows	£88
LOT078	Lotus Organizer V2.1	£88
MAG020	Magnaram	£29
MAG021	Magnaram 95 (P8)	£29
MAP010	Mapvision Gb	£139
MAP011	Mapvision Central London	£139
MIC192	Microsoft Test	£399
PCT003	More Pc Tools	£45
MIC273	MS Office Assistant	£59
MIC160	MS Schedule + 1.0 Starter	£89
MIC161	MS Schedule+1.0 SPack Win	£189
MIC162	MS Schedule+1.0 20Pack	£597
MIC298	MS Schedule + For Win 95	£69
MIC120	MS Windows Sound System 2	£46
NOR032	Norton Utilities/95 Trade Up	£49
NOR035	Norton Antivirus 95 Trade Up	£28
NOR037	Nor/Navigator 95 Trade Up	£34
NOR018	Norton Backup V3 Win	£89
NOR020	Norton Desktop (Win) V3.0	£88
NOR021	Norton Antivirus V3 Win/D	£94
NOR022	Norton Utilities V8 W/Dos	£85
NOR031	Norton Utilities / Win 95	£84
NOR033	Norton Utilities Win 95Cd (P24)	£84
NOR034	Norton Antivirus Win 95 (P24)	£59
NOR036	Norton Navigator Win 95 (P24)	£67
NOR038	Norton Navigator Win 95Cd	£72
NOR039	Norton Disklock	£64
INF001	On File	£39
PKZ001	P.K. Zip	£28
PAC001	Pack Rat V5.0	£189
PER012	Personal Calendar	£9
PFS009	PFS CV & Job Search Pro (P13)	£29
SPI001	Power Album	£29
RAM020	Ram Doubler For Windows (P23)	£49
RSI001	RSI Monitor, (Amp)	£39
SCR003	Screencam Win V2 (Lotus)	£85
SDI004	Slidekick 95 For Win 95 (16)	£29
RMG002	Softram '95 Memory Doublr (P23)	£49
MIC242	SourceSafe V3.1	£259
SPE005	Spellwrite	£14
STA013	Stacker V4 Win/Dos	£59
STA018	Stacker V4 Universal U/G	£36
STA022	Stacker V4 + Qemm V7.5	£69
STA026	Stacker/Cleansweep Bundle	£27
SUP015	Superprint 3.1	£75
SUP016	Superquest Ver 3.1	£49
SUI001	Swimsuit Calendar	£22
UNI005	Uninstaller 3 (P25)	£36
VID002	Video Director	£29
VID038	Video Director V2	£79
WIN089	Win'95 Advisor	£20
WIN061	Wincheckit	£39
WIN050	Windaleta V2.3.1 & 95 (P25)	£30
WIN019	Windows Printing System	£79
WIN060	Winprobe V3	£49
WIN002	Wired For Sound Pro 3.5	£29
XTR006	Xtree Gold For Windows V4	£64
XTR008	Xtree Tools For Netware	£379

DOS VERSIONS		
MACX004	386Max V7	£29
ARC009	Arcsoft For Dos	£80
BLU001	Blue Max (Memory Manager)	£54
CAL001	Calendar Creator Plus V4	£25
COR005	Card Scsl	£59
DES005	Desqview 386 V2.7	£74
SOL001	Dr Solomans Av 1/4Ly Dos	£62
FOR004	Form Tool Gold V4	£27
LAB001	Labels Unlimited	£29
QEM003	Qemm V8 (P8)	£55
QEM003	Qemm V7.5	£44
RAM001	Ram Exam	£15

### UTILITIES SCREENSAVERS

WINDOWS VERSIONS		
AFT001	Afterdark	£24
AFT004	Afterdark V3	£24
FAR002	Farside Screen Saver	£26
AFT002	More Afterdark	£16
MIC106	Ms Scenes Sierra Club	£6
MIC107	Ms Scenes Impressionists	£15
MIC108	Ms Scenes Outer Space Col	£15
MIC232	Ms Scenes Flight Collecti	£15
MIC233	Ms Scenes Sports Extremes	£15
OPU001	Opus And Bill	£24
SIM020	Simpsons Screen Saver	£24

### WORD PROCESSING

WINDOWS VERSIONS		
LEG002	120 Legal Letters (P26)	£25
ACC002	Accent Express V2 (P24)	£37
ACC003	Accent Special Edition V2 (P24)	£90
ACC004	Accent Professional V2 (P24)	£187
ADO004	Adobe Type Manager V3.0	£29
ADO005	Adobe Type Manager-Wp	£35
LOT057	Lotus Ami Pro V3.1	£84
LOT113	Lotus Wordpro (P18)	£89
MIC024	Ms TrueType Fontpack 2	£49
MIC114	Ms Word V6 (Win)	£224
MIC135	Ms Word V6 Ctp Upgrade	£85
MIC299	Ms Word For Win 95 (P7)	£225
MIC301	Ms Word For Win 95 C/U	£107
MIC301	Ms Word Win 95 U/G	£82
Q&A	Q & A Write V3	£49
WOR003	Wordperfect V5.2	£189
WOR116	Wordperfect 6.1	£165
WOR117	Wordperfect 6.1 Comp U/G	£85
WOR118	Wordperfect 6.1 U/G	£62

WOR077	Wordstar V2 (P26)	£28
DOS VERSIONS		
DIS001	Displaywrite V5	£252
LET002	Letterperfect	£69
LOC002	Locoscript Pro V2	£62
MIC164	Ms Word V6 Dos	£172
OXF001	Oxford Engl. Dict. Cd.Rom	£349
NOV064	Wordperfect 6.0 C/U VLA	£69
WOR131	Wordperfect 6.0C New!	£189
WOR132	Wordperfect 6.0C U/G	£76
WOR132	Wordperfect 6.0C C/U	£99
WOR025	Wordstar V7.0	£223

### TRANSLATION & LANGUAGE LEARNING

WINDOWS VERSIONS		
EZL001	Ez Language - 6 Languages	£31
EZL002	Ez Language French	£27
EZL003	Ez Language German	£27
EZL004	Ez Language Italian	£27
EZL005	Ez Language Spanish	£27
EZL006	Ez Language Russian	£27
EZL007	Ez Language Japanese	£27
FRE004	French Pronunciation V3.0	£39
LAN005	Gamma Universe	£149
GER001	German Pronunciation V3.0	£39
GLO013	Globalink Pt Pro French	£259
GLO014	Globalink Pt Pro German	£259
GLO015	Globalink Pt Pro Spanish	£259
GLO021	Global P/T French Deluxe	£99
GLO020	Global P/T Spanish Deluxe	£99
GLO022	Global P/T German Deluxe	£99
GLO006	Globalink Pt French Win (P10)	£90
GLO007	Globalink Pt German Win (P10)	£90
GLO008	Globalink Pt Spanish Win (P10)	£90
LAN001	Language Ass French Win	£43
LAN002	Language Ass. Spanish	£43
LAN003	Language Ass. German	£43
LAN004	Language Ass. Italian	£43
LEA008	Learn To Speak Spanish V5	£89
LEA009	Learn To Speak French V4	£99
VCO01	Learning French Gcse	£15
VCO02	Learning German Gcse	£15
LIN017	Lingua Talking French	£15
LIN018	Lingua Talking German	£15
LIN019	Lingua Talking Italian	£15
LIN020	Lingua Talking Spanish	£15
LIN021	Lingua Talking Greek	£15
LIN022	Lingua Talking Japanese	£15
LIN023	Lingua Talking Russian	£15
SPA003	Spanish Pronunciation V3	£39
THI001	Think & Talk German	£99
THI002	Think & Talk Italian Mpc	£99
THI003	Think & Talk Spanish	£99
THI004	Think & Trch	£99

DOS VERSIONS		
GLO009	Globalink Pt Pro French	£285
GLO010	Globalink Pt Pro German	£285
GLO011	Globalink Pt Pro Spanish	£285
GLO012	Globalink Pt Pro Russian	£245
GLO019	Globalink Pt Chinese Dos	£99
GLO003	Globalink Pt French Dos	£55
GLO004	Globalink Pt German Dos	£55
GLO004	Globalink Pt German Dos	£55
GLO005	Globalink Pt Spanish Dos	£55

### FORMS

WINDOWS VERSIONS		
PER003	Form Flow Designer & Fill	£99
KEY003	Key Form Designer	£29
KEY007	Key Organiser Chart	£29
MIC309	Ms Electronic Form Design	£189
PER004	Perform Pro Filler	£74
PER005	Perform Pro Filler 10Pk	£1207
TOP003	Toplevel Forms (P26)	£69

### NETWORKING

WINDOWS VERSIONS		
NOV031	Novell 3.12 5 User	£395
NOV032	Novell 3.12 10 User	£962
NOV033	Novell 3.12 25 User	£1143
NOV037	Novell 3.12 50 User	£1940
NOV035	Novell 3.12 100 User	£2540
NOV033	Novell 3.12 250 User	£4575
NOV046	Novell 4.1 5 User	£440
NOV038	Novell 4.1 25 User	£1687
NOV039	Novell 4.1 50 User	£2300
NOV040	Novell 4.1 100 User	£3109
NOV041	Novell 4.1 250 User	£5409
NOV059	Novell 4.1 5 User On Cd	£413
NOV063	Novell 4.1 100 User Cd	£2865
NOV036	Novell Lan Work Place	£189
NOV047	Novell 10 User Lan Workplace	£996
ART003	Lantastic Network Kit X 2	£199
ART005	Lantastic Single User S/W	£65
ART006	Lantastic Xtra User Coax	£145
ART007	Lantastic Xtra User Utp	£149
ART009	Lantastic Add On Kit(Bnc)	£99
ART010	Lantastic Add On Kit(RJ45)	£108
ART011	Lantastic Single User Lic	£65
ART012	Lantastic 5 User License	£213
ART014	Lantastic For Os/2	£76
ART015	Lantastic 5 User Lic Os/2	£265
ART016	Lantastic 5 User Coax Bnc	£265
ART017	Lantastic 5 User Utp Card	£265

### O/S

DOS VERSIONS		
WIN071	Windows 95 U/G 3.5 (P6)	£59
WIN072	Windows 95 U/G Cd	£59
WIN081	Ms Plus On Cd For Win 95 (P6)	£28

WIN082	Ms Plus	
WIN073	Dos To Win	
WIN084	Dos To Wind	
IBM004	IBM PC DOS Ver...	
DOSO11	Ms Dos V6.22	
WIN021	WFWG 3.11 Base	
WIN029	WFWG 3.11 Add (Dos)...	£43
NOV007	Novell Dos V7	£49
OS2003	Os/2 Warp V3 (Disk)	£50
OS2004	Os/2 Warp V3 (Cd)	£42
OS2013	Os/2 X/Warp Connct Ugcd	£69
OS2014	Os/2 X/Warp Conn Win Ug	£89
OS2008	Os/2 For Windows (3.5)	£99
OS2005	Os/2 V3 Warp U/G Disk	£49
OS2006	Os/2 V3 Warp U/G Cd	£35
OS2007	Os/2 With Windows (Cd)	£89
OS2009	Os/2 Warp Connect V3 Cd	£89
OS2009	Os/2 Warp Conn Winos2 V3Cd	£99
OS2015	Warp Win/Warp Conn Win Ug	£48
MIC166	Nt Advanced Server 3.1	£699
WIN034	Win Nt Ug To Adv Serv Cd	£398
WIN062	Win Nt Serv 3.1 To 3.51 Ug	£475
WIN063	Win Nt Serv 3.5 20Usr Lic	£397
WIN075		

## MICROSOFT FOR THE HOME

### MS Encarta 96 MS Fury<sup>3</sup>

A vast universe of knowledge comes to life on your PC. Microsoft Encarta 96 Encyclopedia is a fully revised, adapted and updated version of the world's best-selling multimedia encyclopedia

This World English edition has been developed specifically for the UK. It includes 27,000 articles, 8,000 photos, plus more than 100 videos and animations, 9.5 hours of sound and more than 800 detailed maps. Works on Windows 3.1 and is optimised for Windows 95.

**NOW ONLY £39**  
Stock code MIC347



**NEW PRODUCT**

The first shoot-em-up action arcade game from Microsoft!

Seated in a fully-armed spacecraft, pilots complete combat and rescue missions while saving 8 planets from destruction during a space age civil war. You can attack key enemy installations on three parallel playing fields: above, below and along each planet's surface. From the sweltering heat of the tropics to a toxic chemical wasteland, you have eight worlds to save. Fury is optimised for Windows 95 and will also run on Windows 3.x systems. True 32-bit gaming technology makes Fury fast and fun to use.

Get Fury and Joystick for only **£54<sup>04</sup>**



**NEW PRODUCT**

MIC314 MS Fury<sup>3</sup> ..... **£29**

### MS SideWinder Joystick

The SideWinder 3D Pro Joystick increases precision and reliability and eliminates drift.

The SideWinder Pro's 3D rotation gives you an extra dimension to gameplay, and with ThrustMaster and CH emulations it is ideal for all Windows and MS-DOS games. The SideWinder 3D Pro is also the first Windows 95 joystick, utilising Digital Overdrive to increase performance and responsiveness.



**NEW PRODUCT**

MIC349 MS SideWinder 3D Pro ..... **£39<sup>95</sup>**

### Cinemanania 96

With Microsoft Cinemanania 96 for Windows 95, choosing a video to rent can be almost as much fun as watching it!

Cinemanania 96 is an easy to use, personal guide to a world of great films, complete with reviews, video clips, biographies, and insightful articles about the movies. Plus Microsoft presents current movie guides, updated monthly with a FREE on-line service (offer good until August 31st 1996). 2000 movies, 2500 photo-portraits, 4000 biographies, 1200 pictures, 162 excerpts and 120 music tracks.



**NEW PRODUCT**

MIC353 MS Cinemanania 96 ..... **£19<sup>95</sup>**

### MS Plus for 95

Give Windows 95 even more utilities and style with Microsoft Plus!

This powerful companion to Windows 95 adds a whole new range of utilities like intelligent 'Agents', disk compression, exciting fonts and backgrounds, an enhanced Internet browser and much, much more.



MS Plus for Windows 95, CD or 3.5" ..... **£27<sup>95</sup>**

### 3D Movie Maker

Create 3D animated movies, with Windows 95.

Children (8 years upwards) can explore a 3D movie theatre, with various rooms that provide the ideas, tools and content to bring their ideas to life like never before! Choose from 12 3D sets, 40 actors that can be dressed up and moved around the scenes with over 20 motions.



**NEW PRODUCT**

MIC352 MS 3D Movie Maker for Win 95 ..... **£28<sup>95</sup>**

## Windows 95!

The new ground-breaking upgrade to Microsoft Windows will replace Windows 3.1, Windows for Workgroups 3.11 and all versions of MS-DOS. It's robust, fast and features integrated multimedia, networking and a fantastic new interface!



**From £54<sup>95</sup>**  
(See below)

#### ✓ New Interface

Smarter, easier to use interface features longer file names (up to 250 characters!), one click access to all programs and documents with the 'Start' button. Simpler file and document management.

#### ✓ Bigger, Smoother Video

Windows '95 is a powerful 32 bit operating system and lets your computer process more data effectively making the quality of the video you see vastly better.

#### ✓ Plug-and-Play Upgrades

Upgrading your PC is easier! With new Plug-and-Play technology Windows automatically recognises compatible sound cards, drives and more! No more complicated installation routines and struggling with AUTOEXEC.BAT and CONFIG.SYS.

#### ✓ Plays all Your Music

Windows '95 plays all of the music CDs you currently own. When you place a CD in your computer, Windows automatically detects the disc so you can easily play music in the background as you work.

#### ✓ True 32 bit Multitasking

Windows '95 allows you to run multiple 32 bit applications concurrently. Printing, faxing, communicating, redrawing, rendering and much more can all be done while you work in another application!

**When you spend over £50 on another product, get Windows 95 for £54<sup>95</sup>!**

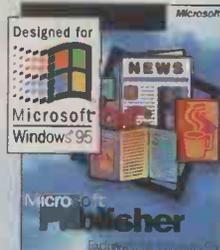
Windows 95 ..... **£59**

## MS Publisher for Windows 95

Create distinctive newsletters, brochures and flyers without any design experience!

Publisher for Windows 95 is a major upgrade that focuses on bringing the ease-of-use and efficiency of the Windows 95 operating system and the power and flexibility of an award-winning desktop publishing application together to allow its users to create professional publications quickly, easily and cost-effectively.

Creating professional publications is easy - PageWizards design assistants are the faster and easiest way to make customised publications because they guide you through the design process. Publisher's Office 95 compatibility means that it works just the same - the toolbars, icons, rulers, text, tables etc. all look and work the same. If you need inspiration, just look in the Design Gallery, there are hundreds of professionally designed options!



MS Publisher for Windows 95 CD or 3.5" ..... **£61<sup>95</sup>**

## MS Works for Windows 95

Create professional documents easily and quickly with the essential tools in Microsoft Works.

Contains the essential tools for easier everyday computing, Microsoft Works for Windows 95 is the one software package you need no matter what kind of work you want to do. It combines a word processor, a spreadsheet with charting, a database, communication tools, and drawing tools. It does so much for so many, so it's no wonder Microsoft Works is the all-time best-selling integrated application for Windows. It runs only in Windows 95.

MS Works 95 also includes Microsoft Bookshelf 95, a collection of seven easy-to-search reference volumes. Works and Bookshelf contain everything the small or home business needs to create professional documents.



**ONLY £54<sup>95</sup>!**

WOR127 MS Works for Windows 95 ..... **£54<sup>95</sup>**

**A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!**

**To Order By Telephone Call 01675 466 467**

For ordering information and terms & conditions, see page 32.



#### News



At the recent LIVE! show, Software Warehouse had a world exclusive by selling Fury<sup>3</sup> 14 days before its launch!

#### Microsoft

#### Index

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

**Page 6**



## MICROSOFT FOR THE OFFICE

# 5 Great Business Products!

### Excel 95



The spreadsheet for anyone whose job isn't just by the numbers.

Microsoft Excel for Windows 95® operating system was designed based on your needs. Whether your'e working on a simple summary or charting sales trends, Microsoft Excel helps you work the way you want to get your job done.

MIC288 MS Excel 95 .....from **£82**

### Word 95



The word processor you already know... plus more!

Everyday tasks are automatic and complex tasks are made easier with Microsoft® Word for Windows 95®. It features IntelliSense, which learns the way you work, and helps in getting the most out of your time.

MIC301 MS Word 95 ....from **£82**

### PowerPoint 95



For everyone who can't wait to get a good idea across!

The flexible features in the Microsoft® PowerPoint® presentation graphics programme adapt to your needs, so you can create a professional-looking presentation that delivers your message in any situation.

MIC297 MS PowerPoint 95 .. **£82**

### Schedule +

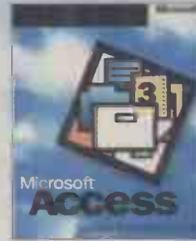


Organise your time better, with MS Schedule +

Schedule + is more than just a personal information manager (PIM), it will enable you to schedule group and team meetings, as well as provide an invaluable tool for organising your individual time schedules.

MIC298 MS Schedule + ..... **£69**

### Access



Make better business decisions quickly with Access.

With the latest version of Access from Microsoft, you will be able to build and structure your databases as never before. Taking advantage of Windows 95's 32-bit architecture, databases have never before been so powerful.

MIC174 MS Access .....from **£81**

## MS Project V4.1

This latest version of the popular MS Project has been designed to take advantage of Windows 95. And it integrates perfectly into Microsoft Office!

Although not included in Microsoft Office or Office Professional, when added to MS Office it will integrate seamlessly, and provide the best business planning tools available today. It is easy to learn and use and will help you to accomplish all your tasks on-time and within budget. This new version makes full use of Windows 95 including long file names and true multitasking.

MIC184 MS Project V4.1 Upgrade ..... **£85**

MIC157 MS Project V4.1..... **£279**



## MS Visual Basic 4

The latest development tool for Windows 95 & NT 3.51.

Turn all applications that you have created in the industry standard Visual Basic 3.0, easily into this true 32-bit Windows 95 version. Visual Basic 4.0, now includes over 20 OLE controls and pre-built components that will help in cutting your development time. With three versions, there is now a development tool to suite all needs. Standard v4 is ideal for casual programmers, that don't want a massive learning curve. Professional v4 is designed for professional programmers, whilst the new Enterprise edition has been created for large development teams.

MIC327 MS Visual Basic V4 ..... **£69**

MIC328 MS Visual Basic Pro V4..... **£298**

MIC333 MS Visual Basic Enterprise V4 ..... **£607**



Upgrades from **£37<sup>95</sup>**

# Microsoft Office 95

## 4 Windows 95-Ready Office Applications in 1 Package!



**Microsoft Word:** Everyday tasks are automatic and complex tasks are made easier by use of Windows 95's exclusive 32-bit technology. Word offers IntelliSense innovations, such as AutoCorrect, which automatically corrects mis-spelled and typos. Also write and send formatted e-mail within Word using the WordMail editor.

**Microsoft Excel:** Whether you're working on a simple summary, charting sales trends, or performing advanced analysis, Microsoft Excel helps you to get your job done easily.

- Enhanced IntelliSense technology, plus more intuitive help and integration
- Significant performance improvements help you get your work done faster
- Powerful new analysis tools simplify a variety of complex tasks

**Microsoft Schedule+:** Manage calendars, tasks and contacts for yourself with the time manager that puts time on your side.

- Store and retrieve names, addresses and phone numbers easily
- Import and export contacts data from applications and insert it into Word documents
- Plan meetings quickly with the meeting Wizard

**Microsoft PowerPoint:** Create professional-looking presentations that deliver your message in any situation.

- Bring your presentation to life with extended animated builds and sounds
- Take meeting notes and assign action items on the spot with the Meeting Minder
- Type a help request in your own words and the Answer Wizard finds the answer



**Price Pledge**



"We will beat any advertised price."

Subject to terms on page 32 of advert

**10 Good Reasons to buy from US!**

Free gift with order 4,000 different products Order before 4pm and use tomorrow Credit card charged on despatch Buy mail order or retail Always lowest prices No hidden surcharges Free technical support Award-winning service 8am-8pm (Mon-Fri)

## MICROSOFT OFFICE PROFESSIONAL

- MS Word • MS Excel
- MS Powerpoint
- MS Schedule +

### Plus:

- MS Access - Powerful and easy-to-use relational database for Windows.



Microsoft	Full Version	Upgrade	Competitive Upgrade
<b>Office Standard</b>	3.5" MIC276 <b>£331<sup>95</sup></b>	3.5" MIC280 <b>£138<sup>95</sup></b>	3.5" MIC278 <b>£162<sup>95</sup></b>
	CD MIC277 <b>£331<sup>95</sup></b>	CD MIC281 <b>£138<sup>95</sup></b>	CD MIC279 <b>£162<sup>95</sup></b>
<b>Office Professional</b>	3.5" MIC289 <b>£424<sup>95</sup></b>	3.5" MIC293 <b>£203<sup>95</sup></b>	3.5" MIC291 <b>£244<sup>95</sup></b>
	CD MIC290 <b>£424<sup>95</sup></b>	CD MIC294 <b>£204<sup>95</sup></b>	CD MIC292 <b>£244<sup>95</sup></b>

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

Order by telephone **01675 466 467** or Fax **01675 466 460**

For ordering information and terms & conditions, see page 32.



Page 7

EVERYTHING FOR YOUR PC - NEXT DAY!

## 4 hot new titles from Quarterdeck!

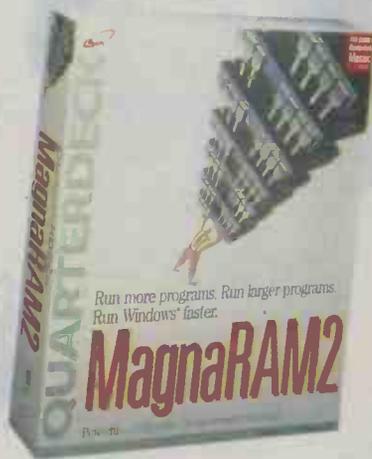


All Quarterdeck products are compatible with Win 3.1 & Windows 95

### Multiply your memory by three with MagnaRAM 2!

Run more programs. Run larger programs. Run Windows faster.

End the frustration of low Windows memory without spending money on more RAM chips. The powerful memory multiplier capability of Quarterdeck MagnaRAM gives you the maximum available memory for your Windows programs. When Windows runs out of physical RAM chips it looks to your hard drive to store data in "virtual memory". Of course virtual memory is not as fast as RAM so your system slows down. MagnaRAM solves this problem by providing more memory space for your programs. Quarterdeck MagnaRAM works right out of the box so you will instantly gain the power and speed to make your system more efficient than ever - no chips to install, no technicians to pay.



### Save mega-bytes with CleanSweep 95!

Total cleanup for Windows 95. Get more hard disk space and better performance - now!

CleanSweep 95 is the essential 32-bit uninstaller program for Windows 95. There's simply no other way to clean up the remnants of your old Windows desktop and manage your new 32-bit environment properly. Best of all, CleanSweep 95 is simple to use.

Your hard disk is crammed with megabytes of useless files, unused fonts, system files and files that you don't use that often. CleanSweep 95 monitors your system and completely and effectively hunts down and removes any 16 and 32-bit program and files to save disk space. You select your level of interaction: let CleanSweep 95's automated wizards determine which components of a program to remove...or choose to confirm every action yourself. These files can be placed into compact packages which can be deleted completely, backed up to any location in compressed form, archived so they can be brought back with a mouse click, moved to another location on a local drive or the network or transported onto another machine.

It is fully compatible with Windows 95 and uses revolutionary Windows 95 automated wizards to speed through tasks simply and safely. The program leads you through every aspect of cleaning up your hard disk with clear explanations and intelligent actions. CleanSweep 95 is a must have program for Windows 95 users and upgraders and is the most advanced uninstaller for all other versions of Windows. Any user who needs to make room on a disk or remove the clutter, will need and appreciate the simplicity, power and effectiveness of CleanSweep 95.



#### Save time

- Boost system performance
- Run multiple applications
- Faster task switching

#### Save money

- £'s less than physical RAM
- No installation fees
- No downtime

#### Save hassle

- End slow performance
- Automatic configuration
- No more "out of memory" messages

MAG021 MagnaRAM 2 ..... **£34<sup>95</sup>**

CLE010 CleanSweep 95..... **£34<sup>95</sup>**

### WINProbe 4 - Pinpoint quickly any system problems!

Operate your system at peak performance.

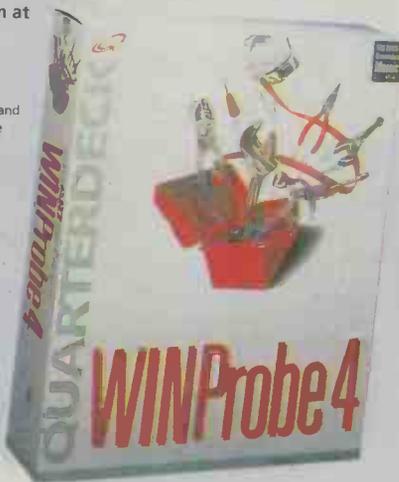
Quarterdeck WINProbe, the troubleshooter toolbox is essential for every Windows and Windows 95 user to diagnose the source of hardware and configuration problems and optimise Windows configuration.

Few things are more aggravating than computer downtime and lockups - you waste your time and your money. WINProbe will troubleshoot your PC with over 200 individual tests including tests to your memory, system board, multimedia adapters and your hard drive. You will be able to quickly and accurately identify the source of problems at the best possible time - before they ever happen, so you can fix them in time.

WINProbe uncovers the secrets to faster Windows and Windows 95 operation. Simply click on the Tune-Up button and WINProbe gives you hundreds of suggestions on how to speed up your system.

WINProbe also includes great value bonus software:

- A complete Windows and Windows 95 uninstaller to rid your PC of unwanted programs and files
- CD Certify Pro, the CD troubleshooter toolbox
- INI and Registry editor for Windows and Windows 95
- Quarterdeck Mosaic, the fastest way to get on the World Wide Web
- Bonus pack products are on CD-ROM. 3.5 diskettes available



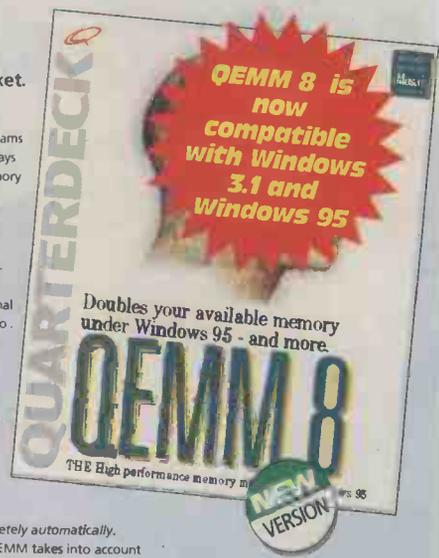
### QEMM 8

The safest, most powerful memory manager on the market.

Memory is your most precious resource. Without enough, your PC is slow and programs run out of memory. Buying RAM is not always the answer, you need QEMM for total memory management.

More memory for programs, networks and multimedia

- Get better performance and fewer "out-of-memory" errors. QEMM frees incredible amounts of crucial conventional memory needed by DOS and Windows to work correctly. Plus lots of new features for Windows 95
- Completely painless. QEMM works its magic automatically, by moving parts of DOS, memory eating utilities and drivers (for your mouse, disk compression, virus checker, CD-ROM and networks) out of the way. Installation is fast and easy.
- Save time and hassles. QEMM's dynamic, universal memory pool gives programs the memory they need, completely automatically.
- Fewer crashes and memory problems. QEMM takes into account troublesome software, so your system runs better
- Load more DOS programs and work better in Windows. QEMM finds more conventional memory needed by Windows and the DOS programs running inside it.
- Easy access. Includes easy Windows Installation and setup programs.
- Safer memory management. Handles conflicts between Windows and hardware that DOS 5 and 6 cannot.
- A lot more memory and a lot easier. Increases memory substantially over DOS 6.
- Disk compression without the memory penalty. QEMM's exclusive stealth technology saves 40K of precious DOS memory for Double Space or Drive Space users.
- No more memory headaches! After installing QEMM you'll have lots of memory for CD-ROM drivers, soundcard drivers and games. QEMM is recommended by many games makers.



WIN060 WINProbe 4 ..... **£49<sup>95</sup>**

QEM005 QEMM 8 ..... **£54<sup>95</sup>**

A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!

**News**

Software Warehouse and Microsoft jointly sponsored three boats in the British Championships and out of 105 boats, they finished 5th, 6th and 18th.

**Index**

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

**Page 8**



To Order By Telephone Call **01675 466 467**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## Quicken 4 - Now on CD!

Quicken 4 CD for Windows

New Quicken 4 CD uses multimedia to make it easier and faster than ever before to have your PC organise your small business or home finances. On-screen Tutors show you Quicken's key features, talking you through the basics and making sure that Quicken starts working for you in next to no time.

QU096 Quicken 4 CD .....£24<sup>95</sup>



Quicken 4 for Windows

The fastest, easiest way to organise all your personal and small business finances.

QU025 Quicken 4 for Windows...£24<sup>95</sup>

Quicken Deluxe UK Home Pack

Quicken 4 for Windows, Quicken Home Inventory and QuickTAX planner '95.

QU022 Deluxe UK Home Pack.....£44<sup>95</sup>

Quicken Deluxe UK Business Pack

Quicken 4 for Windows, Quicken Invoice UK for Windows and QuickTAX Planner '95.

QU021 Deluxe UK Home Pack.....£44<sup>95</sup>

## WinTutor 95

Learn Windows® 95 Now!

Learn at your own pace training as much as you want, whenever you want. Take the entire course or select only those topics of interest to you. Four easy to learn modules with 28 interactive lessons:

- Computer Basics
- Learning Windows® 95
- Moving from Windows® 3.1 to Windows® 95
- Windows® 95 Quickstart



WIN093 WinTutor 95 .....£19<sup>95</sup>

## QuickBooks 3.0

The no-hassle accounting package.

The UK's best-selling accounting package for small businesses. Designed for business people, not accounting experts, QuickBooks is a robust industrial-strength system - the beauty is, that you never get to see the double entry. There's no debits and credits, just simple forms that you already know how to use. This new version adds fully integrated stock control, modifiable invoice formats and audit trails.



QU016 QuickBooks 3.0.....£82<sup>95</sup>

## SmartHeart

Knowledge just a heartbeat away

Learn the fundamentals of the heart in a way that has never been available before. The interactive CD-ROM teaches and then the SmartHeart Teacher demonstrates using the students own heart as input! Includes hundreds of amusing images, animation sequences and over 60 minutes of sound.



GU002 Smartheart.....£79<sup>95</sup>

## Corel All Movie Guide

The Corel All Movie Guide gives you interactive access to the world's largest movie database with over 90,000 movie and video listings on CD-ROM. Print a list of movies to take to the video store, or purchase a video from a selection of titles included in the All Movie Guides home delivery service.



COR130 Corel All Movie Guide .....£19<sup>95</sup>

## Corel World's Greatest Classic Books

The World's Greatest Classic Books offers 3,500 renowned literary classics on one CD-ROM. Also included are over 200 detailed author profiles, hundreds of illustrations, plus 15 minutes of full-motion video. All of this is combined with extensive search capabilities and the American Heritage Concise Dictionary make it an invaluable reference tool for every home.



COR131 Corel World Greatest Classic Books.....£18<sup>95</sup>

## Corel Bernard of Hollywood's Marilyn

Bernard of Hollywood's Marilyn is a photographic account of Marilyn Monroe's life through the eyes of legendary photographer Bruno Bernard. Explore a timeline account of Marilyn's life through in-depth interviews, photographs and newsreel footage. With text and narrative by Susan Bernard, this multimedia CD-ROM biography is a "must-have" collector's item for all of Marilyn's devoted fans



COR128 Corel Bernard of Hollywood's Marilyn .....£18<sup>95</sup>

## Corel Gallery

Corel Gallery allow users to drag and drop images into OLE-2-enabled application or export images to several industry-standard file formats. It includes over 10,000 professionally designed clip art images (including more than 6000 in colour), plus a full-colour reference guide.



COR017 CorelGallery .....£25<sup>95</sup>

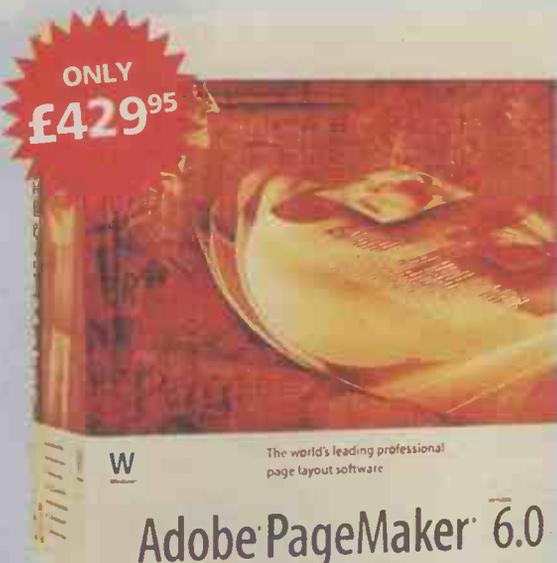
COR056 CorelGallery v2 .....£44<sup>95</sup>

# NEW! Pagemaker 6.0 - Publishing Power for Professionals

Expand your publishing capabilities with Adobe PageMaker, the page layout software that leading Graphic Designers, desktop publishers, and prepress professionals around the world use.

### Why Chose PageMaker 6.0?

- **Flexible Page Design**  
Its familiar pasteboard metaphor puts you directly in touch with the page. You can easily move, crop, resize, rotate, skew, group, mask and lock the elements of your designs. Using the Control palette, you can place objects precisely and apply text attributes quickly.
- **Versatile Colour Publishing**  
PageMaker helps you produce accurate dazzling colour. You can separate images directly within PageMaker and the new Kodak Precision Colour Management System helps you get accurate and consistent results from start to finish. Trapping and other expert printing and prepress capabilities deliver reliable, professional results.
- **Create Beautifully Composed Type**  
Working with text is a breeze using the built-in word processor with spelling checker and search-and-replace features. And you can create beautifully composed type using the professional kerning, tracking and spacing controls.
- **Expert Printing and Prepress**  
PageMaker gives you fast, reliable throughput and performance. It supports numerous prepress standards, allows spot and process colours to be separated directly and includes a print to view.
- **Sophisticated Plug-in Technology**  
PageMaker works seamlessly with text, graphics, images, spreadsheets, and data, and its sophisticated Plug-in technology lets you customise it to suit your needs or automate repetitive tasks.
- **Extensive Compatibility**  
Compatibility with Adobe Acrobat® software makes creating PDF (Portable Document Format) files easy and efficient. And the HTML Author Plug-in helps you convert your PageMaker publications to Hypertext Markup Language for publishing on the World Wide Web.
- **Importing and Exporting**  
The wide variety of formats supported makes importing text, graphics and spreadsheets/databases a simple process. Exporting text and publications is also easy with compatibility from most formats.
- **Networks**  
PageMaker works with several network and file-transfer programs, including AppleTalk® and EtherTalk® on the Macintosh, and Novell network and other networks supported by MS Windows.



The world's leading professional page layout software

## Adobe PageMaker 6.0

Adobe Pagemaker, Acrobat are trademarks of Adobe Systems Inc

### Awards for Macintosh Version

- "World Class, Desktop Publishing" - Macworld.
- "Editors' Choice, Page Design" - Macuser
- "Readers Choice, Page Layout" - Publish

### Awards for Windows Version

- "Readers Choice, Desktop Publishing" - Windows Magazine
- "World Class, Desktop Publishing" - PC World
- "Readers Choice, Desktop Publishing" - Byte

### Price Pledge



"We will beat any advertised price." Subject to terms on page 32 of advert.

### 10 Good Reasons to buy from Us

- Free gift with order 4,000 different products
- Order before 4pm and use tomorrow
- Credit card charged on despatch
- Buy mail order or retail
- Always lowest prices
- No hidden surcharges
- Free technical support
- Award-winning service (8am-8pm (Mon-Fri))

Page 9

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

Order by telephone 01675 466 467 or Fax 01675 466 460

For ordering information and terms & conditions, see page 32.



**NEW PRODUCTS**

# SOFTWARE WAREHOUSE

EVERYTHING FOR YOUR PC - NEXT DAY!

## Serif PagePlus

### Home/Office Edition

Ultra-Powerful DTP at an Ultra-Low Price

**Serif PagePlus Contains Awesome features like:**

- Powerful Wizards for creating publications, checking spelling and layout, adding headers, footers and backgrounds...and more.
- Built in LogoPlus for incredible text effects that leap off the page.
- Import of all major Windows 95® text and graphic file formats, including Kodak PhotoCD pictures.
- Deluxe CD-ROM is packed with designer fonts, photos and extra Page Wizards.

Serif has done it yet again with the first DTP exclusively for Windows 95®. This brand-new version of the best selling PagePlus (over one million users world-wide) will be launched mid-November. Demand is already huge so reserve your copy now at our exclusive launch price! It's total design power and instant ease of use at a jaw-dropping price!

Quickly and easily design and print ANY publishing project imaginable! Automated Wizards create instant, professional quality leisure and business documents before your eyes. Then simply add the final impact with the huge library of designer fonts, clipart and photos.

With Serif PagePlus Home/Office Edition you don't need any design experience to present your company in the most professional and stylish way possible. Newsletters, labels, brochures & reports, flyers & posters, greeting cards, business stationary... even Internet Home Pages are simple to create.

STOCK CODE: PAG032

**£29<sup>95</sup>**



NEW PRODUCT

## Tracker Version 2

The award winning contact manager that's a dream to use.

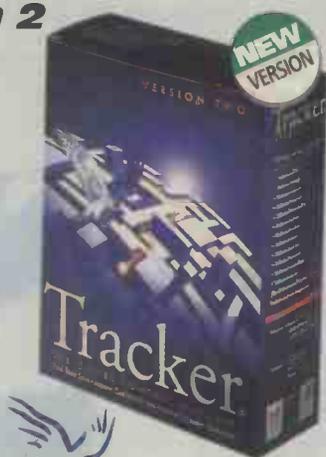
Tracker Version 2 will help you to be more successful in business - which is all about people contacts. It immediately enables you to organise your contacts in the way you want, so you can keep track of what's going on. It's totally integrated and easy-to-use.

Whether you have a single user system or a whole department to cater for, Tracker 2 has all the customer database and mail merge functions you'll need - it'll even check your records for duplications.

This sophisticated Windows package enables you to search easily on non-exact data to find records quickly - which is what you need for telemarketing operations and customer service departments.

**Tracker's features include:**

- Contact Management
- Response Management
- Mail Management
- Time management
- Networkability
- Communications
- Macro Management and much more.



You can improve customer service with Tracker's powerful database management systems. You can enhance communications using Tracker's own word processor, or in conjunction with other leading business software, to give you immediate response letters, documents, direct faxes and E-Mail. You can use it's Time Manager to plan more effectively, schedule meetings and appointments, issue reminders and boost your productivity.

Docking - The networking capability means others can view and use the same database files as you, and Tracker's docking facility enables off-site workers to easily synchronise information, mail and appointments when they dock onto the main computer / network again.

- TRA008 Tracker Version 2 (Stand Alone) ..... **£199<sup>95</sup>**
- TRA009 Tracker Version 2 (5 User Network) ..... **£599<sup>95</sup>**
- TRA010 Tracker Version 2 (10 User Network) ..... **£1099<sup>95</sup>**

## Globalink Power Translator

Whether you need to quickly and accurately translate documents or simply want to learn a new language, Power Translator is the ideal tool.

**Fast and accurate.** Automatically translates over 20,000 words per hour at up to 90% accuracy.

**Easy to Use.** Easy to follow bilingual manuals make learning to use Power Translator quick and easy. And menu-driven, bilingual screens allow you to edit both original and translated text directly on the screen.

**Customise.** Includes an on-line dictionary with over 25,000 entries. **Grammar Module.** Lets you quickly look up parts of speech, verb conjugations and much more. You can also interactively translate documents word-by-word or sentence-by-sentence.



- GL0006 Power Translator French ..... **£89<sup>95</sup>**
- GL0008 Power Translator Spanish ..... **£89<sup>95</sup>**
- GL0007 Power Translator German ..... **£89<sup>95</sup>**

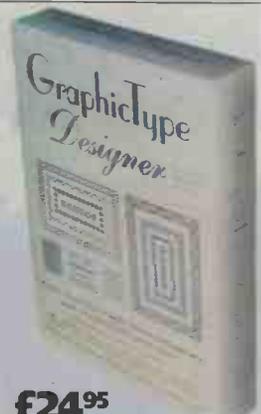
## GraphicType Designer

Borders, corner pieces, surface designs and separators produced to your exact specifications!

All you have to do is specify a single character and a design style and GraphicType Designer automatically selects the other characters needed to build the design; it then calculates the optimum number of repetitions needed and scales the characters to give a precise result.

You paste your design into the host application, and scale it just like a graphic, but, because it still references the font screen redraw and printing are fast. In other words, you get the flexibility of a graphic and the performance of text.

GraphicType Designer is probably the most amazing Windows software you will ever own!



- GRA027 GraphicType Designer ..... **£24<sup>95</sup>**

## WINcheck It 4.0

The all-in-one Windows problem solver

WINcheck It 4.0 provides optimum performance while keeping problems to a minimum.

Here are some reasons why you need the all-in-one Windows problem solver!

**Be Sure You Don't Have a Hardware Problem!**

When something goes wrong, the first question is: Is it Hardware or Software? If you've got a hardware failure, you'll need to have someone repair it. But if the problem is a setup or compatibility issue, you can often fix it yourself, perhaps with a little technical help over the telephone.

- Tests Main System Board
- Tests Serial and Parallel I/O Ports
- Test Hard Drive • Test Floppy Drive
- Tests Memory (RAM)

**Make Room for More Programs & Data Files!**

Let WINcheck It help you with your housekeeping. Over time, every hard drive

accumulates a lot of unnecessary files - like temporary files, duplicates, old versions of applications, and setup programs that are no longer needed. Use WINcheck It to quickly identify unwanted files and clean up disk space. WINcheck It finds unnecessary files:

- Duplicate Files • Empty Files
- Empty Directories • Files by Extension
- Files by Size • Files by Date & Time

**Recovery That Works Even When Windows Won't!**

Not all change is good. Sometimes installing a new

**WINcheck It features :**

- Improved Uninstaller with program archiving options for safer uninstalls
- New One-of-a-kind CD-ROM diagnostic
- Improved Clean & Zip utility
- New comprehensive Modern Diagnostic
- Windows 3.1 and Windows 95 compatible
- New multimedia benchmarks for thorough system performance testing

application, updating the operating system, or even the changes YOU make, just don't work. WINcheck It will help you undo these changes:

- Restore WIN.INI and other system files from Windows or DOS
- Find Hardware Changes • Restore CMOS Settings
- Find DOS or Windows Setup Changes
- Cut & Paste Between INI Files

**Get Rid of Unwanted Windows Applications!**

Everyone has them - Windows applications that don't work right, or that you just don't use any more. But getting rid of them isn't easy because the programs and their related files may be scattered throughout several directories! WINcheck It presents you with a list of your current program groups, then helps you identify and delete the following files for any program item, with your permission, of course!

- Program Item Icon
- Program Executable
- Files in Related Program Directory
- Related INI Files
- Files in Related Working Directory



STOCK CODE: WIN093

**£39<sup>95</sup>**

**Free Gift!**



"When you buy from Software Warehouse you get a FREE gift with every order. Don't forget to ask when you call."

See page 32 of advert for details.

**Index**

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

**PAGE 10**

A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!

To Order By Telephone Call **01675 466 467**

For ordering information and terms & conditions, see page 32.



**EVERYTHING FOR YOUR PC - NEXT DAY!**

## Creative Labs Dual Speed CD-ROM Drive

Includes everything you need to upgrade your PC.

- Fully MPC level 2 compliant CD-ROM drive
- 680Mb data capacity
- 64K RAM buffer
- 300Kb/sec data transfer rate
- 320ms access time
- 320 Multi-session Photo CD compatible



sc0102 Dual Speed CD-ROM Drive ..... **£39<sup>95</sup>**

## Panasonic Quad Pro IDE

Includes everything you need to upgrade your PC.

- New quad speed CD ROM drive
- PowerIDE™ software to eliminate conflict with hard disk drive
- Complies with MPC level 3
- 32-bit disk access
- Video-CD and CDi movie
- Includes all accessory parts for quick, trouble free installation
- Optional IDE interface card available



**12 month end user warranty and installation hotline with Panasonic**

PAN008 Quadro Kit IDE ..... **£119<sup>95</sup>**

## Aztech 6X Speed CD-ROM Drive

Aztech's award winning CD-ROM drive technology pumps data to the PC six times faster at a

900KB/sec transfer rate, with average access time of less than 225 mins. It supports all the major CD recording standards including full multi-session Kodak Photo CD, CD-i for MPEG Digital Video and CD-Audio.



AZT001 Aztech 6X CD-ROM Drive .... **£139<sup>95</sup>**

## Panasonic PD System

- Quad speed CD-ROM drive and 650Mb rewritable optical disk drive. Removable 650Mb optical
- SCSI-2 Interface for Mac or PC
- Corel SCSI!™ supports most SCSI host adapters
- CD-ROM function supports video CD and CDi movie
- Includes all accessory parts for quick trouble-free installation

PAN007 PD System Kit w/out I/F card... **£485**  
 PAN009 PD System Kit with I/F card.... **£589**  
 PAN010 650Mb Optical disc..... **£39<sup>95</sup>**

## CD Vision Packs



Why buy an MPEG Board? Get one free in every Ultimate MPEG Pack!

- Full compatibility with the international MPEG video/audio standard ISO11172.
- 24 Bit (16.7 million colours)
- Frame grab facility (TARGA, 422 and DIB formats). Still frame displays of captured 422 pictures.
- High CD quality stereo audio output with software volume control.
- No jumpers or links to set, installation is controlled completely by software.

Each box contains: • Free 24 bit movie master MPEG Card • 17 video CD's • Free video CD storage case • 3 fully interactive CD-ROM's

**The Ultimate Movie Pack -**  
 Including the biggest British movie of all time, "Four Weddings and a Funeral" and 16 other movie hits featuring a host of stars including Sharon Stone, Bruce Lee and Rutger Hauer.

**The Ultimate Family Pack -**  
 Including 14 titles from the highly acclaimed Dorling Kindersley Eyewitness series and 3 from the popular "In the Wild" series, which attracted some 10 million television viewers.

**The Ultimate Entertainment Pack -**  
 Including "Four Weddings and a Funeral" and 15 other entertaining Video CDs covering topics such as music, cartoon, natural history, comedy and a cocktail of film classics - Something for everyone in this great selection.

cdv001 CD Vision Pack 1 (The Ultimate Movie Pack - 17 CDs) ..... **£279<sup>95</sup>**  
 cdv002 CD Vision Pack 2 (The Ultimate Family Pack - 17 CDs)..... **£279<sup>95</sup>**  
 cdv003 CD Vision Pack 3 (The Ultimate Entertainment Pack - 16 CDs)..... **£279<sup>95</sup>**

## Timex DataLink

The smart way to organise and transfer data from your PC to your wrist!

Using Timex and Microsoft's personal time manager software (included), store information on your PC, and elect what you want to send to your watch. You can also directly link to Microsoft Schedule Plus for Windows. In addition to telling the time and offering a programmable link to your PC, the Timex Data Link watch features day/date, three year battery life, Indiglo™ night light and it is water resistant at up to 100 metres.

No wires, no cables - Just point the watch at your screen!

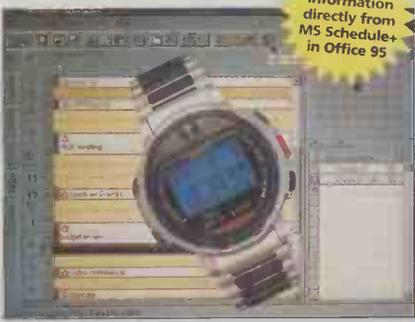
Downloading information is as easy as pointing your wrist at the screen. The watch sensor reads the flashing bars of light - that's the data. In seconds, the watch loads up to 70 different entries, then update as often as you like.

A little black book on your wrist!

Think of your Timex Data Link watch as a little black book on your wrist. It can hold:

- Your telephone numbers - Need a number, just bring your watch up to the screen

- Appointments - The watch will beep to tell you its time to leave, and even show you who your meeting with and where.
- Never forget another birthday or anniversary again! An icon appears a week before and then on the day.
- To-Do-Lists - A great memo log that prioritises tasks.
- Alarms - Pre-set up to five alarms a day.

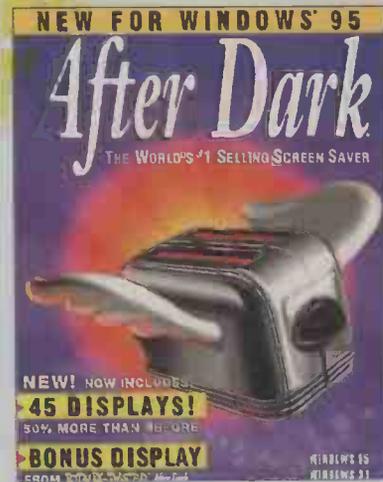


Downloads information directly from MS Schedule+ in Office 95

**£79<sup>95</sup>**  
 STOK CODE: TIM014

TIM017 Datalink (Steel bracelet)  
 TIM018 Datalink (Leather bracelet)

## After Dark for Windows 95



After Dark, the world's No.1-selling screen saver, is now available for Windows 95. After Dark for Windows 95 has 45 fully-animated displays, 50% more than before, including favourites like Bad Dog, Fish Pro, Flying Toasters with Karaoke, Boggilns, Boris and more. There's even a bonus display from the new Totally Twisted After Dark Screen Saver. Plus, After Dark adds the following new Windows 95 features: custom icons for each display, use of the right-mouse button to set up and start After Dark, After Dark in the Windows 95 Taskbar, and a special notification icon for the Windows 95 Tray. After Dark for Windows 95 includes password protection, Randomizer, Multimodule, Ecologic and more. And, for a limited time, After Dark for Windows 95 is half price! This special Windows 95 promotion ends on Nov. 15, 1995. Runs on Windows 95 and Windows 3.1.

AFT006 After Dark ..... **£27<sup>95</sup>**  
 TW1001 Totally Twisted ..... **£27<sup>95</sup>**

## Screen Magic Stick-Ups



Stick-Ups are the quick and easy way to create reminders, jot down information and ideas, track tasks, and attach comments. You can create notes instantly while working in your other applications. Just click the Floating Note Pad, and then type in your note. It's that simple. With Stick-Ups, you'll never scramble for pen and paper, or misplace important information.

GUJ003 Screen Magic Stick-Ups ..... **£18<sup>95</sup>**

## Paradise Pipeline 64

The Paradise Pipeline 64 is an uncompromised, true 64-bit, graphics and motion video accelerator card that provides unparalleled performance in business, education and entertainment applications. The motion video acceleration allows you to view full-screen, full motion video at 30 frames per second in a scalable window using the Western Digital WD9710 integrated graphics and motion video accelerator chip. This state-of-the-art motion video playback is accomplished using hardware interpolation, colour space conversion, and unique video architecture.



wes012 Paradise Pipeline 64..... **£149<sup>95</sup>**

**Price Pledge**

"We will beat any advertised price."  
 Subject to terms on page 32 of advert.

**10 Good Reasons to buy from US**

- Free gift with order
- 4,000 different products
- Order before 4pm and use tomorrow
- Credit card charged on despatch
- Buy mail order or retail
- Always lowest prices
- No hidden surcharges
- Free technical support
- Award-winning service
- 8am-8pm (Mon-Fri)

Page 11

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

Order by telephone **01675 466 467** or Fax **01675 466 460**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## DK Products Europress

### Nature Encyclopedia

Featuring over 250 species of plants and animals.

Watch the behaviour of animals in their natural habitat, hear bird calls and understand complex environmental systems as microscopic life, the effects of climate and the prehistoric world. Features over 50 stunning video sequences, 60 original animations, 700 photos and illustrations, and 2 hours of sound clips.

DOR009 DK Encyclopedia of Nature.....**£32<sup>95</sup>**



### History of the World

Uncover fascinating facts and stories through history.

Watch a medieval archer loading and firing his longbow, hear the passion in the actual spoken words of Martin Luther King, and share in the joy of German crowds as they tear down the Berlin Wall. Investigate historical stories, facts and artefacts from around the world with a simple mouse click.

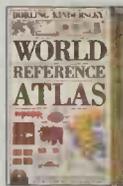
DOR007 DK Eyewitness History of World CD.....**£32<sup>95</sup>**

### World Reference Atlas

A remarkable geographical reference for on-screen use.

Explore the world as never before with the ease and clarity of computer-generated maps. Zoom in and out from world and continental overviews to close-up views of the regions of individual countries. The gazetteer includes more than 250,000 different place names and links them to the maps.

DOR006 DK World Reference Atlas CD.....**£44<sup>95</sup>**



### Cat and Bird

The ultimate multimedia guides to the worlds of cats and birds.

Hear the range of sounds from the cat family, see them in action and find out what makes cats such supreme hunters. You will also find out where every member of the wildcat family lives, what it eats and whether it is threatened by its natural habitat. You will also hear folk stories that surround cats and discover works of art inspired by their mysterious ways.

Enter the extraordinary world of the masters of flight, from the huge Andean condor that soars on its four metre wingspan to the amazing, flightless ostrich that stands more than three metres high. Understand the world of birds and its effect on human culture.

DORXXX DK Cat CD.....**£29<sup>95</sup>**

DORXXX DK Bird CD.....**£29<sup>95</sup>**

## Virgin Interactive

### Command & Conquer



Strategy, tactics, guns, bombs-Kaboom!!

Command and Conquer is the perfect blend of strategic thinking with arcade gameplay-joined together with glorious cinematic sequences. The stark horror of conflict is punctuated with over 60 minutes of vividly rendered presentation comprising news footage, commercials, mission briefings and cut-scene rewards.

VIRXXX Command & Conquer.....**£27<sup>95</sup>**

### Star Wars Rebel Assault II

The long awaited sequel to the best seller Rebel Assault

A totally fresh, original fantasy in the Star Wars universe- with significant improvements to the now famed Rebel engine, plus features that make it more like an interactive Star Wars experience than a game. The Empire has developed a new secret weapon, once deployed, this new weapon could eliminate the Rebel Alliance.

VIRXXX Star Wars Rebel Assault II.....**£28<sup>95</sup>**



### Tilt

Flipper-tastic 3D Pinball

Tilt is a table tickling, ball banging ride around the most realistic pinball simulation to date. Every bulb and screw is rendered down to the smallest detail with table layouts ranging from the Dungeons & Dragons-inspired Mystic table to all the Fun of the Fair table. In keeping with real pinball tables, Tilt features loops, ramps, kickbacks, revolvers, multiball-combination bonuses, speech and music from rock to jazz. Start slapping!!

VIRXXX Tilt.....**£29<sup>95</sup>**



### The DIG

The epic sci-fi adventure inspired by Steven Spielberg

A team of astronauts is mysteriously transported to an alien world where they uncover artifacts of an ancient, yet advanced civilization. They must sift through the ruins and assemble the necessary technology to take them home. In the process elements of greed and self preservation erupt as they make an important discovery...

VIRXXX The DIG.....**£29<sup>95</sup>**



A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!

### Education

Britain's best selling educational software. Nearly 900,000 Fun School users



**£19<sup>95</sup>**  
FUN014

Fun School 5 In Dreamland



**£19<sup>95</sup>**  
FUN015

Fun School 5 In Space



**£19<sup>95</sup>**  
FUN016

Fun School 5 In Time



**£17<sup>95</sup>**  
FUN009

Fun School Maths



**£17<sup>95</sup>**  
FUN008

Fun School Spelling



**£17<sup>95</sup>**  
FUN010

Fun School Young Scientist

### Bookshelf

Some of the greatest of all children's tales come to life with the magic of multimedia



**£14<sup>95</sup>**  
EUR001

Alice In Wonderland



**£14<sup>95</sup>**  
EUR002

Journey To The Centre Of The Earth



**£19<sup>95</sup>**  
EUR003

Treasure Island

### Lifestyle

Let your PC help you landscape your garden, plan your home or even take you angling!



**£17<sup>95</sup>**  
GAR002

3D Garden Designer 2



**£12<sup>95</sup>**  
EUR004

Gone Fishin'



**£17<sup>95</sup>**  
INT017

3D Interior Designer

### GameRunner

Nothing Can Stop You Now!

Everything you need to get the maximum excitement out of today's highly demanding games software. GameRunner gives you all the memory you need, all the speed you crave and 'get a load of this' the power to play games by your own rules. If you're the kind of person who plays to win, you can't afford to be without it. GameRunner-More Memory! More speed! More action!

GAM002 GameRunner.....**£38<sup>95</sup>**



## Roland Pro Sound Package

Pro Quality Desk Top Music

This unique hardware/software package provides you with the same superb Roland sounds used by professional musicians.

Roland PC200MK 2 Keyboard

The PC200GS features 49 velocity-sensitive keys as well as a bend/modulation lever for even more expressive music data input. The octave up/down function extends its range to six octaves, enough for any kind of performance.

Roland SCD-10 Daughterboard

Snap Roland's SCD-10 GM Daughterboard onto your PC's FM sound card to add the superb Roland Articulated-Wave™ sounds used by professional musicians everywhere. The daughterboard includes 128 instrument and 119 rhythm sounds.



Roland CS-10 Micro Monitor

To complete the set add a Roland CS-10 Micro Monitor. It's small foot print easily fits under your computer monitors display. Two front mounted 5cm speakers for mid and high frequencies. Separate low frequency speaker mounted in bottom of unit. Also includes headphone jack.

- ROL001 Keyboard Controller.....**£138<sup>95</sup>**
- ROL011 Interface & GM Daughterboard.....**£213<sup>95</sup>**
- ROL003 Single Powered Speaker (15W).....**£98<sup>95</sup>**
- ROL002 Roland Package (keyboard, soundboard, speakers).....**£497<sup>95</sup>**

### News



Our Reading shop, which recently opened on August 24th, has already exceeded all expectations. A big thank you to all our Reading customers.

### Index

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

### Page 12



To Order By Telephone Call **01675 466 467**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## The magical Disney experience at your fingertips!



### Lion King Screen Scenes

Great Disney moments for your desktop

Relive the magic of The Lion King and light up your screen when it's not in use. Includes 40 different colour images plus fascinating information on the making of the film. Available on PC diskette.

DIS004 Lion King Screen Scenes.....**£21<sup>95</sup>**



### Lion King Print Studio

Create exciting Lion King print projects

More than 16 fantastic print projects to choose from. Favourite characters and scenes from The Lion King, and a collection of specially designed fonts are included. Available on PC diskette.

DIS005 Lion King Print Studio.....**£29<sup>95</sup>**



### Lion King Animated Storybook

A story waiting for you to make it happen

A new dimension in storytelling. You choose what you see, hear and read as the adventures of Simba unfold. Features the quality of Disney animation, the well known characters and the orchestrated music. Available on CD-ROM, PC and Mac compatible.

DIS006 Lion King Animated Storybook.....**£37<sup>95</sup>**

### Aladdin Activity Centre

Explore a whole new world of games and puzzles

Have fun while you learn. Follow Genie through the magical world of Aladdin. Then choose games, puzzles, art activities, multiple skill levels to challenge various ages and abilities. Also features favourite clips from the film. Available on CD-ROM, PC and Mac compatible.

DIS009 Aladdin Activity Centre.....**£37<sup>95</sup>**

### Mickey & Crew Print Studio

Create print projects featuring your Disney favourites

Create exciting print projects. Over 200 Images of Mickey and his friends to choose from: create a birthday card, party invitations, calendars and much more.

DIS007 Mickey & Crew Print Studio.....**£29<sup>95</sup>**

### Mickey & Crew Screen Scenes

Classic Disney moments for your desktop

Feature Mickey, Donald, Pluto and Minnie in over 60 different scenes from their cartoons and films. Customise timings, frequency and transitions to create different visual effects. Available on PC diskette.

DIS008 Mickey & Crew Screen Scenes.....**£21<sup>95</sup>**

## Key Healthy Indulgences

The full flavour guide to low fat cookery.

Learn to prepare all of the elegant low-fat dishes featured on the highly acclaimed "Lynn Fischer's Healthy Indulgences" television series. Includes low-fat cooking techniques and time saving features for the practical gourmet. With over 260 delicious low-fat recipes, full motion video instruction, easy to use cookbook interface, view nutrition analysis of each recipe and fast, flexible printing of recipes and shopping lists.

SOFP35 Key Health Indulgences.....**£24<sup>95</sup>**

## Explorers of the New World

Learn the true stories behind history's great explorers.

Follow in the footsteps of three of history's most acclaimed travellers - Columbus, Magellan and Cortes - as they seek their destinies in the new world. Experience first-hand some of the trials and set backs that they faced in their long and perilous journeys. See how they arise from the dusty history books (using video recreations) to become real people. A dazzling multimedia experience for the whole family.

SOFP34 Explorers.....**£19<sup>95</sup>**

## Aztech Green Pack - 10 top-selling CDs!

**Hutchinson Multimedia Encyclopedia**  
State-of-the-art world viewpoint reference. Age 10+ (Normally £39!)

**The Fortress of Dr. Radlaci**  
A game with "teeth", setting a new standard in animation. Age 12+

**Maelstrom**  
Murder, treason, sabotage, espionage and intergalactic war. Age 15+

**Windows 95 Tutorial**  
Personal training systems from Peter Norton. Age 12+

**DreamWeb**  
Travel the DreamWeb, plane of your subconscious. Age 9+

**Serious Soccer**  
Dribble, trap, pass, dive, scissor kick and more with outstanding ball control. Age 9+

**The PC Educator**  
A complete multimedia instructional overview. Age 9+

**Next-day delivery only £6<sup>95</sup>**

**Gus Goes to Cybertown**  
An interactive learning adventure about day-to-day life. Age 3-7

**Multimedia Space Explorer**  
A compilation of humankind's quest for the stars. Age 8+

**WWII Flight Sim & Toolkit**  
Design your own flight simulation games. Age 15+

PUB011 Publishers Pick Green.....**£29<sup>95</sup>**

PUB010 Publishers Pick Blue.....**£24<sup>95</sup>**

Buy both for only.....**£44<sup>95</sup>**

SOFP33 Aztech Green Pack.....**£29<sup>95</sup>**

**E&OE. All prices are plus VAT and delivery and are subject to change and availability.**



## Ready Set Grow

Parenting made easy(er)!

A fun, interactive and informative guide to pregnancy, childbirth and the first five years of parenthood. Created by a highly successful physician who is also a veteran mother of four, Ready Set Grow is complete with detailed illustrations, animation, music, sound effects and knowledgeable text. It covers all development aspects of your child's early years, including age-appropriate toys and activities, and parents concerns for each of nine different development stages. Store vital dates, events and emergency numbers with the ultimate "handbook" for any couple expecting, or with young children.

RS010 Ready Set Grow.....**£28<sup>95</sup>**

## BodyWorks V4

A colourful guide through the human body.

BodyWorks 4.0 shows you how and why the human body is the ultimate machine. Explore the body's systems, structures and functions in detail. With a vast database, BodyWorks lets you study specific areas from head to toe, right down to the most elaborate cell level detail. State of the art animations bring the intricate functions of the body to life with 3D rotations of the body, video clips and much more.

BO009 BodyWorks V4 CD.....**£32<sup>95</sup>**

## PFS Job Search

Organise every step of your job search with PFS CV and Job Search.

Start tackling those job interviews with confidence. Use this great Windows application to create impressive CVs and cover letters that stand out from the pack. Includes 10 professional CV templates and 70 pre-set layouts. Also included is a full WYSIWYG word processor and 12 sample cover letters. A built-in database and mail-merge allows you to quickly distribute your professional CV.

PFS009 PFS Job Search.....**£28<sup>95</sup>**

## Infopedia

The ultimate multimedia encyclopedia and reference library.

Discover the sights, sounds and thoughts of the world with Infopedia's more than 200,000 entries including 150 animations, 500 new UK relevant photos and 20 new UK relevant videos. Select a topic and instantly access all related articles, videos, photos, animations and recordings. Zoom to explore full colour, highly detailed maps of the world, listen to informative narration as you watch 3D animations - these are just a few of the thousands of multimedia elements included in INFOPEDIA.

SOFP33 Infopedia.....**£29<sup>95</sup>**

**Fast Delivery**



**Order before 4pm and get your order next day**  
Subject to terms on page 32 of advert.

**10 Good Reasons to buy from us**

Free gift with order  
4,000 different products  
Order before 4pm and use tomorrow  
No hidden surcharges  
Credit card charged on despatch  
Buy mail order or retail  
Always lowest prices  
Free technical support  
Award-winning service  
8am-8pm (Mon-Fri)

**Page 13**

**Order by telephone 01675 466 467 or Fax 01675 466 460**

For ordering information and terms & conditions, see page 32.



**EVERYTHING FOR YOUR PC - NEXT DAY!**

## Compuserve Value Pack for Windows

Get on the information superhighway with the world's premier on-line information service

Compuserve is the world's premier online information service with over 3 million members worldwide and over 2000 services including Internet connections - offered online. Compuserve offers a full range of easy-to-use Internet services including e-mail, FTP, USENET Newsgroups, Telnet, and World Wide Web access. Other services include online shopping, travel information, news, weather, sport information, company information, games, leisure and much more... Connection to Compuserve is usually no more than a local telephone call away via your modem. Within each Compuserve Value Pack is everything a PC and modem owner needs to help them get started, understand and enjoy the new and existing world of online services, including the Internet.

With each pack you get:

- Compuserve Software • Quick Start Guide
- Comprehensive guides to the CIM software and the Compuserve Information Service
- Comprehensive 'Internet Made Easy' Guide
- A complete directory of Compuserve services
- Compuserve CD
- UK product quick reference card
- FREE subscription to the monthly Compuserve member magazine



COMD12 Compuserve Value Pack ..... **£22.99**

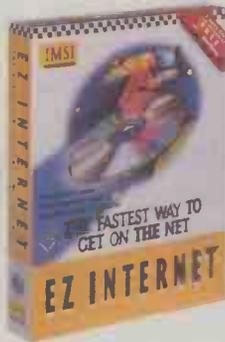
## EZ Internet for Windows

The fastest way to get on the Internet.

EZ Internet is not just another Internet product - it's the best on the market with full Multimedia tutorials and all the communications software you need to get connected - fast and painlessly. Designed for "non-techies" so there's no more guessing what to do next - EZ Internet will show you how, and then provide an easy path through all those complicated options.

Learn all about the new revolution of the Information Superhighway - all at your own pace. Simple!

Within minutes you can do everything from visiting World Wide Web sites, to downloading software - even send email to the President of the USA! It's like having a friend show and tell you everything you need, from how to install the communications software and get onto the Internet, to the etiquette for participating in newsgroups. There are even tutorials for promoting your business. Visit Kids Net, check out the latest breaking news or simply get an update on share prices. Log onto a new world, surf the Net and join millions of Internet users worldwide. Includes 80 hours of FREE access time on the Net via a local UK information provider.



EZ2001 EZ Internet for Windows ..... **£29.99**

## The Motorola Internet Solution! Motorola 3400 28.8 Data/Fax Modem

Everything you need to connect to the Internet and other on-line services in one box.

Ready, Steady, GO! Motorola brings you the complete open-line access solution, using the latest in modem technology. This 28.8 Internet solution includes all the necessary hardware and software that you need to get your PC online to the Internet.

About the Motorola 3400 fax / modem

The Motorola 3400 features:

- High speed data transfer
- Fastest standard modulation protocol
- Data error correction and data compression
- Fax error correction feature for clearer faxes
- Motorola RISC technology
- Automatically selects the fastest possible line speed

- A physical phone number directory for frequently called numbers
- Robust performance over standard telephone lines

- Fully BABT approved
- Fax rates of 14,400bps to 2400bps with ITU-T Group 3
- Light weight of only 298 grams
- Hayes™ AT compatible command set
- Comes complete with 2 year warranty
- Includes Delrina WinComm Lite communications software and Delrina Fax Lite software
- Easy install animated instruction disk
- One month free online access to Compuserve.

About the Motorola Online Bundle

Internet software includes protocol software, file transfer software (FTP), Motorola's World Wide Web browser software

- Electronic mail software
- Newsgroup software
- VOCALTEC Internet phone software license
- One month free access to Compuserve including premium services usage credit
- Special offer for CoSession Remote Control Software
- Heretic online interactive game.

ONL001 3400 (with On-line) ..... **£167.95**

MOT002 3400 (without On-line) ..... **£156.95**

**A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!**



## Ventana - The Internet Publishing Pack For Home Page Power

Everything you need to create professional Web pages

The secret to building a powerful, profitable presence on the Internet's World Wide Web is in this box - cutting-edge tools, professional techniques and insider tips - the most comprehensive, affordable Internet solution available!

- Professional publishing toolkit - Unprecedented array of publishing software: a platform-independent package for creating attractive, effective Web documents. Includes HoTMetal PRO (the hottest HTML editor on the Web), Netscape Navigator, a variety of image-editing tools and much more!
- Publishing tips from the pros - the 500-page HTML Publishing on the Internet, featuring insightful tips on creating powerful Web pages plus advice on applying HTML tags; working with forms; adding graphics, sound and video; and much, much more!
- Innovative CD-ROM-based Internet guides that let you combine money-saving off-line browsing with instant online hyperlinks to exiting Web sites! Includes electronic versions of two bestselling Ventana books:
  - Walking the World Wide Web - featuring a personalized, annotated tour of the Web's graphical riches.
  - Netscape Quick Tour - the first in-depth guide to the hottest browser software to hit the Net.

Free Interactive book / CD-ROM

Three bestselling Ventana guides! Includes a comprehensive guide to Internet publishing plus a unique CD-ROM - containing the full text of two of Ventana's top-selling Web titles, fully hyperlinked for easy Internet touring!

INT016 Internet Publishing Pack .... **£89.95**

## Internet Phone

Talk to a friend in any country for free over the Internet!

Forget costly long-distance bills! Internet Phone literally transforms any PC into a tool for two-way conversations - with full two-way sound. Talk to a friend over the internet for not a penny over your regular internet connection fee.

INT018 Internet Phone ..... **£39.95**

INT019 Internet Phone (2 pack) ..... **£69.95**

## World Wide Web Kit™

Everything You Need to Navigate and Stay Up-to-date on the Web!

The World Wide Web is where the Internet really shines - with graphics, video, sound and live links between remote sites. The kit offers everything users need to navigate and stay up-to-date on the Web's extensive graphical and audio resources, including:

Special Access Offer - instant access to IBM Internet Connection service provided by IBM Global Network, with local phone numbers and 800 line service.

Netscape Navigator™ - the cutting edge Web browser that's sweeping the Internet, featuring a versatile new toolbar, superior text flow, built-in sound and video, powerful security modules and much more.

INT015 World Wide Web Kit™ ..... **£38.95**

Free Interactive book / CD-ROM

Walking the World Wide Web is a richly illustrated, personalized tour of the top Web sites. The CD-ROM includes Ventana's unique WebWalker™ technology, a hyperlinked electronic version of the book featuring live links to Internet sites.

## Internet Membership Kit™ V2.0

The No.1 Selling All-in-One Internet Solution!

Ventana Mosaic™ - a fully licensed and commercially supported version of Enhanced Mosaic™ from Spyglass™ Inc, the most widely recognised World Wide Web browser.

Newsreader - enables users to read and post to newsgroups anywhere in the world; software highly acclaimed for ease of use and custom capabilities, complete documentation included.

Easy Graphical E-mail and Browsing - simple point and click software with built-in e-mail, Gopher, FTP, Telnet and more. Includes an elite shareware selection for Macintosh and the popular Chameleon Sampler™ from NetManage™ for Windows.

Online Companion™ - Purchasers can access regular updates to software and listings on Ventana Online - including the full, hyperlinked text of Ventana's Internet Roadside Attractions.

Special Access Offer with easy one button sign-on - instant access to IBM Internet Connection service provided by IBM Global Network, with local phone numbers as well as 800-line service.

INT014 Internet Membership Kit™ V2.0 ..... **£39.95**

Internet Roadside Attractions

Innovative, interactive listings guide featuring full text on CD-ROM and hyper-linked for instant connections on-line.

### News



In our September survey, Matt was rated at 98% for Customer Satisfaction by a survey return over 130 customers.

### Index

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 14



**To Order By Telephone Call 01675 466 467**

For ordering information and terms & conditions, see page 32.



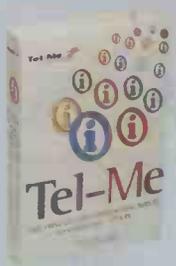
**EVERYTHING FOR YOUR PC - NEXT DAY!**

## Tel-Me

The first on-line information service designed for your PC.

Get the latest news instantly, find phone numbers faster, avoid jams with up to the minute traffic reports. See details on 900,000 companies, choose where to stay, eat or visit anywhere in the UK. Then plan your journey right down to street level. Because it's all on-line, it's all up to date and it saves you time and money. Tel-Me lets your PC do the hard work, so searches take only a few seconds and Tel-Me's "Hardly On-Line" technology keeps your phone bill right down. And Tel-Me gives you FREE Internet E-Mail. Being on-line has never been easier or better value!

- TEL006 TEL-ME ..... **£49**  
 TEL007 TEL-ME with Modem ..... **£99**

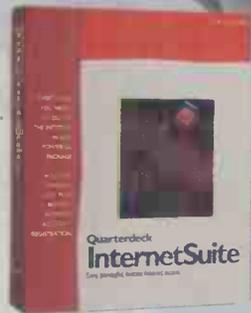


## Quarterdeck InternetSuite

**NEW PRODUCT**

Easy, powerful, instant Internet Access.

What would you like to do on the Internet? Cruise the World Wide Web? Exchange e-mail? Stay on top of late-breaking news and sports? Quarterdeck InternetSuite gives you all the tools you need. There's Quarterdeck Mosaic a powerful, easy-to-use Web browser. Quarterdeck Message Center (QMC) gives you full e-mail and Usenet newsgroup capability letting you talk to anyone, anywhere. QFTP lets you copy files to your own computer and to others. And QTERM (Telnet) lets you access a remote computer from anywhere in the world. Quarterdeck InternetSuite includes pre-configured connection information for the widest spectrum of internet access providers. This powerful product from Quarterdeck includes detailed configuration information for a long list of UK Internet service providers. This makes getting started on the Internet a snap. Also included are Location Managers that let you configure for multiple location (i.e. home and office) allowing you to simply switch with the click of a mouse.



- QUA021 Quarterdeck InternetSuite ..... **£79**

## PSION Dacom Gold Card Modems

Portable data communications solution.

The Psion Dacom Gold Cards let you add fax to your notebook, giving you high-speed file transfer, real remote LAN access and guaranteed compatibility. Available in a high-speed V34+ Fax version and a V32bis+ Fax version - Europe's leading PCMCIA Data+ Fax modem!



- PS1001 V32 14.4 Gold Card ..... **£156<sup>95</sup>**  
 PS1002 V34 28.8 Gold Card ..... **£194<sup>95</sup>**  
 PS1003 V34 28.8 Gold Drive PCMCIA Reader ..... **£99<sup>95</sup>**

## ZOOM Fax/Modems

An award winning V34 modem for only £147!

Sporting advanced features like remote configuration and callback security the ZOOM fax / modem offers unbeatable value for money. No wonder Personal Computer World have awarded ZOOM Editor's Choice 2 years in a row. ZOOM offer either internal or external versions with a choice of either 14,400bps or 28,800bps speeds. Each modem comes with a five year manufacturers warranty, while the external versions' front panel has a 15 light monitoring display to help you understand the current communication status.



- ZOO005 ZOOM 28.8 Internal Fax / Modem ..... **£146<sup>95</sup>**  
 ZOO006 ZOOM 28.8 External Fax / Modem ..... **£167<sup>95</sup>**

## Quarterdeck Web Phone



Quarterdeck Corporation, maker of the acclaimed Quarterdeck Mosaic™ World Window Web browser, have launched plans for a mass market Web-based voice product, delivering one of the first two-way audio connections over the internet. Quarterdeck WebPhone™ will speed up the acceptance of the Internet as a medium for widespread audio communications. Telephone capabilities can now be delivered to Internet users around the world, largely reducing long-distance phone charges. WebPhone is the first in a series of collaborative computing products from Quarterdeck.

WebPhone offers full-duplex audio capabilities, providing sound quality that is two-way and comparable to that of a telephone connection. WebPhone is designed for simple installation and use. When used in combination with the "Connect & Play™" feature of Quarterdeck Mosaic, WebPhone gives users virtually instant access to the Internet. WebPhone utilises a standard phone line and 14.4 kbps or higher speed modem.

- QUA022 Quarterdeck WebPhone ..... **£49<sup>95</sup>**

## Teleshares

Designed specifically to utilise the new Teletext 2000 service, Teleshares provides the closing price of all the shares quoted on the London Stock Exchange before automatically capturing, sorting, storing and displaying the prices of UK traded shares on your PC. Use a TV grabbing card or the Internet to feed Teleshares with the relevant information, or if you have access to neither of these you can always enter the data manually. Teleshares allows you to build your own database, without having to key in any data. Within minutes your PC can hold all prices quoted enabling you to track your stocks at a glance, view multiple text pages and even have live TV pictures in a window at the same time. Teleshares can continually collect information from Teletext for you and update your database. In your absence, alternatively you can also set Teleshares to run at certain times of the day - all of this run time is free of charge.



Download 2000 share details from the Internet with Teleshares

Invest is Update's most powerful share tracking and analysis tool for the individual investor or investment business. It provides a state-of-the-art range of analytical functions including bar and line charts, specific period zoom functions, leaders & laggards and channel analysis. Invest also allows you to have live TV pictures in a window at the same time.

Shares provides a powerful share tracking and analysis tool comparable to systems in City dealing rooms - at a very affordable price. Using a television aerial and a Teletext card or TV card, Shares will run on Teletext services and stores the data on your PC - at no cost to you, allowing you to analyse shares including their price histories and viewing trends, moving averages and overlays against market indices or other shares.

Note: Teleshares can utilise a Win/TV card. The Hauppauge Win/TV Celebrity is suitable for this purpose.

- UPD010 Update Teleshares ..... **£59**



## Unipalm Pipex Dial 90

All the software you need to access the Internet!

- Easy to install and use - connect first time!
- Complete personal Internet solution from the UK's largest leading Internet service provider
- Best available commercial software: Netscape Navigator, Electronic Mail, Telnet & FTP
- No extra charge for time, traffic or "extended services"
- Over 90% of UK population covered with a local call
- 28.8Kbps access for faster transfers and shorter telephone calls

3 Months Connection FREE!

- Engaged tones a thing of the past!  
 • Build your own web with 0.5Mb of space free  
 • 3 months connection and hotline support Included PIP001 Pipex Dial 90 ..... **£84<sup>25</sup>**

## PACE NetLink Fax/Modems

NetLink and NetLink Gold are the complete packs for accessing the world of the Internet quickly and easily.

Each pack contains all the modem accessories you will need to get you up and running on the Internet. Both packs include free Internet software and 21 days free Internet connection time. You will also get an Internet Guide book that will help you get "surfing" the Internet in under 10 mins!

The free software provided will give access to sites such as FTP, Telnet, Gopher, The WorldWide Web and many other sites that you may wish to visit. The NetLink packages are the affordable way to send and receive data and faxes all from within one device.

### NetLink GOLD features:

- All data speeds to V34bis (28,800 bps)
- All fax speeds to V17 (14,400 bps)
- Group III EIA Class 1 send and receive
- V42 / MNP 4 s/ware error correction
- V42bis / MNP 5 software data compression



Tel-Me with this modem only £9<sup>95</sup>

- PAC015 Pace NetLink ..... **£99<sup>95</sup>**  
 PAC016 Pace NetLink GOLD ..... **£184<sup>95</sup>**

**Price Pledge**



"We will beat any advertised price." Subject to terms on page 32 of advert.

**10 Good Reasons to buy from us**

- Free gift with order 4,000 different products
- Order before 4pm and use tomorrow
- Credit card charged on despatch
- Buy mail order or retail
- Always lowest prices
- No hidden surcharges
- Free technical support
- Award-winning service 8am-8pm (Mon-Fri)

**Page 15**

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

Order by telephone **01675 466 467** or Fax **01675 466 460**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## First Aid 95 for Windows 95

Fixes Windows crashes, automatically fixes over 1,000 known problems in Windows 3.11 and Windows 95 and cleans your Windows system to remove clutter and improve performance.

It can take hours to track down even a simple problem in your Windows system. With Technical Support you hold for ages and when you get to speak to someone, it's difficult to explain the problem, let alone implement a solution.

To create First Aid we analysed thousands of Windows problems and then built the exclusive "AutoFix" technology to automatically sense and actually fix thousands of problems in your Windows system. Running in the background, First Aid pops up when it senses a problem and tells you what the problem is in plain English. Then, a click on "AutoFix" corrects the problem. No other product available can do this!

Works with Windows 3.11 and 95

First Aid V2 works with both Windows 3.11 and Windows 95! So, before you upgrade to Windows 95, make sure your system is ready with First Aid. Once you've installed Windows

95, First Aid will continue to monitor your system to assure optimal performance.

**Fixes Windows crashes**

When a program on your PC crashes it means frustration and a complete loss of work. With First Aid, you won't see cryptic messages or lose all work since the last time you saved it. First Aid actually intercepts most crashes and lets you save your work in all open apps!

**Automatically fixes over 1,000 problems in Windows 3.11 & 95**

It's maddening when you can't get the spell checker to work or the multimedia system to play. There are so many configuration files, drivers and settings to mess around with that it's virtually impossible to try and fix the problem. With First Aid, you won't have to because it uses a built-in extensive knowledge base to fix problems.

**Cleans your Windows system to improve performance**

It's easy for your Windows system to become cluttered with unwanted applications, icons and fonts. These not only take up disk space, they also slow down your PC. First Aid can: Uninstall applications, Clean Up configuration files, Tune Up the PC for optimal performance, and FIX problems.

**FREE On-Line Updates!**

First Aid uses an extensive knowledge base to diagnose and fix problems. As newer applications are released and more problems and remedies are identified, CyberMedia continually enhances the knowledge base to support these.

**Now includes uninstaller!**

First Aid now comes complemented by a powerful uninstaller application to keep your system uncluttered.



**WHAT THE PRESS ARE SAYING ABOUT FIRST AID 95**

"...takes the headaches out of installing multimedia peripherals."

Erica Schroeder, PC Week

"I put First Aid to the test by hiding a common DLL file... Predictably, Windows balked. But First Aid came to the rescue, searching my hard disk, finding the misplaced DLL, and copying it to where it belonged. Pretty amazing."

Steve Bass, PC World

"...easy to use, comprehensive, and efficient. ...First Aid would be an excellent addition to any PC system."

Daniel Brown, Info World



**RESTORES Software Apps.**

**CONFIGURES Sound Cards**



**OPTIMISES Windows®**

**FIXES CD-ROM Drives**

FIR006 First Aid for Win 3.11 ..... £36<sup>95</sup>

**FIRST AID 95 ONLY**  
**£38<sup>95</sup>** STOCK CODE: FIR007

## Sidekick 95 for Windows 95

It's The Simplest Way to Stay Organised!



Starfish UK

### News



At the recent Live 95 show, Software Warehouse were pleased to hold a joint stand with Microsoft.

Microsoft

### Index

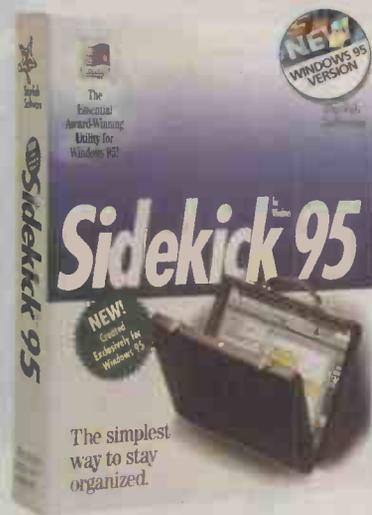
SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 16

Simple to use, easy to learn and incredibly powerful - Sidekick is already the best-selling personal organiser ever. The new 32-bit Sidekick 95 uses the power and flexibility of Windows 95 to get you organised quicker. Taking up a fraction of the memory other PIMs use, you can keep it running all the time without affecting your system's performance.

Sidekick 95 helps simplify your life - not complicate it. With the improved drag-and-drop interface, there's no need to enter information twice or complete complicated import / export procedures. Sharing information between the Calendar, Cardfile, Wordprocessor, Expenses Tracker and Contact Manager is as easy as moving your mouse across the desktop. Sidekick 95 will even dial your phone! Using Windows 95's new "Plug-and-Play" technology, Sidekick automatically looks for and configures any installed modem.

New for Sidekick 95 is an integrated word processor with all the features you need for day-to-day letter writing and document production. What's more it's linked directly to the Cardfile database, so writing properly addressed letters or even mail merging is just a mouse click away. To make life easy, Sidekick automatically prints letters, schedules, notes, names and addresses in over 70 different formats including labels, envelopes and popular paper organiser formats like Filofax™.



**SIDEKICK 95**

STOCK CODE: SID004

**£29<sup>00</sup>** RRP £49.00

SID002 Sidekick 2.0 for Windows 3.11..... £27

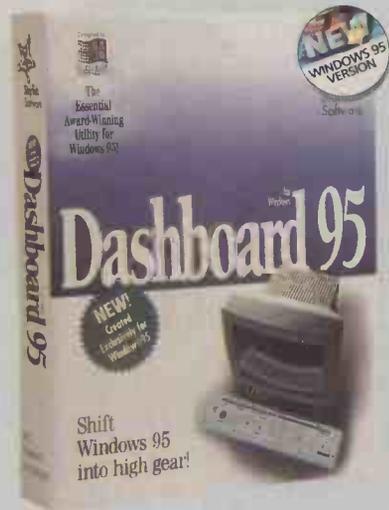
**A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!**

## Dashboard 95 for Windows 95

The Simplest Way to Organise Windows 95!

Like the dashboard in your car, the new native 32bit Dashboard 95 for Windows 95 helps you to get to where you want to go by keeping everything close at hand. Launch applications, check your system's memory usage, disk space and resources and at last - Windows printing made easy! Dashboard 95 makes choosing and using a new printer simple, just click on an icon of the new printer and Dashboard does the rest.

New for 95 are Dashboard's Virtual Screens. This innovative and useful feature allows you to open applications on up to 9 virtual screens and then switch between them with a simple mouse click. No more cluttered screens!



**DASHBOARD 95 ONLY**

STOCK CODE: DAS004

**£29<sup>00</sup>** RRP £49.00

DAS002 Dashboard for Windows 3.11..... £27

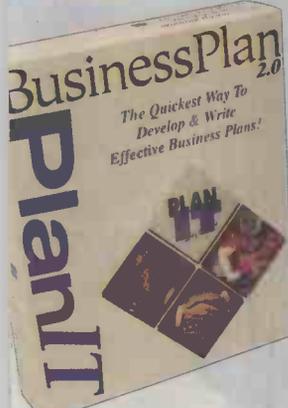


**To Order By Telephone Call 01675 466 467**

For ordering information and terms & conditions, see page 32.



**EVERYTHING FOR YOUR PC - NEXT DAY!**



## Build professional business plans the easy way - with PlanIT!

Writing business plans is a tedious and time consuming job at the best of times. Business Plan 2.0 has been designed to take users through the process of developing and writing effective business plans by providing the structure, automating repetitive tasks and providing all the information necessary to write a winning business plan.

### PlanIT Business Plan

Business Plan 2.0 is an easy to use package that creates structured business plans for any size of company. It provides users with relevant questions and sample answers from which to create a business plan. It automatically formats it with headlines and subheads, even inserting your company details throughout. Simply answer the questions and fill in the blanks - Business Plan 2.0 does the rest!

You can preview your plan at any stage - Business Plan 2.0 files are compatible with practically all Windows Word Processor packages or you can print directly from within Business Plan 2.0.

### Market Analysis

Business Plan 2.0 helps you identify opportunities and threats to your business through an in-depth analysis of your company, products, competition and industry.

### Sales and Marketing

Business Plan 2.0 helps you to develop effective sales and marketing strategies and present them in a coherent manner, which both potential investors and employees will easily grasp. Business Plan 2.0 will provide the right marketing plan and information for you to cross check as your business starts to grow.

### On-Line Information

Much valuable time is wasted collecting and collating information when developing and writing business plans. Business Plan 2.0 has

### Are you starting a business?

If you've had a great business idea, Business Plan 2.0 will help you to explore its feasibility and project your Cash Flows, Profit & Loss, Break-even analyses, and much more. It can help to shape your idea into a winning business plan and present it to financiers, banks or partners. PLUS it includes all the forms required by Companies House to incorporate a company - saving you up to £100!

**SAVE up to £100**  
When incorporating a business.

### Trying to grow your business?

If you own your own business, you'll have had plenty of ideas for expanding and diversifying your company. Business Plan 2.0 will enable you to find out how your ideas will do in a real-life context. You can test out the options available to you to help you decide which areas to expand into, plus you can prepare professional reports and charts to help you explain your idea to others in your business. Also included are over 70 sources of funding to help you get the backing to expand your business.

done this work for you, providing information in a number of ways, namely:

- On-Line Help & Advice
- Contact Database
- On-Line Business Forum

### Over 70 Sources of UK Funding

With over 70 sources and methods of gaining funding, Business Plan 2.0 is an invaluable source of information, advising you on how to effectively secure vital funds necessary for any successful business. Sources include venture capital, factoring, private financing, government and EC grants, and many more.

### 3 Year Plans... Instantly!

- Financials include:
- 1-3 Year Projected Balance Sheets
  - 1-3 Year Projected Profit & Loss
  - 1-3 Year Projected Cash Flows
  - Break-even Analysis
  - Ratios

Business Plan 2.0 removes the drudgery of creating financials from scratch, endlessly copying the same information between

spreadsheets. Business Plan 2.0 features pre-structured financial templates ready for use, simply type in your income and expenditure details and Business Plan 2.0 will automatically calculate totals, percentages and ratios, creating your projected financials for 3 years. Numbers flow from one financial statement to another and you can use your spreadsheet to graph any item in your financials.

### Reference Database

Business Plan 2.0 features an on-line database containing thousands of useful names and addresses - including MPs, ombudsmen, research institutes, trade and consumer associations, institutes and societies. These details can be copied and pasted into other packages.

### Business Information Forum (BIF)

Users of Business Plan 2.0 are entitled to 90 days to free access to Plan-IT's on-line business forum, B.I.F., which contains extensive information on business subjects. It covers topics such as:

- Funding & Debt Collection

**PlanIT Business Plan - 100% BRITISH BUSINESS INFORMATION**

You can be sure of Business Plan 2.0's relevance to your business ideas because it is a 100% British development. All funding information is British and all the database information relates specifically to UK business needs. Over 2,500 names and addresses you need. Everything from the DTI, Health & Safety to MPs and Trade Unions!

- Exporting
- Tax, Law & Accountancy
- Marketing Research & P.R.
- Direct Marketing & Advertising
- Employment and Health & Safety

All of the information provided on B.I.F. is compiled by a panel of experts from across a wide range of industries. BusinessPlan 2.0 users will automatically be kept up to date.

### What you say about PlanIT Business Plan

"This is an excellent example of business productivity software which will make the user's life easier as well as the intended recipient of the business plan, for example, bank managers like myself!"  
**Bank Manager, Small Business Loans Dept.**

"I found this an intuitive package that lead me through the process of writing a business plan in an easy to follow, step by step process."  
**Graham Love, MD, India Ocean Trading Co.**

"This package will save me hours of time when developing business plans for my clients!"  
**Richard Wall, Management Consultant**

**ONLY £88<sup>95</sup>**

**R.**

BUSINESS PLAN 2.0 IS ANOTHER GREAT PRODUCT FROM RODERICK MANHATTAN

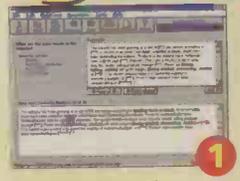
**Fast Delivery**

Order before 4pm and get your order next day  
Subject to terms on page 32 or advert

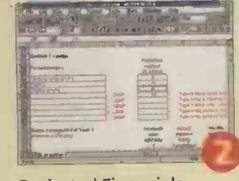
**10 Good Reasons to buy from US**

Free gift with order 4,000 different products  
Order before 4pm and use tomorrow  
Credit card charged on despatch  
Buy mail order or retail  
Always lowest prices  
No hidden surcharges  
Free technical support  
Award-winning service 8am-8pm (Mon-Fri)

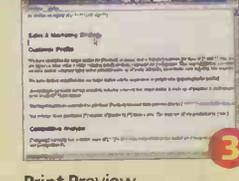
## 5 EASY STEPS TO PRODUCING EFFECTIVE BUSINESS PLANS OR YOUR MONEY BACK!



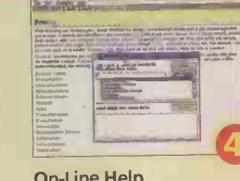
**PlanIT Business Plan**  
Provides relevant questions and sample answers from which to create a business plan. Automatically formats your business plan with headlines, subheadings, and company details. Plus, QuickText allows you to insert recurring phrases, names and dates.



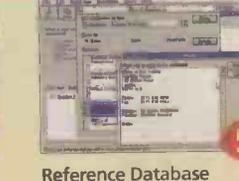
**Projected Financials**  
Pre-structured financial templates are ready to use - simply type in your company income and expenditure details and Business Plan 2.0 will calculate totals, percentages and ratios, creating your projected financials for three years ahead.



**Print Preview**  
View your plan at any time in Print Preview mode. Your plan is automatically formatted with all the headers and sub-headers in place. You can print directly from Business Plan 2.0 or use your favourite Word Processing package.



**On-Line Help**  
Extensive on-line expert advice is available on the subject of writing business plans. Context-sensitive help ensures that all business reference information is available with a single mouse click, and comprehensive search options make it all easy.



**Reference Database**  
On-line database of thousands of useful names and addresses. Includes MPs, ombudsmen, research institutes, trade and consumer associations, institutes and societies, and health & safety organisations. All information can be copied into other packages.

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

Order by telephone **01675 466 467** or Fax **01675 466 460**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## Lotus

"Lotus supplies its products and services through the reseller channel only. As a Lotus Premium Business Partner, Software Warehouse plc receives our full support for its marketing initiatives, staff training and the promotion of new Lotus products. Software Warehouse plc will be playing a key role in the distribution of our products to a diverse market and we will continue to work closely with them to ensure that our customers get what they want, when they want it"

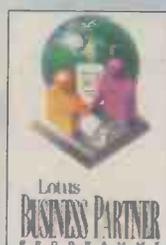


**Jes Miller**  
Business Partner  
Sales Manager  
Lotus

### LOTUS BUSINESSES OPTIONS

#### Lotus License Pack (LLP)

If more than one copy of a Lotus application or comms package is needed, then you must buy one regular copy of the product which will include full documentation and master disks.  
For every other machine that you wish to install the product on, you can purchase a Lotus License for that machine (LLP). These can be purchased as a single license or in 20 packs.



Unit Values:  
Organiser and CC Mail = 0.50 point  
Single Applications = 1 point  
SmartSuite = 2 points

#### Lotus Passport

Designed for organisations that require large numbers of licenses for Lotus products. With an initial order of just 50 points, you can enrol into the passport scheme, and benefit from preferential pricing on the Lotus range of Software. The minimum reorder level is only 20 points. Passport licenses can be used on different sites, even in different countries, and are available for DOS, Windows, Unix or Macintosh. Passport is probably the versatile license programme available today.



This is just a sample of Lotus' products.

#### LOTUS LLPs

Word Pro Single LLP	£73
Word Pro 20 User LLP	£1360
Approach Single LLP	£73
Approach 20 User LLP	£1420
Lotus 1-2-3 Single LLP	From £78
Lotus 1-2-3 20 User LLP	From £1540
SmartSuite Single LLP	From £149
SmartSuite 20 User LLP	From £2849
Lotus Notes	£POA

#### LOTUS Passport

entry level pricing i.e. 50 points

Word Pro	£32 per user
Approach	£54 per user
Lotus SmartSuite	From £117 per user
Lotus 1-2-3	From £54 per user
Lotus Notes	£POA

Call our Corporate team now and let them work out the best solution for your companies needs!

## Lotus Word Pro '96 - Productivity for Teams, Power for Individuals!

Lotus Word Pro 96 rethinks word processing, revolutionising the way people create, review and edit text and documents. Lotus Word Pro 96 is the first Team Word Processor.

Lotus Word Pro 96 is a new breed of word processor - designed for the way you work today. The first and only Team Word Processor, it combines powerful writing and editing features with breakthrough ways to collaborate and share ideas.

Smart Word Processing innovations provide all the tools you need to create persuasive, professional-looking documents. TeamReview and TeamConsolidate features make it easy to gather and manage everyone's contributions to create the final draft.

With Lotus Word Pro 96, individuals and teams can Work Together faster, smarter and more productively. It features a streamlined "smart" interface that makes it easier for teams and individuals to accomplish everyday word processing tasks.

With Lotus Word Pro 96, individuals and teams of business people can work faster, smarter and more productively.

#### Lotus Word Pro 96 Key features:

- Easy to create, revise and edit shared documents with revolutionary Team Word Processing features.
- Breeze through everyday word processing tasks and get great-looking output with Smart Word Processing features
- Get the most out of Working Together with Lotus Word Pro 96 and its rich integration with Lotus SmartSuite and Lotus Notes. You can even share work over the Internet.
- Exceptional filters bring in all your current word processing files - without losing your formatting.
- Team Computing features bring in all the contributions of the team while providing the individual with control over documents.

LOT113 Lotus Word Pro '96 ..... **£98<sup>95</sup>**



#### Lotus 123

It's the spreadsheet has everything you need to make your everyday spreadsheet tasks easier.

LOT108 Lotus 1-2-3 V5: TradeUp..... **£84<sup>95</sup>**



#### Lotus Freelance Graphics

Make presentations the easiest way! Freelance lets you influence, persuade or inform at your next meeting.

LOTXXX Lotus Freelance V2.1: TradeUp..... **£84<sup>95</sup>**



#### Lotus Approach

Approach makes managing data as easy as Lotus 123! You don't have to be a programmer to use it.

LOT062 Lotus Approach V3..... **£82<sup>95</sup>**



#### Lotus Organizer

Lotus Organizer is a full-feature Personal Information Manager that allows you to manage your time and work.

LOT079 Lotus Organizer V2: Universal Upgrade ..... **£44<sup>95</sup>**

FREE Licence Upgrade to Windows 95

Free Gift!



"When you buy from Software Warehouse you get a FREE gift with every order. Don't forget to ask when you call."

See page 32 of advert for details.

### Index

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 18

## Lotus SmartSuite 4.0 is now even better value at only £168<sup>95</sup>!



5 leading Lotus applications for 1 bargain price!

If you own ANY competing software suite, ANY competing spreadsheet, word processor, database, or graphics program, or ANY other Lotus product - Call us now, you qualify for the Lotus SmartSuite upgrade.

No proof needed, we trust you!

Full boxed product inc. manuals and disks. No vouchers, etc.

All five leading applications from Lotus are available individually (see features) or in this new release of Lotus SmartSuite Version 4.

SmartSuite 4 includes the Lotus 1-2-3 Release 5 spreadsheet, the Approach 3.0 database, the Word Pro 96 word processor, Lotus Organizer V2 and the Freelance Graphics presentation package. All are specifically designed to take advantage of Notes/FX 1.1, the Lotus facility for exchanging data bidirectionally between desktop applications and Lotus Notes.

SmartSuite V4 now also includes Lotus' multimedia screen and sound-capture utility, ScreenCam 1.1. The SmartCenter Icon Palette is included and allows easy switching and drag-and-drop copying between applications.

LOT016 SmartSuite V4..... **£168<sup>95</sup>**



A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!

To Order, By Telephone call **01675 466 467**

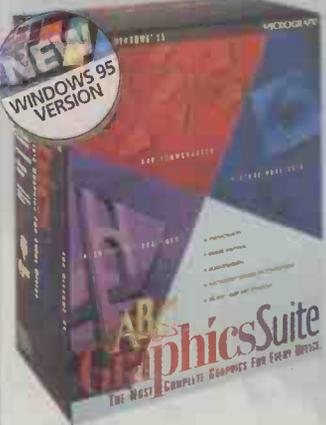
For ordering information and terms & conditions, see page 32.



**EVERYTHING FOR YOUR PC - NEXT DAY!**

## ABC Graphics Suite for Windows 95

The complete graphics package for Windows 95 and Office 95 users.



Micrografx has merged ABC FlowCharter, Designer, Picture Publisher and the revolutionary new ABC Media Manager into the ABC Graphics Suite. It combines superior diagramming, flowcharting, drawing, image editing, painting and clipart whilst using the familiar Microsoft Office for Windows 95 interface. Because ABC Graphics Suite uses the familiarity of an industry-standard interface, you and/or your colleagues can get up and running more easily. ...And because it's a true 32-bit Windows 95 application, its performance is up to four times that of 16-bit applications. ABC Graphics Suite features award-winning diagramming, imaging, and illustration tools to let you work with greater productivity and let your ideas gain shape speedily. The Drag-and-Drop Clipart Manager allows you to easily incorporate clipart into your work.

ABC Graphics Suite includes:

- ABC FlowCharter • Micrografx Designer
- Micrografx Picture Publisher & Media Manager
- Visual Clipart Libraries and Fonts

ABC Graphic Suite Features:

- Superior diagramming, flowcharting, drawing, image editing and more
- True 32-Bit with multithreading
- Over 20,000 pieces of ClipArt
- Over 7,500 photos
- Over 2,000 diagramming symbols
- Over 250 fonts
- Compatible with over 50 file formats including TIFF, BMP, DXF and CorelDraw!
- Comes on two CD-ROMs

ABC006 ABC Graphics Suite .....	<b>£239<sup>95</sup></b>
ABC007 Comp. Upgrade .....	<b>£99<sup>95</sup></b>

## The smart way to create all your business diagrams and more - Visio 4!

Now more than ever, Visio is the smartest way to create all your business diagrams. Version 4 has been enhanced in almost every area, boasting many new productivity features. With both 16 and 32bit versions in one box Visio 4 is optimised for both Windows 3.1 and Windows 95.

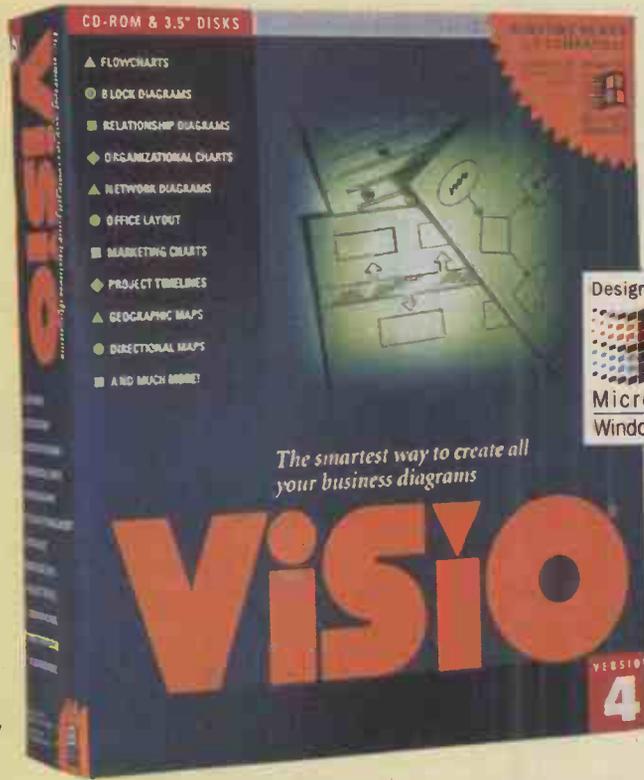
The new optimised 32-bit Visio exploits the advanced capabilities of Windows 95 and will also run on Windows NT 3.51 systems. It offers you significant productivity gains, including these great new features:

- Faster 32bit performance
- Descriptive, long file names make locating files easy
- 'QuickView' lets you preview diagrams before opening them
- Drag work from a diagram to the desktop to create a Scrap file, then easily incorporate it into different documents by simply dragging and dropping
- Stencils float or can be locked to any side of the Visio window
- Work more efficiently with mouse button menus and actions, now including pop-up help
- Use Windows 95's new multitasking to continue working on a diagram while other tasks are being done simultaneously in the background

Visio's new Wizards make creating new diagrams a snap. They set up pages, numbering, headers and any number of document features. An 'Organisational' Wizard automatically generates a chart from your data - either a text file or Excel spreadsheet.

You can even generate a project timetable with the 'Timeline' Wizard.

Thanks to new smart data management Visio 4 will automatically connect to Microsoft Office and Lotus Notes. Its compatibility with Office toolbars means that you are already familiar with Visio from the start.



**only £99<sup>00</sup>** STOCK CODE: VIS060

### Extra Visio Shapes & Ideas

In addition to the SmartShapes™ included in Visio, you can select one or more of 15 Add-On SmartShape products for your own particular diagramming tasks or projects. Visio SmartShapes™ are more than static clip art or symbol libraries, because they anticipate how you'll use them and then behave in a useful way. SmartShapes™ resize without distorting, connecting lines stay glued and reroute automatically, and text goes where it should in a format that makes sense. There are more than 3,000 shapes to choose from. Simply add the shapes you need, when you need them!

Advanced Flowcharts .....	<b>£39</b>
More than 260 shapes for flowcharting	
Network Diagrams .....	<b>£39</b>
Design and model detailed data networks	

Electrical Engineering .....	<b>£39</b>
Create electrical and electronic diagrams	
Marketing .....	<b>£39</b>
Illustrate business, sales and marketing concepts	
Software Diagrams .....	<b>£39</b>
Produce data flows, processes & logic structures	
Space Planning .....	<b>£39</b>
240 shapes for planning office layouts	
Chemistry .....	<b>£39</b>
Draw complex chemical structures & functions	
Chemical Engineering .....	<b>£39</b>
Accurately display plant equipment & facilities	
Biotechnology/Medicine .....	<b>£39</b>
Illustrate experimental & physiological processes	
Mechanical Engineering .....	<b>£39</b>
For creating detailed design documents	
Insurance/Law .....	<b>£39</b>
Graphics for insurance claims & legal briefs	

Home Planning .....	<b>£39</b>
Plan your dream home or your next remodel	
Kids .....	<b>£39</b>
A wealth of fun illustrations & shapes for kids	
Landscape Planning .....	<b>£39</b>
Landscape your garden & create planting charts	
Visio Technical Productivity Packs enable you to produce technical drawings and schematics with the ease of Visio.	
Visio Technical Productivity Pack Upgrade for existing Visio Users ..	<b>£99</b>
Visio Technical Productivity Pack Bundled with Visio ..	<b>£199</b>

**Price Pledge**

"We will beat any advertised price."  
Subject to terms on page 32 of advert.

**10 Good Reasons to buy from us**

- Free gift with order
- 4,000 different products
- Order before 4pm and use tomorrow
- Credit card charged on despatch
- Buy mail order or retail
- Always lowest prices
- No hidden surcharges
- Free technical support
- Award-winning service 8am-8pm (Mon-Fri)

**Page 19**

Next-day delivery only £6\* E&OE. All prices are plus VAT and delivery and are subject to change and availability.

Order by telephone **01675 466 467** or Fax **01675 466 460**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## CorelDRAW! V6 for Windows 95

The World's Premier 32bit Windows 95 Drawing Software!

CorelDRAW 6 is THE essential drawing package for Windows. If you need to illustrate, photo-edit, 3D-render, present or chart absolutely anything then CorelDRAW! 6 for Windows 95 is the software to choose.

New for Version 6 is increased speed and power, a Multiple Document Interface (MDI), which allows many documents to be open at once or many different views of the same document, and fully customisable hot keys and a status bar. There is greater ease of use with Wizards and Tutor notes as well as increased precision to an amazing 0.1 micron.

To make designing posters or large scale graphics easier, page size support has been increased to over 150 feet by 150 feet! OLE 2.0 support enables in-place editing and OLE automation. There is also OPI (Open Press Interface) support.

CorelDraw! Version 6 includes CorelDRAW! 6, Corel PhotoPaint 6, Corel Presents, CorelDream 3D PLUS 9 Powerful Utilities! And now there's 90 days FREE technical support from Corel - You can't go wrong!

COR122 CorelDraw! 6 - Full Version on CD ..... **£259<sup>95</sup>**

COR124 CorelDraw! 6 - Upgrade from V5 on CD... **£144<sup>95</sup>**

COR123 CorelDraw! 6 - U/G from V3 or 4 on CD... **£224<sup>95</sup>**

Call us!  
We will not  
be beaten  
on Corel!



## ILLUMINATUS V3

ILLUMINATUS features everything you need to make multimedia work for you!

ILLUMINATUS gives you everything you need to create your own edutainment programs for kids, catalogues and newsletters on disk, computer-based training, special material for special needs, interactive curriculum vitae, multimedia encyclopedias, audio visual greetings cards, multimedia scrapbooks and more without the need for any programming skills.

Quickly and easily combine text and graphics!

You can quickly and easily combine text, graphic, sound, animation, video and actions onto screen-sized pages. Publish interactive multimedia documents on all kinds of floppy disk and CR-ROM. It's as easy to use as a DTP program but as powerful as an authoring tool.

Supports industry standard multimedia formats

ILLUMINATUS v3 supports industry-standard multimedia formats including PCX, BMP, TGA, TIFF, Kodak PhotoCD, WAV, Midi, AutoDesk Animator FLC/FLI files, Microsoft AVI Video and MPEG motion video.

Includes Free CD-ROM!

ILLUMINATUS includes over 5,000 clipart images, sound files, animations, icons and buttons plus over 100 professional-quality multimedia publications for you to adapt for highest-quality interactive programs in moments. Full tutorials are included.

ILL001 ILLUMINATUS v3 ..... **£99<sup>95</sup>**

compatible  
with both  
Windows 3.1  
and  
Windows 95



## Corel Ventura V5

Power publishing for Windows.

Corel Ventura 5 extends the boundaries of DTP with an intuitive new interface and powerful architecture that supports both structured and free-form documents. With over 650 fonts, 17,000 clip-art images, 100 photos and 75 style sheets and templates, it's ideal for reports, manuals and brochures.

COR044 Corel Ventura CD ..... **£59<sup>95</sup>**



## Labels Unlimited

Create great labels easily - any size or style.

Whether you're creating labels for addresses, file folders, audio/visual, or inventory stickers, Labels Unlimited has the label format that you need. Choose from over 80 A4 size labels for Avery, TENZA, Stampiton and others - or custom design any format of your own.

LAB003 Labels Unlimited for Win ..... **£26<sup>95</sup>**

LAB001 Labels Unlimited for DOS..... **£26<sup>95</sup>**



## CorelDraw! 3

The ideal entry-level package.

This award winning software offers excellent type manipulation and drawing features in addition to CorelChart, Corel PhotoPaint and CorelSHOW all in one value-packed box. Also includes over 14,000 clip-art images / symbols, and 250 fonts.

COR038 CorelDRAW! 3 CD ..... **£42**



## CorelDraw! 4 CorelDraw! 5

The ideal Desktop Publishing Tool!

Features comprehensive page layout, type editing and illustration tools as well as CorelMOVE animation software. Also includes 18,000 clip art images and symbols, colour separation, OCR software, Corel PhotoPaint, CorelSHOW, CorelChart and hundreds of other features.

COR012 CorelDRAW! 4 CD ..... **£83<sup>95</sup>**

Includes Corel VENTURA 5.  
As CorelDraw! V.4 but with 825 fonts, 22,000 clip art images, advanced 3D dimensioning, 100 royalty-free photos on CD-ROM, and Internal PostScript interpreter, CorelTRACE, Corel MOSAIC 5, ARES Font Minder, Adobe Acrobat Reader and much more. Unbeatable value!

COR031 CorelDRAW! 5 (3-5)CD..... **£195**

## Instant 3D for Windows 95

An amazing new way to add stunning 3D, words and clip-art to Microsoft Word, Powerpoint, Excel or any other Windows 95 word processor, graphics or presentation package. With Instant 3D you can turn any text into a 3D object, right on the page.

Instant 3D comes with catalogues of hundreds of objects for everything from business graphics to 3D buttons for your World Wide Web home page - and it all happens in an Instant! Instant 3D adds tremendous value to your suite of productivity applications.

Drag and drop simplicity!

Simply drag objects, textures or light settings from a convenient on-screen catalogue into your document. Using an intuitive control you can clip, rotate and scale text and objects in a 3D window, whilst remaining in your original document page. Instant 3D's advanced text editor uses standard Windows TrueType fonts that can be extruded and deformed using a wide selection of pre-defined shapes.

Takes full advantage of Windows 95!

Instant 3D takes full advantage of Windows 95 thanks to OLE 2.0 support. Instant 3D works inside your application adding a user-friendly button bar menu option to your favourite word processor, presentation or spreadsheet package. Alternatively, you can choose to use Instant 3D in a standalone mode and save your images in popular graphic file formats for use at a later date.

vis063 Instant 3D for Windows ..... **£39<sup>95</sup>**

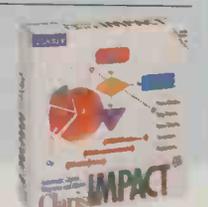


## ClarisImpact 2.0

Business graphics for all your charting and diagramming needs.

Create connected diagrams such as organisational charts, flow charts, computer diagrams, brainstorm charts and TQM charts. It also helps with the creation of project time lines, calendars, data charts, freeform graphics and presentations.

CLA010 ClarisImpact ..... **£169<sup>95</sup>**



**News**

Software Warehouse and Microsoft held a joint stand at the Live 95 show. You can see Software Warehouse at the Shopper Show at Olympia in November.

**Index**

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 20



To Order By Telephone Call **01675 466 467**

For ordering information and terms & conditions, see page 32.



A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!

**EVERYTHING FOR YOUR PC - NEXT DAY!**

## 5 Great Products -

### Simply 3D SuperPack!

Features everything you need to explore exciting 3D computer graphics.

The Simply 3D SuperPack consists of three programs and hundreds of megabytes of 3D worlds. Simply 3D is a complete multimedia 3D graphics program for enthusiasts, artists and business presenters. Use 2D drawing from popular drawing applications, make them 3D and use the 120 seamless textures and 100 3D objects to create photo-realistic images and animations.

The Simply 3D SuperPack also includes three volumes of Simply Scenes 3D virtual worlds (Starter Pack, The Northern Castle and Jurassic Adventure) Plus, Double Vision which lets you create 3D images and animations, just like those old Hollywood movies, from scanned photographs and then view them with the 3D glasses (included). WinBlob makes 3D modelling easy and fun, using "meatballs" to create organic shapes which can then be rendered in Simply 3D.

vis057 Simply 3D SuperPack ..... **£69<sup>50</sup>**



### Amazing effects with Simply 3D!

Simply 3D enhances Corel Draw! and other 2D draw and paint applications so that you can quickly and easily add 3D effects to your work.

STOCK CODE: SIM008

**£42<sup>50</sup>**

### Double Vision

Create amazing full colour 3D images and 3D animations from photographs.

Designed for ease of use, Double Vision enables hobbyists and professionals to create full colour 3D images - similar to those viewed in Hollywood's "3D Movies" - from scanned photographs or computer generated images. Double Vision Images can be viewed three-dimensionally on-screen or in print using the included 3D stereo 3D glasses. **Double Vision comes with a CD containing sample images and 3D animations.**

vis056 Double Vision ..... **£29<sup>95</sup>**



## The 3D Family

### Animate it all with Visual Reality 2.0!

The latest release of the leading 3D graphics and animation package.

Visual Reality 2.0 adds a new Universal Animation System which allows you to animate quite literally anything - cameras, objects, lights, materials and more - all with just a few mouse button clicks. Objects can be twisted, stretched and even morphed in 3D, videos can be played in the background or projected to create animations to broadcast quality and beyond. Visual Models new "munge" facilities allow you to deform any object - including morphing between shapes - and it has an essential unlimited undo feature. Visual Font is the most powerful 3D

text building system yet created! It includes automatic 3D bevels, bending of text along a 3D path, and solid shaded preview. Data from popular drawing and CAD packages can also be imported, rendered and animated. All of this functionality is complemented by over 2Gb of 3D data including 500 3D objects for business use, 1500 textures, 9 3D virtual worlds - including The Northern Castle, Pacific Beaches, Orbit City and Jurassic Adventure, 10 3D scenic UniSpheres™, 100 AVI video clips from a Hollywood film library, and 100 high resolution still background images.

vis055 Visual Reality 2.0 (7 CD set) .....



**Now With A 30-Day Money Back Guarantee**

Features include:

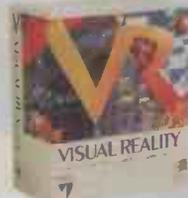
- 2Gb data library • 500 3D objects
- 800 textures
- 700 seamless textures
- 9 3D worlds • 10 unispheres
- 100 time-lapse video clips
- 100 photographic backgrounds

**£199**

### Visual Reality v1.5 - Pro 3D!

The professional 3D graphics software with award-winning rendering and animation.

vis054 Visual Reality ..... **£99<sup>95</sup>**



## trueSpace V1 - The reality of affordable 3D!

Caligari trueSpace for Windows is an award-winning, revolutionary package that integrates professional 3D modelling, rendering and broadcast quality animation within an easy-to-use, "natural" interface. You can produce photo-realistic images as used on the front cover of Time magazine, or video animations, professional enough for the evening news.

Until now, 3D modelling, rendering and animation was really 2D, enhanced with orthogonal views. Unlike other programs, trueSpace actually mirrors the real world so that you can manipulate 3D objects directly and interactively in real time.

- **Model, Render and Animate!**  
3D design couldn't be easier, painting and drawing expand into 3D modelling. Draw 3D, paint on 3D, shape objects like clay and use real-time preview to direct your 3D characters like actors on a film set. Render final slides or video animation at workstation speed with the touch of a button.
- **Seamless Integration**  
Most 3D formats such as DWG, 3D Studio, Wavefront, Lightwave, Image and others are supported. Import BMP, TGA or TIF for texture and bump mapping. Output BMP, TGA or AVI/Video for Windows with alpha channel.
- **Welcome to the 3rd Dimension**  
trueSpace is the first PC-based animation package that makes adding materials to your objects enjoyable, rather than something to be dreaded! In other programs, painting an object with colours and textures is a stab-in-the-dark process. With trueSpace simply grab a paintbrush, touch the areas you want to colour and watch as they are instantly rendered with the combination of colour, bump and texture mapping you selected.
- **Simply The Best!**  
Whether you are a Graphic Artist, Multimedia Designer, Video Professional or simply want to expand into 3D, trueSpace will break barriers to free your expression without breaking your budget. It's the only 3D graphics package with a natural user interface, fully integrated modelling, broadcast-quality animation and photorealistic rendering that also won't blow a hole in your pocket!

STOCK CODE: TRU003

~~RRP £240~~  
**£148<sup>95</sup>**

**Next-day delivery only £6<sup>55</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.**



### trueSpace - The award-winning 3D software!

"Excellent, a blueprint for other renderers to follow"  
PC Pro, Recommended Award, December 1994

"The most impressive piece of software we have seen in a long, long time. Buy it, use it, enjoy." PC Format

"This is a truly innovative and well-designed piece of software, its speed and impressive array of features should appeal to professional users and its excellent interface and ease of use should attract novices." PC User

"...friendly interface goes a long way towards realising sophisticated yet useable PC-based graphics" PC Magazine

**Fast Delivery**



**Order before 4pm and get your order next day**  
subject to terms on page 32 of advert

**10 Good Reasons to buy from us**

Free gift with order  
4,000 different products  
Order before 4pm and use tomorrow  
Credit card charged on despatch  
Buy mail order or retail  
Always lowest prices  
No hidden surcharges  
Free technical support  
Award-winning service  
8am-8pm (Mon-Fri)

**Page 21**

**Order by telephone 01675 466 467 or Fax 01675 466 460**

For ordering information and terms & conditions, see page 32.



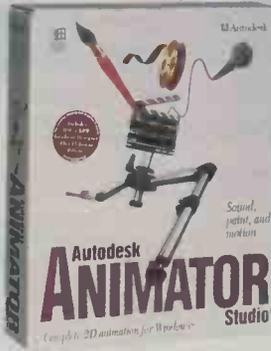
**EVERYTHING FOR YOUR PC - NEXT DAY!**

## Animator Studio from Autodesk

Enter the world of animation with Autodesk Animator Studio.

Animator Studio is the ultimate Windows based creation tool for animated presentation, multimedia content or stand alone multimedia information delivery systems.

By reading, manipulating and creating industry standard multimedia file formats, Animator Studio allows creativity to blossom while making maximum use of existing multimedia files, digital video or computer graphics. Delivery of audio/visual output is in formats which can be used in all multimedia communication tools, giving a wide range of potential uses: business presentations, multimedia content creation, standalone PC-based information systems, digital video editing or integration with computer graphics, games content, CD-ROM content, training applications, and general 2D animations.



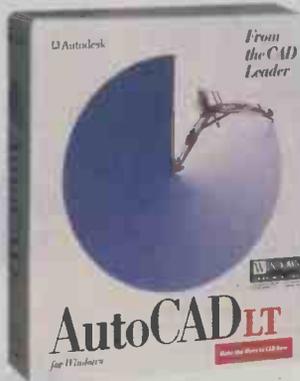
ANI006 Animator Studio ..... **£249**

## AutoCAD LT Rel. 2 for Windows

Fully-featured and easy to use, it's ideal for architects, engineers, designers and contractors.

AutoCAD LT Release 2 for Windows is a 2D design and drafting package that offers extensive 2D drawing and editing tools, associative hatching, Aerial View, OLE and Clipboard support.

Use 3D CAD tools such as 3D extrusion, hidden line removal and shading to create or view 3D drawings. OLE and Clipboard support lets you copy and paste drawings into other Windows programs for higher quality reports and presentations.



AUT025 AutoCAD LT Release 2 for Win..... **£352<sup>95</sup>**

## MathCAD V6 Student Edition

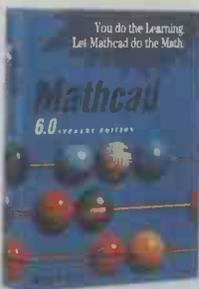
Probably the most friendly maths program around.

As you probably know, calculators are inflexible and limit you to tiny, hard-to-read screens, Spreadsheets box you in, and programming languages are too complex and hard to learn.... MathCAD is different.

With MathCAD V6 Student Edition, you use real maths notation to design and solve problems in a live worksheet environment. The user-friendly environment provides instant feedback, recalculating formulae as you work.

Analyse data, create models and test scenarios, create quality reports including text, graphics, equations and formulae, then print them out or share them via e-mail and the Internet.

MathCAD V6 Student Edition is easy-to-use with a standard user interface and Quicksheets that provide quick reference to common maths. If you use maths, you need MathCAD.



MAT007 MathCAD 6.0 Student ..... **£34<sup>95</sup>**  
 MAT004 MathCAD 6.0 Standard..... **£169**  
 MAT005 MathCAD 6.0 Prof. .... **£340**

## FastCAD for the home & garden

FloorPlan Plus 3D.

Turn your imagination into reality with FloorPlan Plus 3D. Quickly and easily create 2D plans choosing from vast libraries of drag and drop symbols, including walls, floors, staircases, etc. Even produce your own Bill of Materials list. Also available on floppy disk.

THR008 FloorPlan Plus 3D CD ..... **£44<sup>95</sup>**

### 3D Landscape

The complete resource for designing your landscape, combining a powerful, yet easy to use design application, with an extensive electronic book that explains landscaping principles and techniques. This is the ideal program for designing your garden and watching it grow. Also available on floppy disk.

FA5016 3D Landscape CD ..... **£39<sup>95</sup>**

### Garden Encyclopedia

The fast and easy way to find the perfect selection from any plant group. With more than 1,000 varieties, each with a colourful photograph, create, save and print customised plant lists for shopping at nurseries. Also complete multimedia How-to resource that shows you how to select and care for plants. Also available on floppy disk.

FA5017 Garden Encyclopedia CD ..... **£34<sup>95</sup>**

## AutoSketch 2 for Windows

AutoSketch for Windows combines CAD precision, drawing flexibility and Windows simplicity in one!

Produce concept sketches, technical diagrams, architectural layouts, electrical drawings, patterns, illustrations, presentations, and information graphics. Freehand curve tools and line options give you the versatility to meet any need. Easy view features let you choose drawings, symbols and fonts with simple icons, allowing you to create professional illustrations quickly. Other features include: over 600 symbols, TrueType fonts support, DWG Write 4 upward compatibility with AutoCAD and DXF import/export.

AUT027 AutoSketch 2 Win..... **£89**  
 AUT019 AutoSketch 3 DOS..... **£87**

### AutoSketch Libraries

AutoDesk have introduced two specific libraries for AutoSketch for Windows to aid designers, architects and electrical engineers to produce high quality drawings and diagrams as quickly and accurately as possible. Both libraries contain industry standard drawings and symbols.

AUT013 AutoSketch Electrical Library..... **£65**  
 AUT014 AutoSketch Architectural Library..... **£65**

## Paintshop Pro V3

Fast and fully-featured photo-editing and graphics conversion in one program!

Paintshop Pro is a highly popular graphics conversion program that now includes full photo-editing facilities. New tools include clone brush, crayon, chalk and user-definable brushes. Special effects and filters include Contrast, Emboss, Wind, Perspective, plus support for Adobe plug-ins. Paintshop Pro offers the features of packages many times its price!

You can quickly convert between image formats either singly or in batches. Paintshop Pro supports all major graphics formats including PCX, IPI, TGA, PNG, PSD, PhotoCD, CDR and WMF-licensed to use patented GIF and TIF format images. You can capture Windows screens as a whole or as a selection. Supports TWAIN scanners, and includes free browser and sample photos.

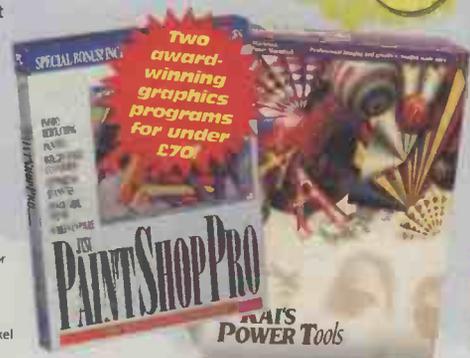
PAI003 Paintshop Pro V3.0..... **£49<sup>95</sup>**

## Paintshop Pro V3 & Kai's Power Tools SE Bundle

You can now get two great award-winning graphics programs in one amazing value package.

Paintshop Pro is now available with award-winning Kai's Power Tools plug-in filters. Your creativity will soar with these famous graphics effects tools which work within Paintshop Pro to offer fantastic effects for photoimages with amazing flair. Create your own Plug-in filters or use the ready made ones supplied. Ideal for beginners and professionals alike.

Includes KPT Gradient Designer and a useful range of ready-made effects (Pixel Storm, Glass Lens Normal, Find Edges Charcoal, Diffuse More etc.)  
 PAI004 Paintshop Pro V3.0 & Kai's Power Tool's Bundle.....



### News



At Software Warehouse we always take customer satisfaction seriously. If you have any queries or problems, don't hesitate to contact our Customer Services department.

### Index

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 22

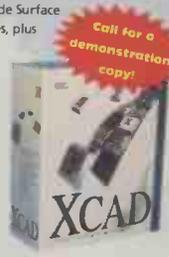
## XCAD 3.0 for Windows

The first and only CAD product for Windows and Windows NT to offer fully integrated advanced 2D and 3D for under £400

The latest version of XCAD features more drawing tools than ever before with several notable additions. 3D Cube allows you to create cubes with one command, Extrude Surface gives you a powerful method for transforming 2D shapes into 3D surfaces, plus Surface Fillet, Chamfer, Offset and more. You can now use XCAD files with a much wider variety of third party products, including renderers, modellers and CAM systems. It supports the major file standards. The XCAD Development System adds a whole new level of flexibility. It allows you to create your own commands, add your commands to the pull-down menus and incorporate your C programs into XCAD.

XCAD allows you to shade and view your 3D objects from any point. Its advanced rendering features allow you to see what your designs will look like in real life with Pan, Zoom and Hidden Line Removal features.

XCA001 XCAD V3 ..... **£368<sup>95</sup>**



**A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!**

To Order By Telephone call **01675 466 467**

For ordering information and terms & conditions, see page 32.



# SOFTWARE WAREHOUSE

**BUSINESS  
BEST BUYS**

**EVERYTHING FOR YOUR PC - NEXT DAY!**

## Warehouse Memory Kits

Low-cost and easy to install memory kits from Britain's favourite software and peripherals supplier.

Upgrading your memory couldn't be simpler, everything you need to upgrade your PC memory is all supplied in one cost-effective package.

Our kits are all original manufacturer memory modules - all are 100% compatible with the PC specified. Each module is covered by a five year manufacturers warranty and has been tested for parity, voltage and speed compatibility with the intended PC.

Each kit includes a 3M anti-static wrist strap, easy-to-follow fitting instructions, a 5 year warranty and full technical support.

Warehouse Memory Kits are available for:

- ACER
- Amstrad
- Dell
- Compaq
- Elonex
- Gateway
- Hewlett Packard
- IBM
- Olivetti
- Packard Bell
- Tandon
- Toshiba
- Vigen
- & most other IBM compatibles

**4MB  
Kits  
from  
£86**



**For  
SIMMs  
prices  
see P.2**

## RAM Doubler for Windows

The safe and cost-effective way to increase and optimise your system's RAM.

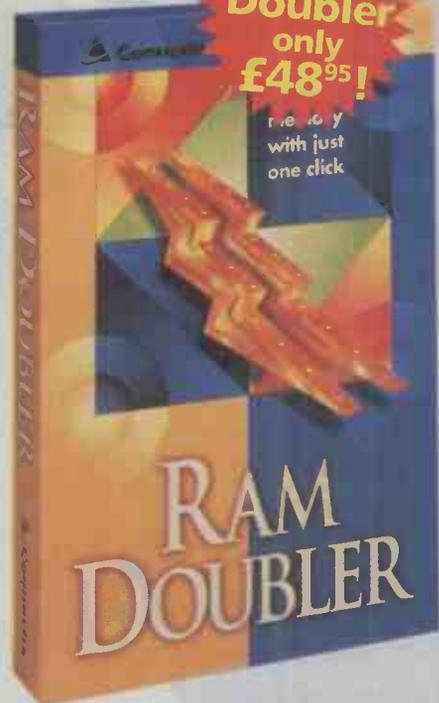
RAM Doubler uses three primary methods to increase your memory. First, it increases System Resource space so that Windows has plenty of room to track your application's menus, icons, and other visual elements.

Next, RAM Doubler cleans up the under one megabyte space where DOS, network software, and hardware drivers reside and often waste space.

Finally, RAM Doubler takes memory that is in use but not likely to be used again and compresses it to keep Windows from triggering virtual (disk) page swaps that slow your system down. The result of these methods is a tremendous increase in the ability to run multiple applications simultaneously, usually with no appreciable effect on performance.

**RAM  
Doubler  
only  
£48<sup>95</sup>!**

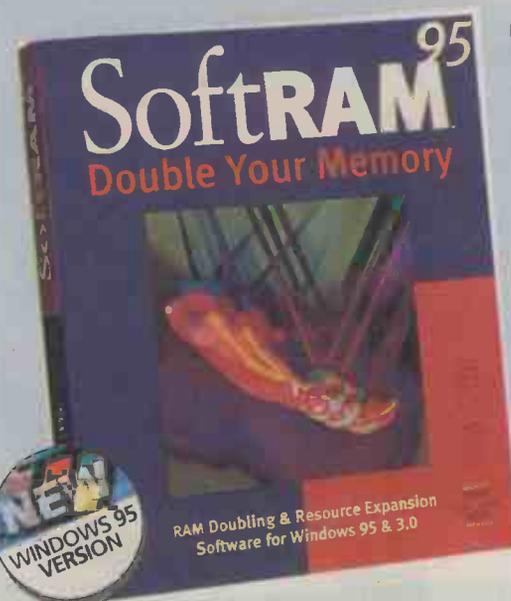
Free  
memory  
with just  
one click



**£48<sup>95</sup>**

RAM020 RAM Doubler for Win .....

# Double your memory with SoftRAM 95!



Now you can double your existing memory in software with the fastest and most inexpensive way to add RAM to your Windows 3.x or Windows 95 PC.

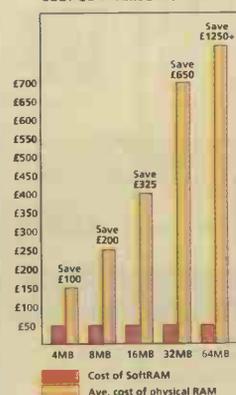
SoftRAM is an innovative Windows-Software-Only technology which approximately doubles the amount of RAM available to Windows applications.

And with SoftRAM's one-click, one-time installation you eliminate the hassle and expense of opening your PC to install hard RAM.

SoftRAM's unique RAM Analyst dynamically reviews the memory requirements of all your applications and pre-calculates the most effective compression method for each RAM page of memory. All of this is tracked and continuously updated in a knowledge database to optimise performance on the applications you use.

- One-click, one-time installation
- Use with as little as 4Mb
- Automatic, transparent and user configurable
- Works with Windows 3.0 and higher
- Compatible with all Windows applications
- Ideal for graphics programs and large data files

SOFTRAM V PHYSICAL RAM  
COST COMPARISON CHART



STOCK CODE: RMG002

**£48<sup>95</sup>**

**Fast  
Delivery**



Order before 4pm and get your order next day  
Subject to terms on page 32 of advert

**10 Good  
Reasons  
to buy  
from US**

Free gift with order  
4,000 different products  
Order before 4pm and use tomorrow  
Credit card charged on despatch  
Buy mail order or retail  
Always lowest prices  
No hidden surcharges  
Free technical support  
Award-winning service  
8am-8pm (Mon-Fri)

**Page 23**

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

**Order by telephone 01675 466 467 or Fax 01675 466 460**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## Norton Utilities



Automatically protect your data with the most comprehensive Windows 95 utilities

Norton Utilities includes new features specifically designed to prepare your system for the transition to Windows 95. It includes the most advanced, comprehensive tools available for system protection and data recovery - true 32-bit utilities with proven award winning technology that recovers data when others can't. Norton Utilities optimises and defragments your disks to improve access times and enhance the chance of full recovery in the event of a crash.

Norton System Doctor runs in the background, constantly monitoring vital system resources and data integrity to ensure stability and reliability, and automatically taking corrective action when needed. If a crash occurs, a rescue disk gets you up and running quickly, automatically repairing and restoring damaged resources.

### Pre-installation tune-up

Norton Utilities provides an easy, systematic way of diagnosing, repairing and fine-tuning your Windows 3.x system to prepare it for the installation of Windows 95 or any new application.

### Space Wizard

Locates duplicate, outdated, and unnecessary files, freeing disk space before and after Windows 95 installation.

### New! Norton System Doctor

Runs in the background monitoring resources and makes your Windows 95 system self-tune.

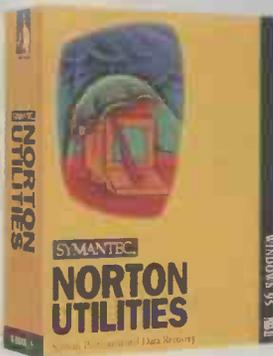
### Exclusive! Emergency Rescue Disk

Includes a ready-made bootable disk that will restart and repair your system even when Windows 95 won't load.

### Norton Disk Doctor

Provides diagnosis and repair of standard or compressed files.

- NOR031 Norton Utilities for Windows 95 3.5" ..... **£83<sup>95</sup>**
- NOR033 Norton Utilities for Windows 95 CD ..... **£83<sup>95</sup>**
- NOR032 Utilities Trade-Up ..... **£48<sup>95</sup>**



## Norton AntiVirus



The right cure, right now!

Norton AntiVirus provides complete virus protection for Windows 95 in one simple, easy to use package that detects, destroys and prevents virus infections. It works automatically in the background, watching for suspicious disk activity and detecting viruses before they can damage your files.

- NOR034 Norton AntiVirus ..... **£58<sup>95</sup>**
- NOR035 AntiVirus Trade-Up ..... **£27<sup>95</sup>**



## Norton Navigator

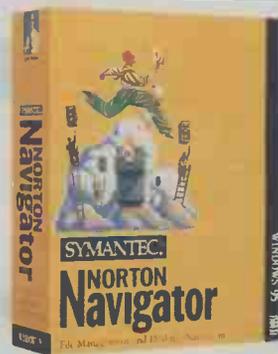


One click to go anywhere!

Norton Navigator puts file management at your fingertips, making Windows 95 significantly faster and easier. You can zip or unzip any file in one third of the time that it would take to use a separate application, simply by dragging and dropping.

You can access Navigator's file management tools from the Open/Save dialog box of almost any application or from the Windows 95 explorer. You can even access Internet FTP sites directly from the file manager.

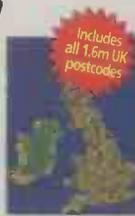
- NOR036 Norton Navigator ..... **£66<sup>95</sup>**
- NOR037 Navigator Trade-Up ..... **£33<sup>95</sup>**



## Auto Addressing System

The Auto Addressing System is a database that holds 1.6million postcodes, covering all of UK, (including Northern Ireland)

With this unique Windows-based program you simply input a postcode and it will tell you the road name, town, city and county, which can then be directly pasted into most Windows applications, including Word, Excel, WordPerfect etc. In the system are 24 million individual addresses across 1.6million postcodes. You can load the whole of the UK (taking up just 10Mb of hard disk space) or one of ten regions. Additional features are the search facility, where you enter part of an address and find the postcodes.



- AO004 Auto Addressing System ..... **£149<sup>95</sup>**

### News

Software Warehouse and Microsoft jointly sponsored three boats in the British Championships and out of 105 boats, they finished 5th, 6th and 18th.

### Index

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 24

## Professor Windows

Regarded the best educational software program to learn Microsoft Windows! No other training method can help you learn Windows more effectively. With fully interactive lessons and quizzes. Get the Windows Insider - The Reference Guide for all Windows Users



- IND050 Prof. Win... **£39<sup>95</sup>**

## Family Ties

Trace your ancestors back hundreds of years and generations with Family Ties. Family Ties is a unique genealogical software program that will piece together family documentation of relationships and help you maintain an invaluable source of information your family can refer to for generations to come.



- IND051 Family Ties ..... **£29<sup>95</sup>**

## Accent 2.0- The Award-Winning Multilingual Word Processor

Accent is the advanced multi-lingual word processor for Windows. This new version means that it's even better!

If you need to work in more than one language, then you need Accent. Designed to give you quick access to the special features that are needed for multilingual word processing. Accent makes it easy to use different alphabets and characters in the same document. Select the language you wish to write in and a keyboard template appears in the corner of your screen, to help you find the corresponding key on your UK keyboard. With your mouse, you can even click the template rather than depressing the actual key. Accent is full of all the standard word processing features, including style sheets, word count, auto save, import, export etc. All Accent word processors cover over 30 languages and many more.



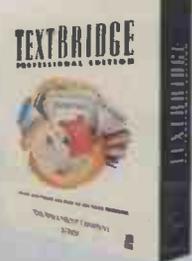
- acc002 Accent Express ..... **£36<sup>95</sup>**
- acc003 Accent Special Ed ..... **£89<sup>95</sup>**
- acc004 Accent Pro Ed ..... **£186<sup>95</sup>**



## XEROX TextBridge

Windows-based OCR that redefines the industry standard. Buy now and receive a FREE upgrade to the Windows 95!

Textbridge lets you convert paper documents to electronic files on your PC. You can then edit, store and distribute the text within Windows applications. It features the highest level of accuracy, and at a fraction of the cost of other OCR. Requires scanner.



- TEX002 TextBridge ..... **£67<sup>95</sup>**
- TEX003 TextBridge Professional C/U & Upgrade ..... **£129**

## Typing Instructor

Get out of the classroom and improve your typing skills with Multimedia Typing Instructor! Travel the world and take a typing adventure. Play Virtual Adventures™ - interactive games designed for all ages to build and improve typing skills. So, cut class and discover a new way to learn with Multimedia Typing Instructor.



- IND052 Typing Instructor ..... **£39<sup>95</sup>**

## Professors

Getting the most out of Microsoft Office® is easy with step-by-step instruction from the Professors™ for Microsoft Office. The Professors will turn your computer into a friendly tutor and show you how to use each Microsoft Office product effectively. Designed to help anyone take full advantage of their investment in Microsoft Office, the Professors can't be beat.



- IND053 Professors ..... **£39<sup>95</sup>**

A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!

To Order By Telephone call **01675 466 467**

For ordering information and terms & conditions, see page 32.



# SOFTWARE WAREHOUSE

**BUSINESS  
BEST BUYS**

**EVERYTHING FOR YOUR PC - NEXT DAY!**

## Complete Virus Protection With Dr. Solomon's Anti-Virus Toolkits

Dr. Solomon's Anti-Virus Toolkits are the UK's Number One anti-virus utilities. They are industry-renowned for combating all known viruses in DOS, OS/2, Windows, Netware and now Windows 95 systems.

Dr. Solomon's range of Anti-Virus Toolkits provide the best answer to the serious problems posed by viruses. Each toolkit is made up of basic programs geared to locate, identify and destroy existing viruses and then protect your system.

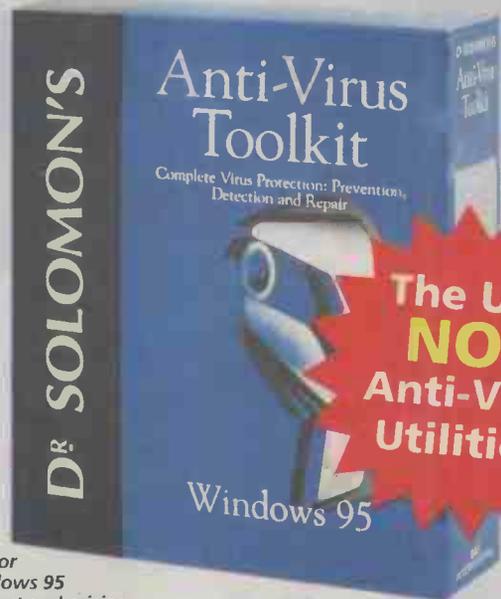
**WINGUARD** - on-access scanner to check all files and disks before access is allowed.

**FINDVIRUS** - on-demand scanner with the ability to carry out a more extensive check - even inside compressed files.

**VIRUS GUARD** - memory resident TSR only requires 9k of memory and can be loaded high. Checks every program for viruses before it is opened or copied.

### Why choose Dr Solomon's Anti-Virus Toolkit?

- Widely recognised as the most effective anti-virus product
- Award winning technology
- Finds more viruses and finds them faster
- Simple to install and easy to use
- Comes complete with both on-line and paperback Virus Encyclopedia containing detailed information on hundreds of viruses and what they do.
- Restores boot and partition sectors and CMOS after known and unknown infections
- Scans archived or compressed files, those downloaded from bulletin boards and CD-ROM collections
- FREE technical support - 7 days a week, 24 hours a day
- Monthly or quarterly updates via post, CompuServe, CIX, Internet or BBS



**The UK's  
NO.1  
Anti-Virus  
Utilities!**

Call for  
Windows 95  
product and pricing

50L000	Anti-Virus Toolkit for DOS 1/4'ly .....	<b>£59<sup>95</sup></b>
50L002	Anti-Virus Toolkit Win & DOS 1/4'ly.....	<b>£69<sup>95</sup></b>
50L009	Anti-Virus Toolkit Netware .....	<b>£238<sup>95</sup></b>
50L008	Dr. Solomon's Audit/Manager .....	<b>£279<sup>95</sup></b>

## WinDelete V2

No other un-installer is safer or more thorough than WinDelete!

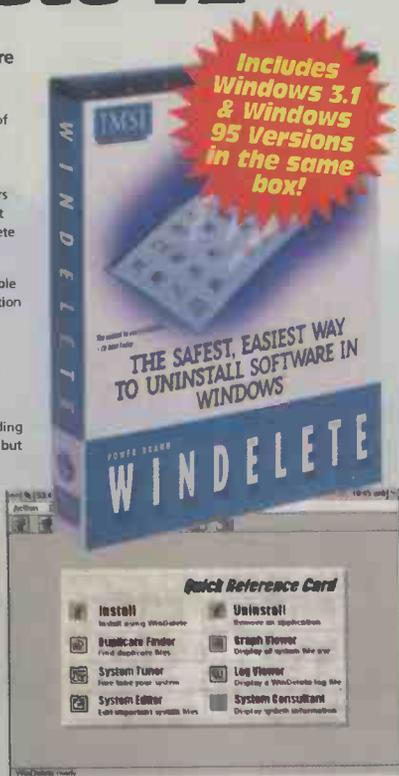
New WinDelete Version 2 is the latest version of this award winning Un-Installer program. This release offers new features and enhancements that make it easier and safer to use, with a lot more power. Market research shows that today's users want a product that is safe and simple, without accidentally deleting files it shouldn't. WinDelete stands out in its ability to meet these needs.

Application installations are monitored to enable better removal, covering every type of application and system support file. Comprehensive installation logs are maintained to ensure thorough removals. Changes are previewed before being executed, and the new range of tools facilitates better system management.

Its Green-Yellow-Red "traffic light" colour coding helps prevent accidental deletion of vital files, but allows all the dross to be removed, with an Undo/Restore option when you change your mind.

### Features include:

- Intelligent un-installing of virtually every file type including Windows and DOS applications CD-ROM and display device drivers, unused system support files, fonts, temporary files, backup files, duplicate files, orphan files etc;
- Direct access to INI files with View, Edit, Backup, and Save;
- System Consultant that analyses your system and suggests changes to improve performance;
- System Tuner with hundreds of tips for optimising Windows performance and much more.



WinDelete V2's simple-to-use interface

**£29<sup>95</sup>**

WIN050 WinDelete Version 2.....

## Uninstaller V3

The No.1 selling Windows utility just got better!

Uninstaller is a simple utility that you can trust to clean up your system. Every Windows application places bits of itself hidden throughout your system. This takes up memory and can lead to rather catastrophic if not dealt with effectively. Uninstaller 3 can uncover the hidden files lurking in your system and then remove whenever you want to.

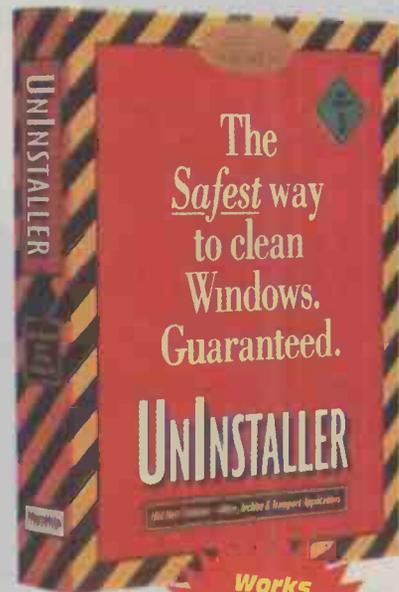
Not only does Uninstaller 3 safely clean Windows, it goes beyond just deleting applications - its unique technology allows you to:

Move applications and supporting data files to other drives while keeping all preferences and Windows settings intact.

Archive seldom-used applications and restore them with a single click.

Transport applications to other PCs with no re-install hassle.

Uninstaller 3 also includes two new modules, 'Disk Data' and 'Windows Cleanup'. Keep tabs on your hard drive space with Disk Data, a colour-coded graphical display that shows which files and applications are eating up disk space. And with Windows Cleanup you can remove Windows files, fonts, drivers, wallpaper, sounds and screen savers. Before deciding to delete or not, you can view or do a trial run.



**Works  
on Windows  
3.1 apps  
under  
Windows 95**

**£35<sup>95</sup>**

WIN050 Uninstaller 3.....

**Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.**

**Order by telephone 01675 466 467 or Fax 01675 466 460**

For ordering information and terms & conditions, see page 32.

**Fast  
Delivery**

Order before 4pm and get your order next day  
Subject to terms on page 32 of advert

**10 Good  
Reasons  
to buy  
from US**

Free gift with order 4,000 different products  
Order before 4pm and use tomorrow  
Credit card charged on despatch  
Buy mail order or retail  
Always lowest prices  
No hidden surcharges  
Free technical support  
Award-winning service 8am-8pm (Mon-Fri)

**Page 25**



EVERYTHING FOR YOUR PC - NEXT DAY!

## FormTool Gold V2.0

The Easiest Way to Create Forms and Automate Your Business.

FormTool Gold for Windows from IMSI offers the easiest way to create, fill and print any type of form. With over 550,000 users worldwide, FormTool for Windows is now available in the UK for the first time. Version 2 brings an enhanced user interface that is Microsoft Office compatible, with powerful design and editing tools to create sophisticated and professional forms. With built-in database creation and support, users can extract data and merge databases quickly and easily. Forms can be filled automatically on-screen, making workflow quick and easy, and each form is automatically saved to the database for later retrieval - all in one simple process. Includes ODBC support for use with FoxPro, dBASE, Clipper, Paradox and more. Fields can be added to any form which allow for automatic filling, including things such as date, time, calculations etc. Includes floating toolbars, drag-and-drop editing, radio buttons, check boxes, automatic word-wrap, OLE 2.0 support, draggable rulers, definable grids, fountain fills, zoom, preview and much more. New Wizards create reports and mailing labels after a few simple questions.

### 4 EASY STEPS TO FORMS AUTOMATION...

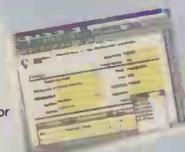
#### Step 1: Design and edit any form with ease

Whether you are modifying one of the pre-designed forms or creating one from scratch, FormTool Gold's powerful design and edit tools make it easy for you every step of the way. Import bitmap or vector images, insert text fields, create tables with the command duplicator and much more.



#### Step 3: Fill your form with speed and accuracy

Once your form is designed, filling it is a snap. You define the filling order most convenient for you. Fill it "on-the-fly" or directly from your database for sequential viewing and printing. Even password protect your confidential forms for complete privacy.



#### Step 2: Automate your data in one step

At your option, FormTool Gold will create a database associated with your form, which then becomes a "window" to your data. Sort, search, or query the data. Different forms can access the same data, letting you see exactly what you want in the form you want. Every time you complete a form, it is added to the database.



#### Step 4: Get professional results fast

Your printed forms have never looked so good. And that's not all. FormTool Gold's report and label Tutors give you database reports and industry standard labels at the click of a button. Even fax your form directly from your computer!



FOR018 FormTool Gold.....**£49.95**

**FREE GIFT WITH EVERY ORDER!**  
SEE PAGE 32 OF THIS ADVERT.

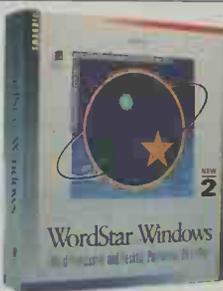
## WordStar 2.0

WordStar 2.0 is a full featured word processor, including many DTP features for only £27.99

WordStar 2.0 has recently won more accolades in the computer press than any other word processor. It has been highly praised for its extensive feature set and incredible value for money.

WordStar 2.0 includes English spell checker, grammar checker and thesaurus, in fact everything you'd expect to find in a word processor costing 10 times as much.

WOR077 WordStar 2.0 .....**£27.99**



## "Forms look like being stormed by Toplevel" - PC Direct

Powerful, professional-looking form design and filling with contact database.

Invoices, orders, expenses, BS5750, time sheets, quality control... your business needs professional-looking printed forms. Both Toplevel FastForms and Forms save money on printing costs and give you the flexibility to update form layouts as often as you like. Design your own attractive forms using logos, pictures, text, calculated fields, borders and shading. Great looking forms make small businesses look big and give big businesses control of big administration problems. Whether you're printing blank forms, filling out and printing or filling our pre-printed stationery, this software will make sure it all lines up perfectly, and help prevent staff filling it incorrectly. What's the difference? Toplevel Forms contains a database to store addresses and other information ready to fill in forms electronically. It also offers power features like spreadsheet functions in calculations and standard phrase support. Toplevel is a British company and is an international leader in forms software. The entry-level forms software, FastForms, is the market leader in the USA with a 40% market share, so you can be confident of a world-beating product backed by first class technical support.



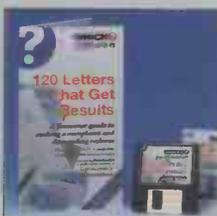
TOP003 Toplevel Forms.....**£68.95** TOP009 Forms for Win 95 .....**£68.95**  
TOP004 Toplevel FastForms.....**£24.95** TOP009 FastForms for Win 95 .....**£24.95**

## Legal Letters

120 letter templates that get results!



Have you ever been frustrated by a garage over-charging you? By a shop selling faulty goods? For these and many other kinds of problems, 120 Letters That Get Results contains a carefully-worded letter template written by Which? lawyers for you to adapt. A full word processing package is included, as is the text of the Which? book '350 Legal Problems Solved' in an easily accessible questions and answers format. All letters can be exported to your own word processor, then simply insert your details and print and post your professionally-written letters and see the difference it makes to the results



Legal Letters.....**£24.95**

**Free Gift!**



"When you buy from Software Warehouse you get a FREE gift with every order. Don't forget to ask when you call."

See page 32 of advert for details.

## Pegasus Solo

Fully integrated accounting software, ideally suited to the small business.

Pegasus Solo is ideally suited for every small business, incorporating Sales, Purchase and Nominal ledgers along with invoicing and stock control, allowing you to keep track of customer's and supplier's transactions. Produce statements and debtors' reports, as well as handling all of your VAT requirements.

PEG001 Pegasus Solo (DOS).....**£64.20**



## Pegasus Solo Payroll

Fully-integrated accounting software for small businesses, covering all aspects of NIC and PAYE.

Pegasus Solo Payroll is ideally suited for every small business. It is a perfect companion for all accounts packages or can be used standalone. It also fits neatly into Pegasus Accounts Solo.

This great, comprehensive package combines ease-of-use with a friendly interface.

PEG002 Pegasus Solo Payroll (DOS).....**£42.95**

**A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!**



250,000 sold in America

## Win your own Max Fox T-Shirt!

Max is celebrating the success of Toplevel's British software in the States - and so can you! Just use Forms or FastForms to design a useful, attractive form for Toplevel's forms library.

If Toplevel think your form is good enough, you win an exclusive Max Fox T-shirt. We will ship your competition entry form with your order.

## Alpha 5 Home & Business Edn.

Fully-featured Windows database.

Alpha 5 goes much further than other Windows databases because it comes with common database functions already pre-built! With Alpha 5 you can create powerful database applications without the need for any programming knowledge.

You can easily create forms, reports, mail labels and even stunning WYSIWYG letters with the ease of Alpha 5's drag and drop control.

ALP010 Alpha 5 Home and Business Edition (Win) .....**£39.95**



## Index

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 26



To Order By Telephone Call **01675 466 467**

For ordering information and terms & conditions, see page 32.



# SOFTWARE WAREHOUSE

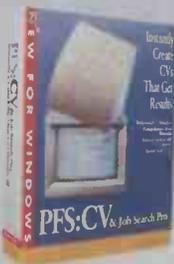
**BUSINESS  
BEST BUYS**

**EVERYTHING FOR YOUR PC - NEXT DAY!**

## PFS Job Search

Successfully organise every step of your job search with PFS CV and Job Search.

Start tackling those job interviews with confidence. Use this great Windows application to create impressive CVs and cover letters that stand out from the pack. Includes 10 professional CV templates and 70 pre-set layouts. Also included is a full WYSIWYG word processor and 12 sample cover letters. A built-in database and mail-merge allows you to quickly distribute your professional CV.



PFS009 PFS Job Search ..... **£29**

## FileMaker Pro

The complete database that includes six ready-to-run applications.

FileMaker Pro from Claris is established as one of the easiest-to-use relational Windows databases. In this new version, Claris have added many hot new features and six full-blown pre-designed applications for you to use or modify in just about any database application. Order before December 31st and get a FREE Claris T-Shirt and a 100-template CD upon registering your copy.



CLA002 Claris FileMaker Pro ..... **£79<sup>95</sup>**

## Visual dBASE for Windows

Relational database for Windows.

Visual dBASE combines leading edge tools with a sophisticated, but easy to use, programming language. From interactive use of local data, to deployment of advanced client-server applications, its all done in one highly productive environment. This is the best database on the market for business professionals and application developers. By using the unique Two-Way-Tools one can switch back and forth between visual design and programming. This is the best database on the market for business professionals and application developers.



BOR105 Visual dBASE (Win) ..... **£219<sup>95</sup>**

## Paradox 5.0

The powerful relational database.

With OLE 2.0 client and server support, Paradox 5.0 is relational database power made easy. It's the natural database to use with any suite or other applications. In fact, it even integrates better with leading suites than the ones included! Paradox for Windows is the database choice for end users, power users and developers.

PAR021 Paradox 5.0 ..... **£94<sup>95</sup>**

## Borland Delphi

RADICAL Windows application development.

Delphi - BYTE's Best Technology of Comdex 1994 - facilitates Rapid Application Development (RAD), letting you progress from prototype to production. The only Windows development tool that combines a high-performance optimising native code compiler with a visual design environment and integrated database access.

DEL006 Borland Delphi CD ..... **FROM £119<sup>95</sup>**

DEL006 Delphi RAD Pack CD ..... **£124<sup>95</sup>**



## Performance Now!

Employee appraisal - what to write and how to write it!

If you've ever put off writing an employee review because you didn't have the time, or you just plain hate writing them, Performance Now! is for you. Evaluating employee is one of the most difficult tasks for a manager or superior, but a sensible employee review process is essential for improving communication and helping your employees become more productive. Features include dozens of performance elements, Intelli-Text to write text for you, Language checker, built-in expert advice, employee log and much more.



PER022 Performance Now! ..... **£108<sup>95</sup>**

# Macromedia Director V4

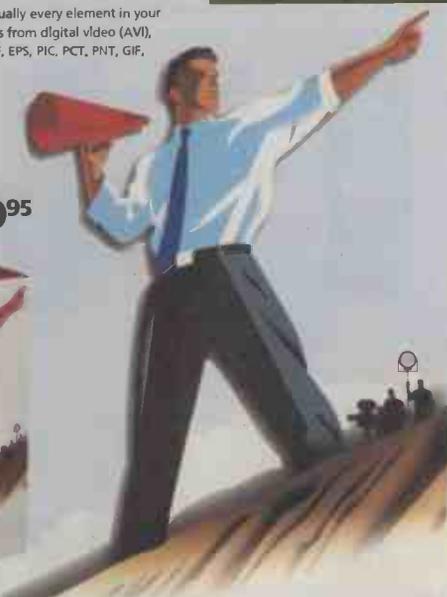
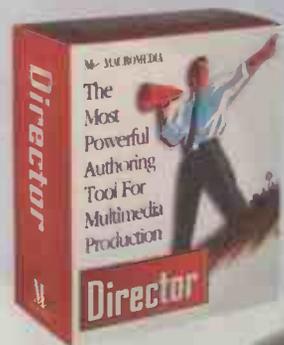
**The most powerful authoring tool for multimedia production.**

Director 4 for Windows is the tool of choice for all your multimedia needs. This popular program includes powerful features that let you easily combine, text, graphics, animations, sounds, digital video and interactivity to create dynamic multimedia productions. Use Director to create entertainment and education CD-ROMs, simulations, visualisations, digital publications, multimedia corporate presentations, electronic reference materials, software demonstration disks and more!

The uses of Director are virtually unlimited. Artists, Creative Directors, Corporate Presentation Specialists, students and publishers - in fact, more than 100,000 people currently use Director.

Director gives you precise control of virtually every element in your multimedia production. Import elements from digital video (AVI), sound files, graphic files (BMP, DIB, WMF, EPS, PIC, PCT, PNT, GIF, TIF), and much much more. Use these imported elements to cast, paint and score Windows to create and sequence your production and then use Lingo to add interactivity to your multimedia production.

AC009 Director ..... **£749<sup>95</sup>**



# Macromedia Freehand

**For Powerful Design & Illustration**

**NEW OFFER**

**Amazing Macromedia Bundle!**



Get Director, MacroModel, Sound Forge & Adobe Premiere for only... MAC011 **£999<sup>95</sup>**



Freehand 5.0 - More new features make it number one for designers, illustrators and artists.

Freehand is the most powerful and easiest-to-use software for design and illustration. Its comprehensive feature set, customisable work environment, and superior performance make it the tool of choice for graphic designers, creative directors, production artists and illustrators worldwide.

Freehand has everything you need to develop simple illustrations or complex designs with the minimum of hassle. Its open architecture allow you to take advantage of drop-in interactive tools and palettes in addition to Illustrator plug-ins. With extensive text handling capabilities, including style sheets, spelling checker, search and replace, text on a path, copyfitting, columns, and linked text blocks, Freehand's features surpass those found in any other design and illustration package. No other application has the features or the flexibility.

MAC010 Macromedia Freehand 5.0 ..... **£399<sup>95</sup>**

Freehand 5.0 Features include:

- Calligraphy Pen and Pressure-sensitive Pen let you create natural strokes.
- Draw Starbursts, Polygons and Spirals right on the screen without using dialog boxes!
- AutoTrace automatically turns any object into editable Bezier curves.
- Unique Eyedropper actually pulls colours from placed TIFFs for further use in the work.
- Report Generator gives you information about fonts, colours and linked graphics.
- Create 4-Colour Separations without having to switch to other applications. Plus a new Trapping for custom spreads and chokes.
- Import and Export EPS, PICT, PICT2, TIFF etc.

**Price Pledge**



**"We will beat any advertised price."**  
Subject to terms on page 32 of advert.

**10 Good Reasons to buy from US**

- Free gift with order
- 4,000 stocked products
- Order before 4pm and use tomorrow
- Credit card charged on despatch
- Buy mail order or retail
- Always lowest prices
- No hidden surcharges
- Free technical support
- Award-winning service 8am-8pm (Mon-Fri)

**PAGE 27**

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

**Order by telephone 01675 466 467 or Fax 01675 466 460**

For ordering information and terms & conditions, see page 32.



**EVERYTHING FOR YOUR PC - NEXT DAY!**

## Intel Pentium® OverDrive® Processor Upgrades

**Better Performance For Today's and Tomorrow's Applications!**

Today's software applications - both at the office or in the home - are demanding greater processing power than ever. Spreadsheets can never calculate fast enough and graphics always redraw too slowly. If you attempt to run Windows 95 on your Intel486™ processor-based PC, you'll find that features such as multitasking will tax your system beyond belief. That's why you need to consider the Intel Pentium® OverDrive® Processor Upgrade.

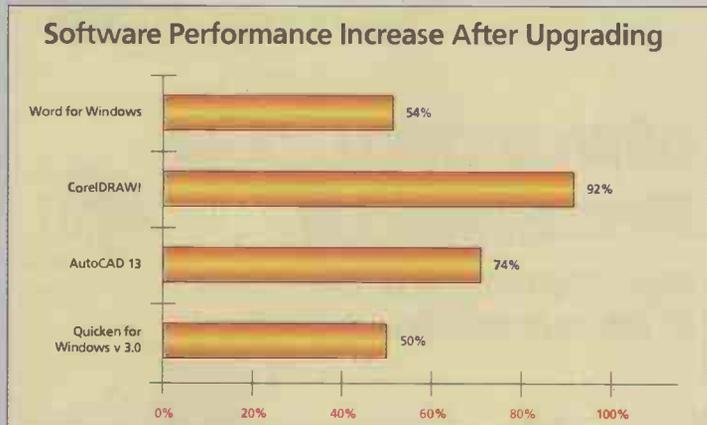
### The Advantage of Pentium-Based Performance

The Pentium OverDrive processor is the highest-performance OverDrive processor upgrade available. It features Pentium processor superscalar architecture, enhanced on-chip cache and faster floating point, a 32-bit bus interface, and an on-package voltage regulator and fan heatsink. It also offers a 3:2 bus ratio, that operates the OverDrive processor at two and a half times the speed of the system bus. A system upgrade with a Pentium OverDrive processor delivers a substantial performance increase to most Intel 486 CPU-based systems. For example, an upgraded IntelDX2 66-MHz CPU-based system will realise more than a 50% performance increase in most typical applications (performance results depends on your system configuration and the applications used).



**Upgrade Your PC to run Windows 95 more effectively!**

**NEW PRODUCT**



### Frequently Asked Questions About the Intel Pentium® OverDrive® Processor

**What is a Pentium® OverDrive® processor?**  
The Pentium OverDrive processor is the highest-performance OverDrive processor upgrade available today. It provides a simple, inexpensive performance upgrade for most IntelSX2™ and IntelDX2™ systems, as well as a superior upgrade option for many Intel486™ SX and DX CPU-based systems.

**Is the Pentium OverDrive processor really a Pentium® processor?**  
Yes, it is a true Pentium processor. It is based on 3.3 volt, .6 micron Pentium processor technology, the same used by the range of 75-120MHz Pentium processors available today. In addition to featuring Pentium processor superscalar architecture, enhanced on-chip cache and faster floating point, it also offers a 32-bit interface, an on-package voltage regulator and fan heatsink, and a 5:2 core:bus ratio that operates the OverDrive processor at two-and-a-half times the speed of the system bus.

**How much of a performance increase will be gained with a Pentium Overdrive processor?**  
In comparing the relative performance of the Pentium Overdrive processor with an Intel DX2-66MHz CPU-based system, the Pentium Overdrive processor has an iCOMP® (Intel Comparative Microprocessor Performance) index of 581, representing a 96 percent increase over the Intel DX2-66MHz system (iCOMP index 297). The Pentium OverDrive processor delivers a substantial performance increase for many of today's applications (see table above left). For example, an upgraded Intel DX2-66MHz CPU-based system will realise more than a 50 percent performance increase across most typical applications like Word for Windows, CorelDRAW and Quicken for Windows (depending upon the system configuration and applications used).

**News**

We'll be at the Shopper Show at Olympia again this year. Don't forget to visit the stand for the best show bargains.

From November 30th until December 3rd.

**Index**

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

**Page 28**

### Upgrading an IntelDX2 66-MHz System

In addition to providing improved performance for today's software applications, upgrading with a Pentium OverDrive processor gives your system enough power for more demanding operating systems like Windows 95 and emerging communications and video applications. Increased processing power also makes games more fun. By upgrading your CPU, keyboard and control, responsiveness improves as well as the quality and detail of the graphics. In fact, many of today's games are designed to offer different levels of detail based on the performance of your system's CPU. These games will recognise your system's Pentium OverDrive processor upgrade and automatically turn on key graphic features without sacrificing performance.

### IntelDX2 and IntelDX4 Overdrive processor upgrades

Also available are these OverDrive upgrades. The IntelDX4 OverDrive processor is a mainstream CPU upgrade for Intel486 SX and DX-based CPU-based systems. It features "speed tripling" technology, a larger 16K cache and an on-chip math coprocessor, as well as an on-package voltage regulator and heatsink.

The IntelDX2 OverDrive processor is the entry-level CPU upgrade designed for Intel486 SX and DX CPU-based systems. It features "speed doubling" technology, an on-chip math co-processor, and an attached heatsink.

**The Pentium OverDrive processor is available in two versions, based on your system's bus speed**

Present System	Pentium® OverDrive® Processor Upgrade	Stock Code	Price
33-MHz Intel486 - or - 66 MHz IntelDX2™	83-MHz Pentium OverDrive Processor	INT018	<b>£197<sup>95</sup></b>
25-MHz Intel486 - or - 50 MHz IntelSX2™ - or - IntelDX2	63-MHz Pentium OverDrive Processor	INT019	<b>£174<sup>95</sup></b>



**Call for DX2 and DX4 OverDrive® Processor® Upgrades**

**PRICES FROM**

INT018 63-MHz Pentium OverDrive Processor..... **£174<sup>95</sup>**

**A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!**

**To Order By Telephone Call 01675 466 467**



EVERYTHING FOR YOUR PC - NEXT DAY!

## Super Desktop Video Editing!

### Miro Video DC1 Plus

The ultimate desktop video editing system for Windows!



The ideal Video solution for real-time capture and play back of video sequences comes with Adobe premier or VideoStudio software. Capture digital VHS video to your hard disk and add transitions, titles and special effects, then print to tape in full-size NTSC or PAL, with SVHS and VHS quality, and up to 16.7 million colours. Comes complete with MJPEG hardware compression. There are no jumpers or dip switches to set and you get a two year warranty. DC1 Plus includes Premier 4.0 LE, Photoshop LE & Asymetric 3DFX Complete.

MIR005 DC1 Plus ..... **£299**

### Miro Video 20TD Live

Integrated graphics accelerator, video overlay and TV reception - all on one board!



Watch any TV or cable channel on your PC and then capture, store and edit any TV clip or edit video from any external sources. Play back AVI movies or TV images in full-screen size and at full speed. This card is also one of the fastest graphics cards available. There are no jumpers or dip switches to set and you get a two-year warranty.

20TD Live 2Mb VLB or PCI ..... **£314<sup>95</sup>**

### Miro Video 12PD

An incredibly low-cost graphics accelerator and AVI movie board!



The Miro Video 12PD is a unique graphics card and the only one of its kind on the market today. With full screen AVI and software MPEG playback, it can display up to 1280 x 1024 resolution and capable of 16.7 million colours, making it the ideal graphics card for CD-ROM users. This plug and play card is compatible with VLB or PCI buses and is the best value all-in-one graphics and multimedia accelerator.

12PD Live 1Mb VLB or PCI ..... **£94<sup>95</sup>**  
12PD Live 2Mb VLB or PCI ..... **£134<sup>95</sup>**

### miroCONNECT 34 Wave

miroCONNECT is not just a fast Fax/Modem or a high quality DSP sound card but an integrated H/W & S/W solution.



With 100% Word and Excel compatible S/W totally integrated into the miroCONNECT 34 office provides you with seamless communications. At work or at play miroCONNECT 34 Office will play your favourite sounds at high quality. The communications feature brings complete telephone capabilities to your home or office in an easy one-slot solution. With no jumpers to set and a complete suite of communications and audio software, you'll be productive within minutes. This card is the ultimate in communications solutions for your PC. surf the 'Net, graze CompuServe, listen to your latest CD whilst it deals with your telephone calls... all in one card!

MIR012 MiroCONNECT 34 Wave ..... **£239**

MIR013 Miro PCM10 Sound Card ..... **£79<sup>95</sup>**

MIR014 Miro PCM1 Pro Sound Card ..... **£129<sup>95</sup>**

### STB - Award Winning Performance in Video Cards at Low Prices!

#### STB Velocity 64V

MPEG playback, AVI acceleration and a massive 1600 x 1200 resolution.



The STB Velocity 64 Video is based around the S3 Vision 968 controller with 2MB or 4MB of ultra-fast EDO VRAM. It features the Xing MPEG Plus Player for CDi and CD Video playback, AVI acceleration, a massive 1600 x 1200 resolution and 24-bit (16.7m colours) at 1280 x 1024 to provide the ultimate in graphics capability and acceleration.

STB012 Velocity 64V 2Mb EDO RAM PCI ..... **£199<sup>95</sup>**  
STB013 Velocity 64V 2Mb EDO RAM VLB ..... **£199<sup>95</sup>**  
STB014 Velocity 64V 4Mb EDO RAM PCI ..... **£329<sup>95</sup>**  
STB015 Velocity 64V 4Mb EDO RAM VLB ..... **£329<sup>95</sup>**  
STB016 Nitro Cirrus 5434 1Mb ISA ..... **£94<sup>95</sup>**  
STB017 Nitro Cirrus 5434 2Mb ISA ..... **£138<sup>95</sup>**  
STB018 Nitro Cirrus 5434 2Mb PCI ..... **£138<sup>95</sup>**

#### Powergraph 64/V

The unbeatable 64-bit price/performance accelerator.

The STB Powergraph 64V features the S3 Trio 64 + V controller with 1MB or 2MB fast DRAM for the support of display of resolutions up to 1280 x 1024, colour depths up to 24-bit colour refresh rates up to 160Hz. Full screen AVI acceleration, and software MPEG playback as standard. An optional MPEG hardware decoder module which simply plugs on as a daughter card provides hardware decoding of MPEGi CDi or CD-video files from CD-ROM. Also as an option is a TV tuner for both the Powergraph 64V. Combine these features with STB's vision Windows desktop control and a lifetime warranty and you get unrivalled price/performance from a 64bit graphics accelerator.

STB019 Powergraph64 2Mb PCI ..... **£135** STBXXXPowergraph64V 2Mb PCI...EPOA  
STB020 Powergraph64 2Mb VLB .....EPOA STBXXXPowergraph64V 2Mb VLB...EPOA  
STBXXX Powergraph64 1Mb PCI .....EPOA STBXXXPowergraph64V 1Mb PCI...EPOA  
STBXXX Powergraph64 1Mb VLB .....EPOA STBXXXPowergraph64V 1Mb VLB...EPOA  
STBXXX MPEG Decode Module ..... EPOA STBXXXTV Tuner .....EPOA  
STBXXX MPEG1 Option Bundle - 2Mb Powergraph 64 + hardware MPEG decoder .....EPOA

### Movie Machine II - The Complete Video Digital Centre

- On-board Tuner with Teletext
- Real-time video effects and live mixer
- Transfer titles and graphics to video
- Live video overlay up to 1280 x 1024 resolution
- SVHS and VHS input and output
- Studio quality digitisation
- Optional MPEG and MJPEG extensions for 1 slot solution



MOV005 Movie Machine II (includes tuner) ..... **£489<sup>95</sup>**  
MOV006 MJPEG Extension Card for MM II ..... **£289<sup>95</sup>**  
MOV007 MPEG Extension Card for MM II ..... **£239<sup>95</sup>**  
MOV008 Movie Machine II Power Pack (includes MJPEG & MPEG) ..... **£989<sup>95</sup>**  
Fast FP/S 60 ..... **£489<sup>95</sup>**  
MOV009 MJPEG Extension Card for MM Pro ..... **£289<sup>95</sup>**

### Movie Machine Pro

Editing with Movie Machine Pro is easier than anything you've ever done. Use Movie Studio to choose you video sources, mix or cut and then use the T-Bar to add real-time digital effects: fades, zooms, flips, colour reversals, mosaic, luma and chroma keying, stroboscope, etc. Of course, you can also set the speed and direction of the effects.

**Movie Machine Pro**  
**£289<sup>95</sup>**  
STOCK CODE: MOV01

### Introducing the new MGA Millennium from Matrox

If you're working with 256, 65k or 16.7m colours, MGA Millennium delivers consistent Windows performance at all display resolutions.

Integrating Windows, digital video, and 3D acceleration onto a single high speed chip, the Matrox MGA Millennium marks a new milestone in desktop graphics. It teams the award-winning MGA 64-bit graphics processor with Windows 95 and other PC operating systems.

To take advantage of MGA Millennium's powerful video, 3D and DOS performance, we have thrown in a number of multimedia titles absolutely free! They include 3D/FX by Asymmetric Design - a drag and drop 3D software for Windows Papyrus, NASCAR racing simulation game, and CompCore SoftPEG, MPEG player under Windows. PCI2 or 4Mb can be upgraded to 4 or 8Mb of Window RAM.

#### MGA Millennium Features include:

- Real-time rendering of full-screen, full-motion 3D graphics
- 220MHz DAC for refresh rates up to 85Hz at 1600 x 1200
- 32-bit BGA core for fast DOS performance
- Ultra high, 1600 x 1200 @ 24-bit resolution
- Broadcast quality full-screen video at 30fps
- Memory upgradeable to 8Mb



**Matrox Accelerators from £249!**

# matrox

MAT008 MGA Millennium/21 2Mb WRAM PCI ..... **£249**  
MAT009 MGA Millennium/41 4Mb WRAM PCI ..... **£349**

**Fast Delivery**



**Order before 4pm and get your order next day**

Subject to terms on page 32 of advert

**10 Good Reasons to buy from us!**

Free gift with order 4,000 different products Order before 4pm and use tomorrow Credit card charged on despatch Buy mail order or retail Always lowest prices No hidden surcharges Free technical support Award-winning service 8am-8pm (Mon-Fri)

**Page 29**

Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.

**Order by telephone 01675 466 467 or Fax 01675 466 460**

For ordering information and terms & conditions, see page 32.



EVERYTHING FOR YOUR PC - NEXT DAY!

## Hauppauge!

Hauppauge TV Cards are the easiest way to turn your PC into a TV!

Hauppauge introduces the Win/TV celebrity and Prisma cards, 16 bit multimedia PC cards that run under Windows 3.1X, Windows NT, Windows 95 and DOS 6.X. They display full motion television in a resizable overlay window on a PC Screen, and can capture 24 bit colour still images. Both cards feature on board teletext, which can be viewed on your desktop PC. The cards do this by digitizing all the information. Once digitized the information will allow data to be manipulated by any other running application such as a spread sheet, database or a word processor. The professional teletext feature (standard on both Win TV, Celebrity and Prisma Cards) will allow multiple windows to display real time information, enabling all the data to be updated simultaneously, the applications remain permanently on-line to the live information transmitted, allowing automatic re-calculation of a spreadsheet.



FREE "VIDEO CUBE" CD WITH EVERY ORDER!

- HAP002 Hauppauge Prisma ..... £149
- HAP001 Hauppauge Celebrity ..... £269
- HAP009 Hauppauge Celebrity & FX/T ..... £409

## Primax Venus Mice

Ergonomical designed pointing device for left or right handed!

The Primax Venus mouse has a triangular shape which provides full support to the hand and as a result puts less pressure on the user's wrist and arm and is suitable for right or left-handed users. A unique rubber-paint finish gives the Venus mouse a distinctive look and a secure grip and is available in an array of colours to complement any office.



- PR123 Venus Mouse Grey ..... £18<sup>95</sup>
- PR124 Venus Mouse Black ..... £18<sup>95</sup>
- PR125 Venus Mouse Red ..... £18<sup>95</sup>
- PR126 Venus Mouse Blue ..... £18<sup>95</sup>

NEW PRODUCT

## CyberRomCD from IC

The portable CD ROM drive for AutoRoute Express.

Plan all your trips while on the move using the CyberRomCD and Microsoft AutoRoute Express. There are over 100,000 miles of road and more than 33,000 place names to access on CD-ROM making this the complete portable solution for travelling, using the CyberRomCD.



- CV8005 Microsoft AutoRoute Express/CyberRomCD Promotion ..... £299<sup>95</sup>



## Portable Sound Plus

A true plug and play Windows 95 sound solution.

The Portable Sound Plus is a parallel port-based 16bit sound card which has its own printer pass through point. It comes with a high fidelity speaker and a built-in microphone with line-in/out jacks for use with CD-ROM drives and external speakers.

- CV8010 Portable Sound Plus ..... £109<sup>95</sup>

## Quad Speed PC Card CD-ROM

The first quad speed drive available for plug and play under Windows 95!

This plug and play compatible CD-ROM drive gives the ultra-fast speed required for use with large applications, video and animation. With the CyberRomCD Quad you will find no rivals on the road to multimedia.



- CV8011 Quad Speed PC Card CD-ROM ..... £399<sup>95</sup>

## ZyFi 2 Speakers & Pro Speakers

Ideal for all sound cards and multimedia systems

The new ZyFi 2 Active power amplified stereo speakers offer the best in sound reproduction. They feature a built in power amplifier with separate LR volume controls and tone control and are magnetically shielded.

The ZyFi 2 Pro Active speaker system has a PMPO of 60 watts per channel and an amplifier with a true 18 watts RMS per channel rating, the PROs deliver a rich dynamic sound. They feature separate volume, bass and treble controls, and are magnetically shielded.

- SPK001 ZyFi 2 Speakers ..... £24<sup>95</sup>
- SPK002 ZyFi 2 Pro Speakers ..... £38<sup>95</sup>

# Graphic Artpad

# WACOM

Professional graphics tablets for designers, illustrators and Graphic Artists.

Wacom electro-magnetic "give-and-take system" is the unique passive technology employed in all Wacom graphics tablets, eliminating the need for magnets and batteries and allowing for a cordless pen and cursor (puck).

It is the realisation of an input device, comfortable to use and sensitive to hand pressure, which can tackle every challenge in painting and drawing. Just as a conventional pen needs paper, Ultra-Pen needs a tablet. The Ultra-Pen is extremely rugged and has a lifetime of at least ten million cycles.

All Tablets come complete with accessories, cables, handbook and software (available in several languages), plus you get are covered by a two-year warranty.

- WAC001 Wacom ArtPad ..... £149<sup>95</sup>
- WAC004 Wacom ArtPad + Dabblier ..... £179<sup>95</sup>
- WAC003 Wacom ArtPad + Painter 3.0 ..... £389<sup>95</sup>
- WAC002 A5 Tablet ..... £349
- WAC005 A5 Tablet + Painter 3 ..... £499
- WAC006 A4 Tablet ..... £469
- WAC007 A3 Tablet w/Menu Overlay ..... £599
- WAC008 A3 Tablet w/Electrostatic ..... £689



Wacom ArtPad from £149<sup>95</sup>!

**Free Gift!**

"When you buy from Software Warehouse you get a FREE gift with every order. Don't forget to ask when you call."

See page 32 of advert for details.

**Index**

SUBJECT	PAGE
Peripheral List	2
Leisure List	3
Business List	4
Microsoft	6
New-Products	8
Home Products	11
Comms	14
Business S/W	16
Peripherals	28
Order Form	32

Page 30

# Western Digital Drive Kits

The Western Digital range of hard drive kits offer, the highest level of quality backed by a three year warranty.

A major step forward in upgrading your PC - these drive kits contain everything you need to easily extend the storage capabilities of your PC; A Caviar 3.5" quick access time drive, rails, screws, 5 1/4" chassis, manuals and installation disk. The Western Digital installation disk will even get around the limitations on drive partition sizes, set by DOS, allowing your new drive to be configured as one large partition (no need for separate drive letters). The cost per megabyte of these new storage devices, is in fact now cheaper per megabyte than a floppy!



- WES006 Western Digital 540MB IDE Kit ..... £139
- WES007 Western Digital 850MB IDE Kit ..... £149
- WES008 Western Digital 1.2 GB IDE Kit ..... £209
- WES010 Western Digital 1.6 GB IDE Kit ..... £299

Please note: Before buying bare drives, please check you have the necessary cables and fixings, as they do not come with individual drives. You will also need a screwdriver and remember to power down your PC before removing the cover.



Pictured above right are the Western Digital Caviar drives (without top cases!). These high quality drives come with a 3 year manufacturers warranty.

- WES001 IDE Western Digital AC2540A 540Mb ..... £109
- WES002 IDE Western Digital AC2700A 730Mb ..... £119
- WES003 IDE Western Digital AC2850A 850Mb ..... £129
- WES005 IDE Western Digital AC3312 1280Mb ..... £195
- WES009 IDE Western Digital 1.6Gb ..... £259

A massive 39,000 items in stock across 4,000 different product lines. Nobody delivers faster!

To Order By Telephone Call **01675 466 467**

For ordering information and terms & conditions, see page 32.



**EVERYTHING FOR YOUR PC - NEXT DAY!**

## SICOS Colour Page Scanner

Scanning, faxing and copying

The SICOS 24 bit colour A4 page scanner allows you to scan pictures and it also recognises text so that you can convert documents into text files without retyping. Improve your business presentations and reports with coloured images and start a paperless office by filing, retrieving and faxing images and documents.

- Compatible with HP Scanjet II driver (necessary for multiple page scanning) and TWAIN driver.
- Software - Photo Plus for image processing, Textbridge V.2 for OCR and Sicos Fax/Copy utility.
- Scanning modes: 16.8 million true colours and 256 grey scale, dither (half tone) and line art.
- Resolution: up to 1200dpi
- Scan width: up to 216mm - full A4 page.
- Scan speed: 3.5 ppm (line art mode).
- Scans in a single pass.
- Scanner automatically calibrates colour.
- Auto sheet feeder supplied: up to 50 pages.
- Interface card supplied: 16 bit ISA with 6 IRQs - 3, 4, 5, 10, 11, 12.
- No power cable required - power is supplied through interface card and 25 pin cable is supplied.
- 3.5" Driver disk supplied with full User's Guide and Test photograph.
- Dust cover supplied.
- Compact size: 335 x 240 x 95mm (LxWxH). Weight: 4.5K.



**New low price!**

SIC001 SICOS Colour Page Scanner ..... **£199<sup>95</sup>**

## ScanMan Colour

Scan every colour the human eye can see.

Ideal for designers who want to scan large colour pages or odd-sized originals. It's the most versatile handscanner ever! Its 24-bit hardware captures 400dpi images in 16.8million colours with 256 greyscales or lineart. It is one of the few colour handheld scanners that require no warming-up time.

**£25 OFF!**



LOG007 Logitech ScanMan Colour ..... **£145<sup>95</sup>**

## MICROTEK ScanMaker II - The best value A4 flatbed around?

MICROTEK has spent 10 years investing in scanner research and development, resulting in a comprehensive range of high quality scanners for both beginners and professional users.

The economical ScanMaker II is an all-rounder that is probably the best value A4 flatbed scanner on the market today. It reproduces your hard copy in 16.7million colours at a maximum resolution of 1200 x 1200dpi. It can even be specially equipped to meet your specific needs. For instance, if most of your scanning is text-based just add an ADF-600 50-page document feeder; or for film scanning, choose the backlit TMA-II transparency attachment. All MICROTEK scanners include a TWAIN-Module for TWAIN-compliant Windows software plus an additional ASPI driver and a SCSI card.



**Microtek ScanMaker II only £299**

SCA001 Microtek ScanMaker II..... **£299**

## PRIMAX

**The leaders in scanners!**

Primax are the largest mouse and scanner supplier that you've probably never heard of.

Primax have chosen Software Warehouse as its first business partner to market the Primax range in the UK. Primax are one of the world's leading manufacturers in mice, game pads, sound cards, speakers, scanners, cables, printer-share devices, and communications hardware. The extensive range of scanners includes handscanners (colour & black and white), flatbeds, mobile scanners and pen scanners so whatever your needs may be, Primax will have something for you. All Primax products are supplied with a two-year warranty and are backed by years of intensive research and development. Software Warehouse will be stocking the leading products from the Primax range in both our retail outlets and through our mail-order operation.

### Primax Scanners

This exciting new range of Primax scanners are ALL supplied with Finishing Touch photo-styling software and ReadIRIS text recognition software (OCR). ALL are TWAIN compatible and come with UK support and warranty.

### Primax Greyscale Hand Scanners

The Primax greyscale scanners scan at 100/200/300 and 400 dpi and have a wider than normal scan width of 105mm. The 32 greyscale scanner will actually scan up to 256 using software emulation. The 256 greyscale scanner scans at true 256 greyscales via its hardware.

PRI101 Primax 32 Greyscale ..... **£44<sup>95</sup>**

PRI102 Primax 256 Greyscale ..... **£54<sup>95</sup>**

### Primax Colour Hand Scanners

The Primax Colour Hand Scanners scan at up to 400dpi resolution. They are able to scan black and white, greyscales and 24-bit true colour (16.8 million colours). They come with a high-speed, 16-bit interface card.

PRI103 Primax Colour ..... **£89<sup>95</sup>**



### Primax Colour Mobile Scanners

The mobile version includes all the features as the handscanners, but also includes motorised rollers. This unique feature allows a hand scanner to perform at the same accuracy as a flatbed scanner. You simply place the scanner on the image to be scanned and press the start button on-screen, and the scanner automatically moves itself across the image. It determines the speed of scanning with reference to computer speed and image complexity. This is absolutely essential for colour or greyscale images. It also connects to your parallel port, making it ideal for use with portables or in offices where more than one person needs to scan images and documents.

PRI104 Primax Colour Mobile ..... **£139<sup>95</sup>**

PRI120 Primax Colour Office ..... **£169<sup>95</sup>**

PRI127 Primax Flatbed Scanner ..... **£299**



## MICROTEK ScanMaker II Specifications

- Type: 24-bit colour flatbed scanner
- Maximum resolution: 1200 x 1200dpi (interpolated)
- Scanning area: 21.6 x 35.6cm (approx. A4)
- Optical resolution: 600 x 300dpi
- Scanning modes: 1-bit / 64 greyscales simulated
- 8-bit / 256 greyscales;
- 24-bit / 16.7million cols.
- Scanning method: 3-pass with RGB filter

### Primax DataPen

Simply the fastest way of entering text and, on average, 20-30 times faster than using the keyboard. Run the DataPen over the text and it will input text from where the cursor lies. The OmniFont OCR software runs in the background and allows it to recognise any font between 8pt and 22pt text size. It can be used in all applications running under Windows. There's even a spell checker in 11 languages. The DataPen is easy to install and connects to your standard parallel port.

PRI105 Primax DataPen ..... **£119<sup>95</sup>**

**FREE 30-Day Paintshop Pro Evaluation Copy with every Primax Scanner!**



**Price Pledge**



"We will beat any advertised price." Subject to terms page 32 of adv

**10 Good Reasons to Buy From Us**

- Free gift with order 4,000 different products
- Order before 4pm and use tomorrow
- Credit card charged on despatch
- Buy mail order or retail
- Always lowest prices
- No hidden surcharges
- Free technical support
- Award-winning service 8am-8pm (Mon-Fri)

**Page 31**

**Next-day delivery only £6<sup>95</sup> E&OE. All prices are plus VAT and delivery and are subject to change and availability.**

**Order by telephone 01675 466 467 or Fax 01675 466 460**

For ordering information and terms & conditions, see page 32.



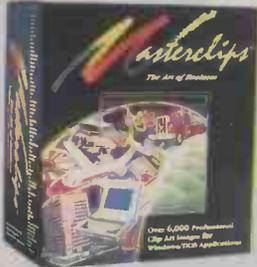
# HOW TO ORDER

# SOFTWARE WAREHOUSE

EVERYTHING FOR YOUR PC - NEXT DAY!

## Free gift with every order!

When you place your order with Software Warehouse choose one of these great software titles absolutely free! Please make sure you specify which title you want at the time of ordering. If no title is specified no free gift will be sent.



### MasterClips Lite Vol. II

The professional collection of 150 colour clip-art images. Each vector picture is fully editable and scalable without loss of image quality.



### Wired for Sound Lite

This Lite version of Wired for Sound includes 5 fun programs to add sound to your Windows environment.



### MPC Wizard V1 on CD-ROM

Tune up your Windows 3.x system and get the best performance from multimedia hardware with these utilities from SoftKey.

Packaging shown for identification purposes only

## How to order..

Sales lines now open 8am til 8pm, Monday to Friday and 9am til 5pm on Saturday.

Our sales team are ready to take your order on 01675 466 467.

Alternately you can fax us your order on 01675 466 460.

For postal orders, please send us your official order (please note our terms and conditions) or use the form provided below and send to:



Software Warehouse  
6 Roman Way,  
Coleshill Industrial Estate,  
Coleshill, Warks,  
B46 1HG

## Nationwide stores

Store Opening Times: Monday to Friday 9.30am 'til 6pm • Saturday 9am 'til 5pm • Sunday Closed

### Manchester



129 Deansgate,  
Manchester  
M3 9WR

Tel. 0161 831 7779

### Leeds



28 Eastgate St.  
Leeds  
LS2 7JL

Tel. 0113 244 8540

### Bristol



50 Bond Street  
Bristol  
BS1 3LZ

Tel. 0117 930 4804

### Birmingham



Smallbrook Queensway  
Birmingham  
B5 4JL

Tel. 0121 643 2325

### Reading



93 Caversham Rd  
Reading  
Berks RG1

Tel. 01734 568 686

### London



The Gyrotory  
Hangar Lane  
London  
W5 1EE

Tel. 0181 810 7770

Visit our stores for expert advice!

We accept all major credit cards (with no surcharge) and personal / business cheques. For immediate clearance on cheques please add 1.5% charge to your total bill for Transax service. If you require this service please mark clearly on your order TRANSAX. Otherwise please allow seven working days for clearance.

We accept official orders from Government departments, the MOD, health authorities, schools and higher education, Times 100 companies and approved credit accounts.



## Software Warehouse Terms & Conditions

All orders are subject to our full terms and conditions of sale which are available on request.

**Ordering:** Prices are subject to change and availability. VAT will be charged at a rate of 17.5% on all orders (including packaging). We do not charge credit cards until the goods are ready for despatch. Goods paid for by cheque are dispatched on receipt if Transax service is requested (please add 1.5% of the total order value to your cheque amount for Transax). Alternatively allow seven working days to clear. Orders by Purchase Order are accepted by fax or post for Govt. Depts, Education, MOD, Health Authorities, all Subject to Status. Goods ordered by post or fax will be priced at the current price on the day they are received.

**Delivery Place** your order for 'in-stock' items up to 4pm and we will ship same day via next-day delivery service (as long as credit card authorisation is obtained and barring system failure). This service is part of the £6.95 (+ VAT @ 17.5%) freight charge for UK mainland deliveries that is associated with your order. All delivery times quoted are only estimates. All orders are shipped by courier and a signature will be required upon delivery. UK delivery charges for small items are £6.95, Highlands of Scotland and islands £12 (2 day service), Northern Ireland £8 (2-3 days service), Eire £15 (2-3 days service), Isle of Man and Channel Islands £18 (2-3 days service). International charges on request.

**Warranty and Returns** Only UK sourced goods are supplied. Goods are not sold on a trial basis, please check specifications and compatibilities with the manufacturer before buying. We will accept goods back within 30 days of purchase if the shrink wrap seal is not broken. In the case of faulty goods, please contact our customer service department, who will make arrangements for replacement. Such arrangements may involve you dealing with the manufacturer directly. If, after purchase (but before damaging the shrink wrap), you realise that the product is unsuitable, please call for a returns number to authorise a return. We will refund the cost of the item minus a 15% (or £15 which ever is higher) restocking fee, ONLY where goods are returned unopened and as-new. Due to copyright law we cannot accept opened software for return. Software Warehouse will ONLY accept returns subject to these terms and conditions.

**Price Pledge** Refers to UK products available ex-stock. We will beat the advertised total cost (including delivery) subject to not selling below our cost price. We reserve the right not to beat prices of liquidated stock or OEM software (OEM software is intended to be sold with a computer, and is not supported by the manufacturer when sold on its own). The price pledge is only available at time of ordering and available for mail-order purchases only.

**Special Offers and free gifts** All special offers are subject to availability and may be in promotional packaging (packaging may refer to boxes, documentation etc.). Photographs are for identification purposes only. Please remember to choose a free gift when ordering. If no gift is specified none will be sent. Errors and omissions excepted.

Cut out or photocopy and send / fax to:

Software Warehouse plc, 6 Roman Way, Coleshill Ind. Est., Coleshill, Warks B46 1HG

Please tick this box if do not want to receive regular catalogues from Software Warehouse

Qty.	Reference	Description	Price
1	FREE GIFT		FREE

Exp. Date     Delivery Sub Total  
 Please charge my Access / VISA / MasterCard / AMEX / Switch ( If Switch please quote issue number \_\_\_ )  
 Signature \_\_\_\_\_ Address \_\_\_\_\_ VAT @ 17.5%  
 Name \_\_\_\_\_ TOTAL \_\_\_\_\_  
 (Company Name) \_\_\_\_\_  
 Tel No. \_\_\_\_\_  
 Fax No. \_\_\_\_\_ Post Code \_\_\_\_\_

NB. If paying by cheque, please allow 7 days for clearance. An instant service for immediate despatch is available - add 1.5% to your order total and tick the box



# PC Buyer

## The UK's Best Deals

### December Issue - All Offers End 9th December 1995

- ◆ 486DX4-100 or 75MHz Pentium® processor
- ◆ 8Mb RAM (4Mb on £539)
- ◆ 540Mb hard disk
- ◆ 14" SVGA colour screen
- ◆ £1000 worth of software including Lotus SmartSuite
- ◆ 100 Hours FREE Internet access worth £300



### 486DX4-100 MT

486DX4-100 with 540Mb hard disk and 4Mb RAM

# £539 + VAT

486DX4-100 with 540Mb hard disk, 8Mb RAM, double speed CD-ROM drive = £689 + VAT

### 75MHz Pentium® MT

75MHz Pentium® with 540Mb hard disk and 8Mb RAM

# £759 + VAT



#### Multimedia Perfect Office '95



# £38

Per Month

#### Multimedia Time Machine '95



# £39

Per Month

#### Multimedia Family PC



# £29

Per Month

See inside for full details

#### LASER PRINTER PACKS FROM

# £19

Per month



#### COLOSSUS 133MHz PENTIUM®

# £1399 + VAT

Telephone lines open until 8 p.m.  
All offers end 9th December

#### APR

# 0% INTEREST FREE CREDIT

Interest Free Credit is available subject to status. Written quotations are available on request. Be sure you can afford the payments before entering into a credit agreement. See page ii for Interest Free example

**TIME**  
Computer Systems Ltd.

# More Power... ...Lower Prices!

When it comes to providing the latest PC technology and specification at down to earth prices, no-one gives you better value than Time. As the UK's leading direct PC supplier, we have the resources and buying power to offer you incredible deals on top quality high specification 486 and Pentium® systems.

As a truly special promotion, these state-of-the-art

systems from Omega/Mitac are bundled with a massive collection of the best business, educational and leisure software (including Lotus SmartSuite) - applications that would cost over £1000 if bought individually!

These systems are incredible value for money and with our popular finance option are affordable by virtually everyone from an amazing £28\* per month!

**Telephone lines open until 8 p.m. All offers end 9th December**

## 486DX2-66

- ◆ 486DX2-66 processor
- ◆ 4Mb or 8Mb RAM expandable to 64Mb
- ◆ Pentium® technology upgradeable
- ◆ 170Mb or 540Mb IDE hard disk
- ◆ 3.5" 1.44Mb floppy drive
- ◆ SVGA graphics
- ◆ 14" SVGA colour screen
- ◆ IDE hard and floppy controller
- ◆ Parallel, 2 serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 4 drive bays and 7 expansion slots (2 VESA)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double (or quad speed option) CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite with 540Mb or larger disk models (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required) from IBM

## 486DX4-100

- ◆ 486DX4-100 processor
- ◆ Faster than most P60 systems
- ◆ 4Mb RAM expandable to 64Mb
- ◆ Pentium® technology upgradeable
- ◆ 540Mb or 850Mb IDE hard disk with 256K cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ SVGA graphics
- ◆ 14" SVGA colour screen (15" optional)
- ◆ IDE hard and floppy controller
- ◆ Parallel, 2 serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 4 drive bays and 7 expansion slots (2 VESA)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double (or quad speed) CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required) from IBM

## 486DX4-100S

- ◆ 486DX4-100 processor
- ◆ Faster than most P60 systems
- ◆ 8Mb RAM expandable to 64Mb
- ◆ Pentium® technology upgradeable
- ◆ 540Mb or 850Mb IDE hard disk with 256K cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ SVGA graphics
- ◆ 14" SVGA colour screen (15" optional)
- ◆ IDE hard and floppy controller
- ◆ Parallel, 2 serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 4 drive bays and 7 expansion slots (2 VESA)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double (or quad speed) CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required) from IBM

**£499** +VAT

540Mb model .....	£529
540Mb 8Mb model .....	£629
Multimedia models .....	+£99
Omega desktop with 7 bays .....	+£29

**£549** +VAT

850Mb model .....	£579
Multimedia models .....	+£99
Omega desktop with 7 bays .....	+£29

**£649** +VAT

850Mb 8Mb models .....	£679
Multimedia models .....	+£99
16Mb RAM models .....	+£200
Omega desktop with 7 bays .....	+£29

Finance from under **£28\*** Per Month  
See example

Finance from under **£31\*** Per Month  
See example

Finance from under **£36\*** Per Month  
See example

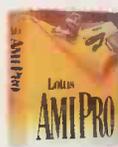
Please Note: Mouse is not included with this range as a choice of different mice is available from as low as £9 + VAT

### Software Applications\*\*

Claim your FREE software bundle with all systems with 540Mb or more hard disk capacity. This superb range of pre-loaded and ready to use software applications includes, the superb multi-tasking 32-bit version of Lotus SmartSuite for OS/2, IBM OS/2 Warp, Pacioli 2000 Business Accounts, Fun School, the best shareware games and other programmes. Windows 95 options are also available.



Lotus 1-2-3 spread sheet is the worlds best spread sheet package



Lotus Ami Pro word processor with advanced features



Lotus Freelance Graphics presentation and drawing package



Lotus CC-Mail single user electronic mail licence



IBM Works is a superb easy to use collection of 5 great programs Inc. WP, spread sheet, charting, database & reporting



FaxWorks allows you to send and receive faxes easily (modem required)



IBM Personal Information Manager (via telephone or network) allows collaborative working on your PC



Personal Information Manager allows you to manage your time more effectively



CompuServe Information Manager and Internet Connection provide graphical interfaces to these services (modem required)

**CALL NOW!**

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

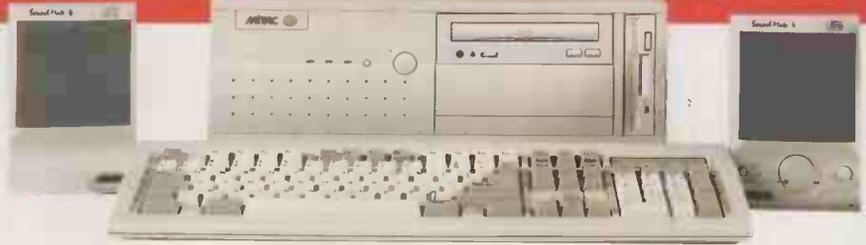
Grönville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

Finance from under

**£28\***  
Per Month

New Lower Prices

100 Hours  
FREE  
Internet  
access worth  
over £300



**Omega**  
**MITAC**

**75MHz Pentium®**

- ◆ Intel 75MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 540Mb, 850Mb or 1.08Gb enhanced IDE (fast ATA) hard disk with 256K hard disk cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional)
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 fast serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 4 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required) from IBM

**90MHz Pentium®**

- ◆ Intel 90MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb, 1.08Gb or 1.6Gb enhanced IDE (fast ATA) hard disk with 256K hard disk cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional)
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 fast serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 4 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required) from IBM

**100MHz Pentium®**

- ◆ Intel 100MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb, 1.08Gb or 1.6Gb enhanced IDE (fast ATA) hard disk with 256K hard disk cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional)
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 fast serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 4 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required) from IBM

**£749** +VAT

850Mb 8Mb model	£779
1.08Gb 8Mb model	£829
16Mb RAM models	+£200
Multimedia models	+£99
Omega desktop with 7 bays	+£29

**£879** +VAT

1.08Gb 8Mb model	£929
1.6Gb 8Mb model	£1029
16Gb RAM model	+£200
Multimedia model	+£99
Omega desktop with 7 bays	+£29

**£979** +VAT

1.08Gb 8Mb model	£1029
1.6Gb 8Mb model	£1129
16Mb RAM model	+£200
Multimedia model	+£99
Omega desktop with 7 bays	+£29

Finance from under **£41\*** Per Month  
See example

Finance from under **£48\*** Per Month  
See example

Finance from under **£53\*** Per Month  
See example

Please Note: Mouse is not included with this range as a choice of different mice is available from as low as £9 + VAT

\*APR **19.8%**

Finance Example: Cash Purchase: £549 +VAT = £667.40 inc. delivery + VAT. Credit Purchase: 10% (£66.74) deposit and 24 equal monthly payments of £30.04. Total Price £787.70 including delivery + VAT. Finance is available subject to status. Written details are available on request. Be sure you can afford the payments before entering into a credit agreement.



Pacioli 2000 Business Accounts is a full-featured package that outperforms many packages costing over £500



IBM OS/2 Warp v3 is the latest and most powerful 32-bit, multitasking operating system



PC DOS 7 (full version) is the latest version of DOS and gives you up to 40K more RAM than version 6.22



Fun School 4 covers the essential elements of the national curriculum



Fun School Maths educational package covering all the essentials



Doom virtual reality graphics game - the world's most popular game



Raptor Flight simulator / Warship shoot'em up action crazed guns blazing game



Blake Stone graphics adventure game set in a high tech space station



Epic Pinball professional arcade game with all the usual features

**CALL NOW!**

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT



# Expandable Tower Systems

## at the UK's Best Prices

Our incredible buying power coupled with our direct relationships with leading manufacturers allows us to offer you these incredible mini-tower systems at the best prices in the UK.

These expandable mini-tower systems from Omega also include our massive collection of the best business, educational and leisure software (including Lotus

SmartSuite) -applications that would cost over £1000 if bought individually!

Also included with all these systems is our unique offer of 100 hours of FREE internet access. Now virtually everyone can afford a full-feature multimedia system from around £32 per month on our incredible finance offer\*.

**Telephone lines open until 8 p.m.**  
**All offers end 9th December**



### 486DX2-66 540 MT

- ◆ 486DX2-66 processor
- ◆ 4Mb or 8Mb RAM expandable to 64Mb
- ◆ Pentium® technology upgradeable
- ◆ 540Mb IDE hard disk
- ◆ 3.5" 1.44Mb floppy drive
- ◆ 14" SVGA colour screen with 16-bit SVGA card
- ◆ IDE hard and floppy controller
- ◆ Parallel, 2 serial and keyboard ports
- ◆ Expandable mini-tower case
- ◆ 5 Drive bays and 7 expansion slots (2VESA)
- ◆ 102 Enhanced keyboard
- ◆ Multimedial models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)



### 486DX4-100 540 MT

- ◆ 486DX4-100 processor
- ◆ 4Mb or 8Mb RAM expandable to 64Mb
- ◆ Pentium® technology upgradeable
- ◆ 540Mb IDE hard disk
- ◆ 3.5" 1.44Mb floppy drive
- ◆ 14" SVGA colour screen with 16-bit SVGA card
- ◆ IDE hard and floppy controller
- ◆ Parallel, 2 serial and keyboard ports
- ◆ Expandable mini-tower case
- ◆ 5 Drive bays and 7 expansion slots (2VESA)
- ◆ 102 Enhanced keyboard
- ◆ Multimedial models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)



### 486DX4-100 850 MT

- ◆ 486DX4-100 processor
- ◆ Faster than most P60 systems
- ◆ 4Mb or 8Mb RAM expandable to 64Mb
- ◆ Pentium® technology upgradeable
- ◆ 850Mb IDE hard disk with 256K cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ 14" SVGA colour screen with 16-bit SVGA card
- ◆ IDE hard and floppy controller
- ◆ Parallel, 2 serial and keyboard ports
- ◆ Expandable mini-tower case
- ◆ 5 Drive bays and 7 expansion slots (2VESA)
- ◆ 102 Enhanced keyboard
- ◆ Multimedial models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

**£519** +VAT

540Mb 8Mb model .....£619  
Multimedia models .....+£99

**£539** +VAT

540Mb 8Mb model .....£639  
Multimedia models .....+£99

**£569** +VAT

850Mb 8Mb models .....£669  
Multimedia models .....+£99

Finance from under **£29\*** Per Month  
See example

Finance from under **£30\*** Per Month  
See example

Finance from under **£32\*** Per Month  
See example

Please Note: Mouse is not included with this range as a choice of different mice is available from as low as £9 + VAT

#### Software Applications\*\*

Claim your FREE software bundle with all systems with 540Mb or more hard disk capacity. This superb range of pre-loaded and ready to use software applications includes, the superb multi-tasking 32-bit version of Lotus SmartSuite for OS/2, IBM OS/2 Warp, Pacioli 2000 Business Accounts, Fun School, the best shareware games and other programmes. Windows 95 options are also available.



Lotus 1-2-3 spread sheet is the worlds best spread sheet package



Lotus Ami Pro word processor with advanced features



Lotus Freelance Graphics presentation and drawing package



Lotus CC-Mail single user electronic mail licence



IBM Works is a superb easy to use collection of 5 great programs inc. WP, spread sheet, charting, database & reporting



FaxWorks allows you to send and receive faxes easily (modem required)



IBM Person to Person (via telephone or network) allows collaborative working on your PC



Personal Information Manager allows you to manage your time more effectively



CompuServe Information Manager and Internet Connection provide graphical interfaces to these services (modem required)

**CALL NOW!**

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

Finance from under

£29\*  
Per Month

100 Hours  
FREE  
Internet  
access  
worth  
over  
£300



Omega

**75MHz Pentium® 850 MT**

- ◆ Intel 75MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb or 1.08Gb enhanced IDE (fast ATA) hard disk with 256K hard disk cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional)
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 fast serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 5 Drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers.
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

**90MHz Pentium® 850 MT**

- ◆ Intel 90MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb or 1.08Gb enhanced IDE (fast ATA) hard disk with 256K hard disk cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional)
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 fast serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 5 Drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers.
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

**100MHz Pentium® 850 MT**

- ◆ Intel 100MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb or 1.08Gb enhanced IDE (fast ATA) hard disk with 256K hard disk cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional)
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 fast serial and keyboard ports
- ◆ Expandable desktop case
- ◆ 5 Drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers.
- ◆ Software bundle including Lotus SmartSuite worth over £1000 (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

£789 +VAT

1.08Gb models .....£839  
16Mb RAM models .....+£200  
Multimedia models .....+£99

£889 +VAT

1.08Gb models .....£939  
16Mb RAM models .....+£200  
Multimedia models .....+£99

£989 +VAT

1.08Gb models .....£1039  
16Mb RAM models .....+£200  
Multimedia models .....+£99

Finance from under **£43\*** Per Month  
See example

Finance from under **£49\*** Per Month  
See example

Finance from under **£54\*** Per Month  
See example

Please Note: Mouse is not included with this range as a choice of different mice is available from as low as £9 + VAT

\*APR **19.8%**

Finance Example: Cash Purchase: £519 +VAT = £632.15 inc. delivery & VAT. Credit Purchase: 10% (£63.22) deposit and 24 equal monthly payments of £28.45. Total Price £746.02 including delivery & VAT. Finance is available subject to status. Written details are available on request. Be sure you can afford the payments before entering into a credit agreement.



Pacioli 2000 Business Accounts is a full-featured package that outperforms many packages costing over £500



IBM OS/2 Warp v3 is the latest and most powerful 32-bit, multitasking operating system



PC DOS 7 (full version) Is the latest version of DOS and gives you upto 40K more RAM than version 6.22



Fun School 4 covers the essential elements of the national curriculum



Fun School Maths educational package covering all the essentials



Doom virtual reality graphics game - the world's most popular game



Raptor Flight simulator / Warship shoot'em up action crazed guns blazing game



Blake Stone graphics adventure game set in a high tech space station



Epic Pinball professional arcade game with all the usual features

**CALL NOW!**  
Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT





**100 Hours  
FREE  
Internet  
access worth  
over £300**



### 486DX4-100

- ◆ 486DX4-100 processor
- ◆ 256K external cache
- ◆ 8Mb RAM expandable to 64Mb
- ◆ Pentium® technology upgradeable
- ◆ Enhanced 850Mb IDE hard disk with 256K cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ 1Mb 64-bit PCI local bus graphics with Windows accelerator
- ◆ 14" SVGA colour screen
- ◆ PCI enhanced IDE hard and floppy controller
- ◆ Parallel, 2 serial and keyboard ports
- ◆ Midi-tower case with 8 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard
- ◆ Microsoft compatible mouse
- ◆ Multimedia models include double (or quad speed option) CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

**£799** +VAT

Multimedia models ..... +£99  
1.4.4 Approved Fax/Data modem ..... +£80

Finance from under

**£44\***

Per Month  
See example



### 75MHz Pentium®

- ◆ Intel 75MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb, 1.08Gb or 1.6Gb enhanced IDE (Fast ATA) hard disk with 256 hard disk cache
- ◆ 256 external SRAM cache
- ◆ 3.5" 1.44Mb floppy drive, PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional) and super-fast 64-bit Windows accelerator
- ◆ 14" SVGA colour screen (15" Optional)
- ◆ PCI enhanced IDE hard and floppy controller
- ◆ Parallel, 2 Fast serial and keyboard ports
- ◆ Midi-tower case with 8 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 Enhanced keyboard and Microsoft compatible mouse
- ◆ Multimedia models include double or quad-speed CD-ROM drive 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

**£899** +VAT

1.08Gb 8Mb model ..... £949  
1.6Gb 8Mb model ..... £1049  
16Mb RAM models ..... +£200  
Multimedia models ..... +£99

Finance from under

**£49\***

Per Month  
See example



### 90MHz Pentium®

- ◆ Intel 90MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb, 1.08Gb or 1.6Gb enhanced IDE (Fast ATA) hard disk with 256 hard disk cache
- ◆ 256 external SRAM cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional) and super-fast 64-bit Windows accelerator
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 Fast serial and keyboard ports
- ◆ Midi-tower case with 8 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 enhanced keyboard and Microsoft® compatible mouse
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

**£999** +VAT

1.08Gb 8Mb model ..... £1049  
1.6Gb 8Mb model ..... £1149  
16Mb RAM models ..... +£200  
Multimedia models ..... +£99

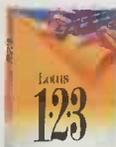
Finance from under

**£54\***

Per Month  
See example

### Software Applications\*\*

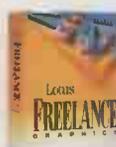
Claim your FREE software bundle with all above Colossus systems. This superb range of pre-loaded and ready to use software applications includes, the superb multi-tasking 32-bit version of Lotus SmartSuite for OS/2, IBM OS/2 Warp, Pacioli 2000 Business Accounts, Fun School, the best shareware games and other programs. Windows 95 options are also available.



Lotus 1-2-3 spread sheet is the worlds best spread sheet package



Lotus Ami Pro word processor with every advanced feature



Lotus Freelance Graphics presentation and drawing package



Lotus CC-Mail single user electronic mail licence



IBM Works is a superb easy to use collection of 5 great programs inc. WP, spread sheet, charting, database & reporting



FaxWorks allows you to send and receive faxes easily (modem required)



IBM Personal to Personal (via telephone or network) allows collaborative working on your PC



Personal Information Manager allows you to manage your time more effectively



CompuServe Information Manager and Internet Connection provide graphical interfaces to these services (modem required)

**CALL NOW!**

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

# Ultimate Performance Incredible Value!

These state-of-the-art systems from Colossus provide the ultimate performance and expandability at prices that only Time could achieve with our buying power. Take a closer look at these incredible high specification products from the performance PC manufacturer.

All systems come with a truly expandable midi-tower case with 8 drive bays, and have a minimum of 8Mb or 16Mb RAM and minimum hard disk capacity of 850Mb

or 1.08Gb. The software bundle shown below (worth over £1000) includes Lotus SmartSuite and is normally £99 extra with these systems but is available FREE for a limited period.

These systems are suitable for the power user who wants high specification and expandability. Windows 95 based software bundles are also available for a small extra charge.

Telephone lines open until 8 p.m.  
All offers end 9th December

## 100MHz Pentium®

- ◆ Intel 100MHz Pentium® processor
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 850Mb, 1.08Gb or 1.6Gb enhanced IDE (Fast ATA) hard disk with 256 hard disk cache,
- ◆ 256 external SRAM cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional) and super-fast 64-bit Windows accelerator
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 fast serial and keyboard ports
- ◆ Midi-tower case with 8 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 enhanced keyboard and Microsoft compatible mouse
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite (see below)
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

£1099 +VAT

1.08Gb 8Mb model	£1149
1.6Gb 8Mb model	£1249
16Mb RAM models	+£200
Multimedia models	+£99

Finance from under **£60\*** Per Month  
See example

## 120MHz Pentium®

- ◆ Intel 120MHz Pentium® processor
- ◆ Intel Trinton Chipset
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 1.08Gb or 1.6Gb enhanced IDE (Fast ATA) hard disk with 256 hard disk cache,
- ◆ 256 external SRAM cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional) and super-fast 64-bit Windows accelerator
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 Fast serial and keyboard ports
- ◆ Midi-tower case with 8 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 enhanced keyboard and Microsoft compatible mouse
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

£1299 +VAT

1.6Gb 8Mb model	£1399
16Mb RAM models	+£200
Multimedia models	+£99

Finance from under **£70\*** Per Month  
See example

## 133MHz Pentium®

- ◆ Intel 133MHz Pentium® processor
- ◆ Intel Trinton Chipset
- ◆ 8Mb or 16Mb RAM expandable to 128Mb
- ◆ 1.08Gb or 1.6Gb enhanced IDE (Fast ATA) hard disk with 256 hard disk cache,
- ◆ 256 external SRAM cache
- ◆ 3.5" 1.44Mb floppy drive
- ◆ PCI bus with 4 PCI slots
- ◆ PCI bus graphics with 1Mb video RAM (2Mb optional) and super-fast 64-bit Windows accelerator
- ◆ 14" SVGA colour screen (15" optional)
- ◆ Enhanced PCI IDE hard and floppy controller
- ◆ Parallel, 2 Fast serial and keyboard ports
- ◆ Midi-tower case with 8 drive bays and 7 expansion slots (4 PCI)
- ◆ 102 enhanced keyboard and Microsoft compatible mouse
- ◆ Multimedia models include double or quad speed CD-ROM drive, 16-bit sound card and twin stereo speakers
- ◆ Software bundle including Lotus SmartSuite
- ◆ 100 Hours FREE Internet access worth over £300 (modem required)

£1399 +VAT

1.6Gb 8Mb model	£1499
16Mb RAM models	+£200
Multimedia models	+£99

Finance from under **£75\*** Per Month  
See example

\*APR **19.8%**

Finance Example: Cash Purchase £799 +VAT =£961.15 Inc. delivery & VAT. Credit Purchase: 10% (£96.12) deposit and 24 equal monthly payments of £43.29. Total Price £1134.36 including delivery & VAT. Finance is available subject to status. Written details are available on request. Be sure you can afford the payments before entering into a credit agreement.



**Pacioli 2000 Business**  
Accounts is a full-feature package that outperforms many packages costing over £500



**IBM OS/2 Warp v3** is the latest and most powerful 32-bit, multi-tasking operating system



**PC DOS 7 (full version)** is the latest version of DOS and gives you upto 40K more RAM than version 6.22



**Fun School 4** covers the essential elements of the national curriculum



**Fun School Maths** educational package covering all the essentials



**Doom** virtual reality graphics game - the world's most popular game



**Raptor** Flight simulator / Warship shoot'em up action crazed guns blazing game



**Blake Stone** graphics adventure game set in a high tech space station



**Epic Pinball** professional arcade game with all the usual features

**CALL NOW!**  
Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT



# Multimedia Tower



## System Specification

- ◆ 486DX2-66 or 486-DX4-100 processor
- ◆ 540Mb or 850Mb enhanced IDE hard disk
- ◆ 4Mb or 8Mb RAM (max 64Mb)
- ◆ 1.44Mb 3.5" floppy drive
- ◆ Pentium® technology upgradeable
- ◆ 14" SVGA colour screen with 16-bit SVGA graphics
- ◆ Expandable Omega mini-tower case with 5 bays and 7 slots
- ◆ 102 Keyboard and Microsoft compatible mouse
- ◆ 12 Months warranty expandable to 5 years

### Multimedia Hardware

- ◆ Double speed or quad speed IDE CD-ROM drive
- ◆ 16-bit high quality sound card
- ◆ Twin stereo speaker system

### Fax and Internet Access

- ◆ Models 3 and 4 also include the following for a limited period:- BABT approved fax and data modem
- ◆ 100 Hours FREE Internet access from IBM

### Infaware Encyclopaedias

- ◆ Exploring Animals: covers 195 different animals and their behaviours with video footage and photographs
- ◆ Amazing Journeys: 1000 years of exploration, detailed animated journeys and discoveries

- ◆ World of Knowledge: Animated encyclopaedia covering 38 subjects
- ◆ World of Pharaohs: Interactive encyclopaedia of ancient Egypt with animation and maps



## Software\*\*

See software section for details

The superb 32-bit multitasking version of Lotus SmartSuite for OS/2 with the following programs:-

- ◆ Lotus 1-2-3 spreadsheet
- ◆ Lotus Ami Pro word processor
- ◆ Lotus Freelance presentation graphics
- ◆ Lotus CC:Mail licence
- ◆ Pacioli 2000 Business Accounts suite
- ◆ PC DOS 7 - the latest version
- ◆ IBM OS/2 Warp 32-bit operating system
- ◆ IBM Works easy to use pack
- ◆ IBM Personal information Manager
- ◆ IBM FaxWorks
- ◆ IBM Person-to-Person
- ◆ CompuServe information manager and Internet access (modem required)
- ◆ Doom arcade game
- ◆ Epic Pinball game
- ◆ Blake Stone game

Fun School suite covering all the essential elements of the National Curriculum

- ◆ Fun School 4 Educational Pack
- ◆ Fun School Maths pack
- ◆ Fun School 5 In Time
- ◆ Fun School Paint and Create



Telephone lines open until 8 p.m. All offers end 9th December

The multimedia tower systems from Time feature top quality advanced mini-tower PC systems from Omega, and come fitted with full-feature multimedia and pre-loaded with superb Lotus SmartSuite software and a range of other educational and leisure applications that includes 5 encyclopaedias and

the full suite of educational software from Fun School. Models 3 and 4 also include an integrated fax and data modem and also included is 100 hours of free access to the internet from IBM. At prices of just £599 for a full-feature multimedia PC, there simply is no better value!

## Finance from under

£33\* Per Month <sup>\*APR</sup> 19.8%

Finance Example:  
Cash Purchase: £599 + VAT = £726.15 inc. delivery & VAT. Credit Purchase: 10% (£72.62) deposit and 24 equal monthly payments of £32.68. Total Price £856.94 inc. delivery & VAT.

Multimedia Tower 1  
486DX2-66

with 540Mb hard disk and 4Mb RAM

Multimedia Tower 2  
486DX2-66

with 540Mb hard disk and 8Mb RAM

Multimedia Tower 3  
486DX4-100

with 850Mb hard disk, 4Mb RAM and modem

Multimedia Tower 4  
486DX4-100

with 850Mb hard disk, 8Mb RAM and modem

£599 +VAT

£699 +VAT

£699 +VAT

£799 +VAT

Finance from under £33\* Per Month See example

Finance from under £38\* Per Month See example

Finance from under £38\* Per Month See example

Finance from under £44\* Per Month See example

CALL NOW!

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

01282 777 111

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

# Multimedia Time Machines 95



## System Specification

- ◆ 486 Models: 486DX2-66 or 486DX4-100 processors
- ◆ Pentium® Models: Pentium® processor 75, 90, 100, 120 or 133MHz
- ◆ 8Mb or 16Mb RAM expandable to 64/128Mb
- ◆ 540Mb, 850Mb, 1.08Gb or 1.6Gb fast enhanced IDE hard disks with upto 256K cache
- ◆ 1.44Mb floppy drive
- ◆ Super fast local bus SVGA graphics controller with 1Mb or 2Mb video RAM
- ◆ 14", 15" or 17" SVGA low radiation colour screen
- ◆ Omega/Mitac desktop case with 4 drive bays and 7 slots. Models 1, 2 and 3 also available in Omega mini-tower case. Model 5 features Colossus Midi-Tower case with 8 drive bays
- ◆ 102 Keyboard and Microsoft compatible mouse
- ◆ Microsoft Windows® 95
- ◆ 12 Months warranty extendable to 5 years

### Multimedia Hardware

- ◆ Double speed or quad speed IDE CD-ROM drive
- ◆ 16-bit high quality sound card
- ◆ Twin stereo speaker system
- ◆ PC joystick

### Fax & Internet Pack

- ◆ BABT approved 14.4 data and fax modem
- ◆ Easy to use fax software
- ◆ Communications software
- ◆ Introductory subscription to CompuServe with Internet mailbox



Optional: Advanced PC TV system with Teletext (£160) +VAT



## Software\*\*

See software section for details

### Business Software

- ◆ Lotus software suite including Lotus 1-2-3, Ami Pro, Approach, Organizer 2, SmartPics and Lotus Training
- ◆ GSP Pressworks and Designworks
- ◆ TurboCAD for Windows
- ◆ Organize Your Way
- ◆ CV & Job Search Pro
- ◆ Pocioli 2000 Business Accounts
- ◆ Masterclips SE and Picture This!
- ◆ Quicken v4 personal finance pack

### Educational Software

- ◆ Fun School 4, Spelling, In Time, Paint and Create and Maths
- ◆ Computerworks, Bodyworks and Autoworks
- ◆ EZ Language French, German and Spanish

### Leisure Software

- ◆ PC Paintbrush
- ◆ Arts & Letters Draw, Doom, Blake Stone, Pinball and Raptor Games

### CD Multimedia Software

- ◆ Microsoft Encarta '95
- ◆ Encyclopaedia CD
- ◆ Time Almanac CD
- ◆ UFO for Windows CD
- ◆ Dinosaur Museum CD
- ◆ Bodyworks CD
- ◆ EZ Language CD
- ◆ World Atlas MPC CD
- ◆ WinTutor 95 CD
- ◆ Infopedia Encyclopaedia CD



The new Multimedia Time Machines are powerful, high specification 486 and Pentium systems that feature a minimum of 8Mb or 16Mb RAM and have been optimised for Microsoft Windows® 95. Excellent business software from Lotus and other leading manufacturers is included together with a range of educational and leisure software. All are fully multimedia ready

with fitted CD-ROM drives, 16-bit sound cards and a superb range of CD multimedia titles. Also included is the 14.4 Fax and Internet Pack allowing these systems to function as a powerful fax machine and allowing you to get on-line to services such as CompuServe and the Internet. (Models 1, 2 and 3 are also available in mini-tower options.)

\*APR

# 0%

INTEREST FREE CREDIT

Interest Free Credit is available subject to status. Written quotations are available on request. Be sure you can afford the payments before entering into a credit agreement. See page ii for Interest Free example.

Telephone lines open until 8 p.m.  
All offers end 9th December



TIMESB

14.4 Modem  
Included

### Multimedia Time Machine 95/1 486DX2-66

486DX2-66 with 8Mb RAM, 540Mb hard disk, and 14" Screen

**£39\***  
Per Month

£156.65 deposit and 24 monthly payments of £58.00 OR £612.65 deposit and 24 monthly payments of £39.00  
Total price £1299.00+VAT = £1548.65 inc delivery & VAT. \*APR 0%

Mini-Tower model .....+£10

### Multimedia Time Machine 95/2 486DX4-100

486DX4-100 with 8Mb RAM, 850Mb hard disk and 14" screen

**£49\***  
Per Month

£178.15 deposit and 24 monthly payments of £62.00 OR £490.15 deposit and 24 monthly payments of £49.00  
Total price £1399.00+VAT = £1666.15 inc delivery & VAT. \*APR 0%

14" to 15" upgrade .....+£99  
Mini-Tower model .....+£10

### Multimedia Time Machine 95/3 75MHz Pentium®

75MHz Pentium® with 8Mb RAM, 850Mb hard disk, 64-bit PCI graphics and 14" screen

**£59\***  
Per Month

£186.40 deposit and 24 monthly payments of £69.00 OR £426.40 deposit and 24 monthly payments of £59.00  
Total price £1549.00+VAT = £1842.40 inc delivery & VAT. \*APR 0%

90MHz Pentium® upgrade .....+£79  
100MHz Pentium® upgrade .....+£179  
14" to 15" upgrade .....+£99  
Mini-Tower model .....+£10

### Multimedia Time Machine 95/4 75MHz Pentium®

75MHz Pentium® Colossus notebook with 16Mb RAM, 1.08Gb hard disk, Triton chipset, 64-bit PCI graphics with 2Mb video RAM and 15" screen

**£69\***  
Per Month

£245.90 deposit and 24 monthly payments of £91.00 OR £773.90 deposit and 24 monthly payments of £69.00  
Total price £2049 +VAT = £2429.90 inc delivery & VAT. \*APR 0%

90MHz Pentium® upgrade .....+£79  
100MHz Pentium® upgrade .....+£179  
15" to 17" upgrade .....+£199

### Multimedia Time Machine 95/5 90MHz Pentium®

90MHz Pentium® Colossus Midi-Tower with Triton Chipset, 16Mb RAM, 1.6Gb hard disk, 64-bit PCI graphics with 2Mb video RAM and 15" screen

**£79\***  
Per Month

£286.40 deposit and 24 monthly payments of £104.00 OR £886.40 deposit and 24 monthly payments of £79.00  
Total price £2349 +VAT = £2782.40 inc delivery & VAT. \*APR 0%

100MHz Pentium® upgrade .....+£100  
120MHz Pentium® upgrade .....+£250  
133MHz Pentium® upgrade .....+£350  
15" to 17" upgrade .....+£199

CALL NOW!

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

5 8 9

# Multimedia PowerStation '95



## System Specification

- ◆ 486 Models: 486DX2-66 or 486DX4-100 processors
- ◆ Pentium® Models: Pentium® 75, 90, 100, 120 or 133Mhz processor
- ◆ 8Mb or 16Mb RAM expandable to 64 / 128Mb
- ◆ 540Mb, 850Mb, 1.08Gb or 1.6Gb fast Enhanced IDE hard disks with up to 256K cache
- ◆ 1.44Mb floppy drive
- ◆ Super fast local bus SVGA graphics controller with 1Mb or 2Mb video RAM
- ◆ 14", 15" or 17" SVGA low radiation colour screen
- ◆ Omega/Mitac desktop case with 4 drive bays and 7 slots. Model 1,2 and 3 also available in Omega mini-tower case. Model 5 features Colossus midi-tower case with 8 drive bays
- ◆ 102 Keyboard and Microsoft compatible mouse
- ◆ Microsoft Windows® 95
- ◆ 12m Warranty extendable to 5 years

### Multimedia Hardware

- ◆ Double Speed or quad speed IDE CD-ROM drive
- ◆ 16-bit high quality sound card
- ◆ Twin stereo speaker system
- ◆ PC Joystick



Optional: Advanced PC TV system with Teletext ....£160 Extra  
Optional: Fax & Internet Packs .....See section at the back



## Software\*\*

See software section for details.

- ◆ Lotus 1-2-3 v5 spread sheet
- ◆ Lotus Ami Pro v3.1 word processor
- ◆ Lotus Approach v3 database
- ◆ Lotus Organizer v2
- ◆ Lotus SmartPics graphics
- ◆ Lotus Training for 1-2-3, Ami Pro and Approach
- ◆ Intuit Quicken v4 personal finance pack
- ◆ GSP Pressworks desktop publishing pack
- ◆ GSP Designworks art and graphics pack
- ◆ Pacioli 2000 Business Accounts

### Multimedia Software

- ◆ Microsoft Encarta '95 CD Encyclopaedia
- ◆ Time Almonac CD
- ◆ EZ Language Multimedia CD - Learn French, German, Spanish and more
- ◆ Play and Learn educational CD
- ◆ UFO for Windows CD
- ◆ Dinosaur Museum CD
- ◆ Bodyworks CD

## Finance from under

£49\*

Per Month

Finance Example  
Cash Purchase: £898 +VAT =£1077.48 inc. delivery & VAT. Credit Purchase: 10% (£107.75) deposit and 24 equal monthly payments of £48.49. Total Price £1271.51 inc. delivery & VAT.

\*APR

19.8%



Telephone lines open until 8 p.m. All offers end 9th December

If you are looking for a powerful complete multimedia solution, the Multimedia PowerStation 95 represents the best value. These 486 and Pentium® systems have a high specification which has been optimised for Windows 95 and includes a minimum of 8Mb or 16Mb RAM, large hard disks up to 1.6Gb, fast controllers and plenty of expansion potential.

All are fully multimedia ready with fitted CD-ROM drives, 16-bit sound cards, an excellent range of educational CD titles including

Microsoft Encarta, Bodyworks and EZ Language. Low cost Fax and Internet packs and PC TV with Teletext options are also available.

Also included is a range of excellent business software from Lotus, Intuit and GSP which will handle all your requirements for word processing, filing, number crunching, organising, graphics, accounts and desktop publishing. At these special introductory prices, with the finance option from under £49 these systems are a great buy.

Multimedia PowerStation '95/1 486DX2-66	Multimedia PowerStation '95/2 486DX4-100	Multimedia PowerStation '95/3 75MHz Pentium®	Multimedia PowerStation '95/4 75MHz Pentium®	Multimedia PowerStation '95/5 90MHz Pentium®
486DX2-66 with 8Mb RAM, 540Mb hard disk and 14" screen	486DX4-100 with 8Mb RAM, 850Mb hard disk and 14" screen	75MHz Pentium® processor with 8Mb RAM, 850Mb hard disk, 64-bit PCI graphics and 14" screen	75MHz Pentium® processor Colossus desktop with 16Mb RAM, 1.08Gb hard disk, Triton chipset, 64-bit PCI graphics with 2Mb video RAM and 15" screen	90MHz Pentium® processor Colossus Midi-Tower with 16Mb RAM, 1.6Gb hard disk, Triton chipset, 64-bit PCI graphics with 2Mb video RAM and 15" screen
<b>£898</b>	<b>£998</b>	<b>£1098</b>	<b>£1498</b>	<b>£1698</b>
+VAT	+VAT	+VAT	+VAT	+VAT
Mini-tower model .....+£10	14" to 15" upgrade .....+£99 Mini-tower model .....+£10	90MHz Pentium® .....+£79 100MHz Pentium® .....+£179 14" to 15" upgrade .....+£99 Mini-tower model .....+£10	90MHz Pentium® .....+£79 100MHz Pentium® .....+£179 15" to 17" upgrade .....+£199	100MHz Pentium® .....+£100 120MHz Pentium® .....+£250 133MHz Pentium® .....+£350 15" to 17" upgrade .....+£199

**CALL NOW!**  
Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

# Multimedia Perfect Office



## System Specification

- ◆ 486 Models: 486DX2-66 or 486DX4-100 processors
- ◆ Pentium® Models: Intel Pentium® 75, 90, 100, 120 or 133MHz processor
- ◆ 8Mb or 16Mb RAM expandable to 64 / 128Mb
- ◆ 540Mb, 850Mb, 1.08Gb or 1.6Gb fast enhanced IDE hard disk with up to 256K cache
- ◆ 1.44Mb floppy drive
- ◆ Super fast local bus SVGA graphics controller with 1Mb or 2Mb video RAM
- ◆ 14", 15" or 17" SVGA low radiation colour screen
- ◆ Omega/Mitac desktop case with 4 drive bays and 7 slots. Model 5 features Colossus midi-tower case with 8 drive bays
- ◆ 102 Keyboard and Microsoft compatible mouse
- ◆ Microsoft Windows 95
- ◆ 12 Month warranty extendable to 5 years

### Multimedia Hardware

- ◆ Double Speed or quad speed IDE CD-ROM drive
- ◆ 16-bit High quality sound card
- ◆ Twin stereo speaker system

- ◆ PC Joystick
- ◆ Optional: Advanced PC TV system with Teletext (£160)
- Optional: Fax & Internet Packs (see section at back)

### Leisure Software

- ◆ PC Paintbrush
- ◆ Arts & Letters Draw
- ◆ Doom, Blake Stone, Pinball and Raptor shareware games



## Software\*\*

See software section for details

### Novell PerfectOffice Suite including:-

- ◆ WordPerfect 6.0 word processing package
- ◆ Quattro Pro for Windows spread sheet
- ◆ Presentations graphics package
- ◆ InfoCentral organizer
- ◆ GroupWise electronic mailing system

### Other Business Software

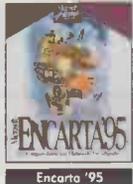
- ◆ GSP Pressworks and Designworks
- ◆ TurboCAD for Windows
- ◆ Organize Your Way
- ◆ CV & Job Search Pro
- ◆ Pocioli 2000 Business Accounts
- ◆ Masterclips SE and Picture This!

### Educational Software

- ◆ Fun School 4, Spelling, In Time, Paint and Create and Maths
- ◆ Typing Tutor
- ◆ Computerworks
- ◆ Bodyworks
- ◆ Autoworks
- ◆ EZ Language French German and Spanish

### CD Multimedia Software

- ◆ Microsoft Encarta® '95 Encyclopaedia CD
- ◆ Time Almanac CD
- ◆ Bodyworks multimedia CD
- ◆ UFO for Windows CD
- ◆ Dinosaur Museum CD



Telephone lines open until 8 p.m. All offers end 9th December

The new Perfect Office Systems from Time are powerful, high specification 486 and Pentium® systems that feature a minimum of 8Mb or 16Mb RAM and have been optimised for Microsoft Windows 95. Excellent business software from Novell and other leading manufacturers is included together with a range of educational and leisure

software. All are fully multimedia ready with fitted CD-ROM drives, 16-bit sound cards and a superb range of CD multimedia titles.

These systems are suited to the power user needing powerful software in the form of Novell PerfectOffice and are available on Interest Free Credit for a limited period only.

\*APR

0%

INTEREST FREE CREDIT

Interest Free Credit is available subject to status. Written quotations are available on request. Be sure you can afford the payments before entering into a credit agreement. See page 11 for Interest Free example.

Multimedia Perfect Office 1 486DX2-66	Multimedia Perfect Office 2 486DX4-100	Multimedia Perfect Office 3 75MHz Pentium®	Multimedia Perfect Office 4 75MHz Pentium®	Multimedia Perfect Office 5 90MHz Pentium®
486DX2-66 with 8Mb RAM, 540Mb hard disk, and 14" screen	486DX4-100 with 8Mb RAM, 850Mb hard disk, and 14" screen	75MHz Pentium® processor with 8Mb RAM, 850Mb hard disk, 64-bit PCI graphics and 14" screen	75MHz Pentium® Colossus desktop processor with 16Mb RAM, 1.08Gb hard disk, Triton chipset, 64-bit PCI graphics, 2Mb video RAM and 15" screen	90MHz Pentium® Colossus Midi-Tower with Triton chipset, 16Mb RAM, 1.6Gb hard disk, 64-bit PCI graphics, 2Mb video RAM and 15" screen
<b>£38*</b> Per Month	<b>£48*</b> Per Month	<b>£58*</b> Per Month	<b>£68*</b> Per Month	<b>£78*</b> Per Month
£159.15 deposit and 24 monthly payments of £53 OR £519.15 deposit and 24 monthly payments of £38 Total price £1199+VAT = £1431.15 Inc delivery & VAT. *APR 0%	£156.65 deposit and 24 monthly payments of £58 OR £396.65 deposit and 24 monthly payments of £48 Total price £1299+VAT = £1548.65 Inc delivery & VAT. *APR 0%	£188.90 deposit and 24 monthly payments of £64 OR £332.90 deposit and 24 monthly payments of £58 Total price £1449+VAT = £1724.90 Inc delivery & VAT. *APR 0%	£248.40 deposit and 24 monthly payments of £86 OR £680.40 deposit and 24 monthly payments of £68 Total price £1949+VAT = £2312.40 Inc delivery & VAT. *APR 0%	£288.90 deposit and 24 monthly payments of £99 OR £792.90 deposit and 24 monthly payments of £68 Total price £2249+VAT = £2664.90 Inc delivery & VAT. *APR 0%
	14" to 15" Upgrade ..... £99	90MHz Pentium® upgrade .. £79 100MHz Pentium® upgrade £179 14" to 15" upgrade ..... £99	90MHz Pentium® upgrade .. £79 100MHz Pentium® upgrade .. £179 15" to 17" upgrade ..... £199	100MHz Pentium® upgrade £100 120MHz Pentium® upgrade £250 133MHz Pentium® upgrade £350 15" to 17" upgrade ..... £199

CALL NOW!

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

01282 777 111

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simanstone,  
Bumley, BB12 7GT



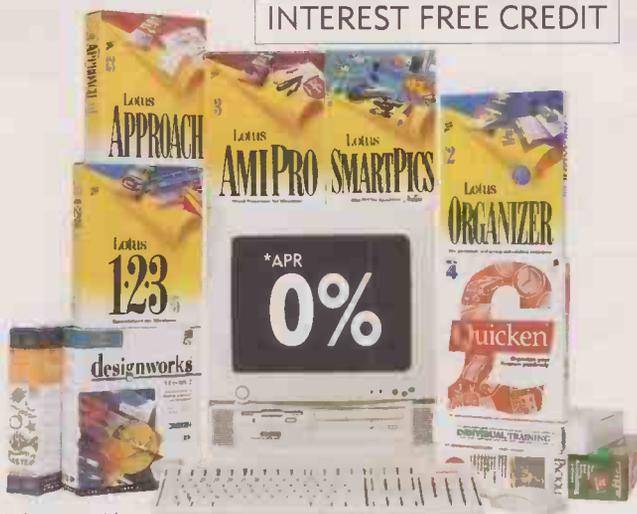
# Compaq Presario Multimedia PowerStations



## System Specification

- ◆ 486SX2-66 or 486DX4-100 processor
- ◆ 4Mb or 8Mb RAM expandable to 64Mb
- ◆ 420Mb hard disk
- ◆ 3.5" 1.44Mb floppy drive
- ◆ Local Bus SVGA graphics
- ◆ Compact 3 bay case with 2 slots
- ◆ Serial, parallel, joystick, MIDI and mouse ports
- ◆ 14" Low radiation NI SVGA colour screen
- ◆ 16-bit stereo sound card, microphone and speakers
- ◆ Double speed CD-ROM drive
- ◆ Integrated fax/data modem with telephone answering and CompuServe
- ◆ MS DOS 6.2, Windows® 3.1 (free upgrades to Windows 95 from Compaq), Tabworks, Welcome Centre, Control Centre and Learning Centre

INTEREST FREE CREDIT



## Software\*\*

See software section for details

- ◆ Lotus 1-2-3 v5 spread sheet
- ◆ Lotus Ami Pro v3.1 word processor
- ◆ Lotus Approach v3 database
- ◆ Lotus Organizer v2
- ◆ Lotus SmartPics graphics
- ◆ Lotus Training for 1-2-3, Ami Pro and Approach
- ◆ New Intuit Quicken v4 personal finance pack
- ◆ GSP Pressworks 2 desktop publishing pack
- ◆ GSP Designworks 2 art & graphics pack
- ◆ Pacioli 2000 Business Accounts
- ◆ Microsoft Works v3 all-in-one package
- ◆ MS Money finance pack
- ◆ MS Entertainment pack
- ◆ Microsoft Encarta® '95 Encyclopaedia
- ◆ EZ Language French, German, Spanish & more
- ◆ The Ultimate Human Body

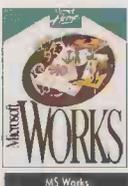
Compaq Presario Multimedia PowerStations provide you with famous brand, high quality solutions for home and business use. Only systems from Time come with additional software including the Lotus Business Suite, GSP graphics and DTP packages and New Quicken v4 personal finance pack. Also included are some excellent CD titles including Microsoft® Encarta, EZ Language and The Ultimate Human Body.

All systems feature high quality multimedia and also include fax & data modem with answerphone facilities.

Presario  
PowerStation A  
486SX2-66, 4Mb  
and modem

£29  
Per Month

£382.65 deposit, then 24 monthly payments of £29. Total price £899 +VAT = £1078.65 inc delivery and VAT. \*APR 0%.



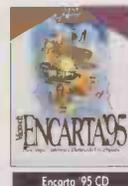
MS Works



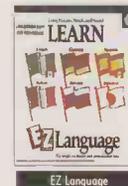
MS Money



MS Entertainment Pack



Encarta '95 CD



EZ Language



The Ultimate Human Body

Presario  
PowerStation B  
486SX2-66, 8Mb  
and modem

£100  
EXTRA +VAT

Presario  
PowerStation C  
486DX4-100, 8Mb  
and modem

£200  
EXTRA +VAT

## BUY NOW...

Pay only £137.65 deposit with nothing more to pay for 6 months

These new Time Machines for the business user feature a minimum of 8MB RAM and have been optimised for Microsoft Windows 95. They all come with excellent software and can be configured with Multimedia options, Advanced PC TV and Fax/Data modems if required. All systems are available on Interest Free Credit with a incredible buy now, pay later offer.

Telephone lines open until 8 p.m. All offers end 9th December



## ...PAY LATER

After 6 months pay just £49 per month for 24 months on Interest Free Credit. \*APR 0%.



## System Specification

- ◆ 486 Models: 486DX2-66 or 486DX4-100 Processors
- ◆ Pentium Models: Pentium® 75, 90, 100Mhz processor
- ◆ 8Mb RAM expandable to 64/128Mb
- ◆ 540Mb or 850Mb fast Enhanced IDE hard disks with up to 256K cache
- ◆ 1.44Mb floppy drive.
- ◆ Super fast Local bus SVGA graphics controller with 1Mb Video RAM
- ◆ 14" or 15" SVGA low radiation colour screen
- ◆ Omega/Mitac desktop case with 4 drive bays and 7 slots.
- ◆ 102 Keyboard and Microsoft compatible mouse
- ◆ Microsoft Windows 95
- ◆ 12m Warranty extendible to 5 Years

Optional: Advanced PC TV system with Teletext .....£160  
Optional: Multimedia Hardware  
Optional: Fax & Internet Packs

Time Machine 95 /A  
486DX2-66 with 8Mb RAM,  
540Mb hard drive and 14" screen

£49  
Per Month

\*£137.65 deposit, nothing to pay for 6 months and then 24 monthly payments of £49. Total price £1099 +VAT = £1313.65 inc delivery and VAT. \*APR 0%.

Time Machine 95 /B  
486DX4-100 with 8Mb RAM,  
850Mb hard drive and 14" screen

£53  
Per Month

\*£159.15 deposit, nothing to pay for 6 months and then 24 monthly payments of £53. Total price £1199 +VAT = £1431.15 inc delivery and VAT. APR \*0%.

Time Machine 95 /C  
75MHz Pentium® with 8Mb RAM,  
850Mb hard drive, 64-bit PCI  
graphics and 14" screen

£62  
Per Month

\*£178.15 deposit, nothing to pay for 6 months and then 24 monthly payments of £62. Total price £1399 +VAT = £1666.15 inc delivery and VAT. APR \*0%.



## Software\*\*

See software section for details

### Business Software

- ◆ Lotus Software suite including Lotus 1-2-3, Ami Pro, Approach, Organizer 2, SmartPics and Lotus Training
- ◆ GSP Pressworks and Designworks
- ◆ TurboCAD for Windows
- ◆ Organize Your Way
- ◆ CV & Job Search Pro
- ◆ Pacioli 2000 Business Accounts
- ◆ Masterclips SE and Picture This!

### Educational Software

- ◆ Fun School 4, Fun School Maths and Typing Tutor
- ◆ Computerworks, Bodyworks and Autoworks
- ◆ EZ Language French, German and Spanish

### Leisure Software

- ◆ PC Paintbrush
- ◆ Arts & Letters Draw
- ◆ Doom, Blake Stone, Pinball and Raptor shareware games

CALL NOW!

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

01282 777 111

TIME  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

# Multimedia Family PC



## System Specification

- ◆ 486DX2-66, 486DX4-100 or Pentium 75 processor
- ◆ 540Mb Enhanced IDE hard disk
- ◆ 4Mb or 8Mb RAM (Max. 64Mb)
- ◆ 1.44Mb 3.5" floppy drive
- ◆ Pentium technology upgradeable
- ◆ Local Bus SVGA graphics with 1Mb
- ◆ 14" SVGA colour screen
- ◆ Omega/Mitac expandable case with 4 bays and 7 slots
- ◆ 102 Keyboard and mouse
- ◆ 12 months warranty expandable to 5 years

### Multimedia Hardware

- ◆ Double Speed or Quad Speed IDE CD-ROM drive
- ◆ 16-bit high quality sound card
- ◆ Twin stereo speaker system
- ◆ Free 100 hours Internet access worth over £300 (modem required)

Optional:  
Fax & Internet Packs  
Call for details

Optional:  
PC TV with Teletext  
£160 +VAT



## Software\*\*

See software section for details

The superb 32-bit multitasking version of Lotus SmartSuite for OS/2 with the following programs:-

- ◆ Lotus 1-2-3 Spreadsheet
- ◆ Lotus Ami Pro WordProcessor
- ◆ Lotus Freelance Presentation Graphics
- ◆ Lotus CC:Mail Licence
- ◆ Paciolli 2000 Accounts Suite
- ◆ PC DOS 7 -the latest version
- ◆ IBM OS/2 Warp 32-bit operating System
- ◆ IBM Works easy to use pack
- ◆ IBM Personal Information Manager
- ◆ IBM FaxWorks, Person-to-person
- ◆ CompuServe Information Manager & Internet Access (Modem required)
- ◆ DOOM, Epic Pinball, Raptor and Blake Stone shareware games

Fun school suite covering all the essential elements of the National Curriculum.

- ◆ Fun School 4 educational pack, Maths pack, Spelling, Fun School 5 in Time and Paint & Create

### InfoWare Encyclopaedias

- ◆ Exploring Animals: Covers 195 different animals and their behaviour with video footage and photographs.
- ◆ Amazing Journeys: 1000 years of exploration, detailed animated journeys and discoveries
- ◆ World of Knowledge: Animated encyclopaedia covering 38 subjects
- ◆ World of Pharaohs: Interactive encyclopaedia of ancient Egypt with animation and maps
- ◆ History in Motion: Interactive encyclopaedia covering the history and development of transport



The new Family PC from TIME represents the best value Multimedia Educational PC system for the home. Models feature top quality advanced PC systems from Omega/Mitac, fitted with full-feature multimedia and pre-loaded with superb Lotus SmartSuite software and a range of other educational and leisure applications. At these special limited offer prices and with INTEREST FREE CREDIT for £29\* per month these deals are simply unbeatable.

### Multimedia Family PC /A 486DX2-66

With 540Mb drive and 4Mb RAM

**£799** +VAT

Interest Free Credit **£29**\* Per Month

£265.15 deposit and 24 Monthly Payments of £29.  
Total price £799 + VAT = £961.15 Inc. Delivery & VAT.  
APR 0%

### Multimedia Family PC /B 486DX2-66

With 540Mb drive and 8Mb RAM  
+£139 +VAT

### Multimedia Family PC /C 486DX4-100

With 540Mb drive and 8Mb RAM

**£999** +VAT

Interest Free Credit **£39**\* Per Month

£260.15 deposit and 24 Monthly Payments of £39.  
Total price £999 + VAT = £1196.15 Inc. Delivery & VAT.  
APR 0%

### Multimedia Family PC /D 75MHz Pentium\*

With 540Mb drive and 8Mb RAM  
+£100 +VAT

Telephone lines open until 8 p.m.  
All offers end 9th December

\*APR

**0%**

**INTEREST FREE CREDIT**

Interest Free Credit is available subject to status. Written quotations are available on request. Be sure you can afford the payments before entering into a credit agreement. See page 11 for Interest Free example.

**CALL NOW!**

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT



# Texas Instruments TFT Colour Notebook

## Mobile Comms Office

Time announce incredible deals on the top of the range Texas Instruments TFT and dual scan colour multimedia notebooks. These systems come complete with the best software applications including:- Lotus 1-2-3, Lotus Ami Pro, Lotus Organizer 2, Lotus Approach, Lotus SmartPics, Quicken v4 and AutoRoute Express.

All these systems also come with a complete Fax & Internet Pack including a BABT

approved Intel PCMCIA modem with appropriate fax and comms software. Fax your documents to anyone and connect to your PC to your base and many other on-line services with ease.

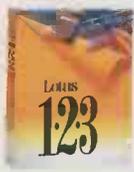
At just £49 per month on Interest Free Credit, these Mobile Comms Office Solutions are going fast. Hurry place your order today!

APPROVED for communication systems specified in the conditions for use subject to them

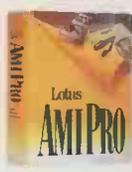
\*APR

# 0% INTEREST FREE CREDIT

Interest Free Credit is available subject to status. Written quotations are available on request. Be sure you can afford the payments before entering into a credit agreement. See page 11 for Interest Free example.



Lotus 1-2-3



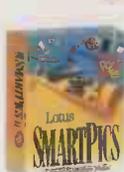
Lotus Ami Pro



Lotus Approach



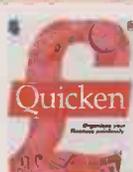
Lotus Organizer



Lotus SmartPics



AutoRoute



Quicken

### Notebook Specification

Texas Instruments latest 4000M models with built-in multimedia, Intel modem and Pre-loaded software. The Portable CD-ROM dock & Mega Bundle is also available as an option on Interest Free Credit.

- ◆ Intel 486DX2-50, 486DX4-75 or 486DX4-100 processor
- ◆ 4Mb or 8Mb RAM
- ◆ 455Mb or 520Mb IDE hard disk
- ◆ Superb large 10.5" VGA TFT or 9.5" Dual Scan colour screen
- ◆ 1Mb VESA video
- ◆ Built-in 16-bit sound card, microphone and speakers
- ◆ Built-in point mouse
- ◆ Adaptec fast SCSI-II port
- ◆ Optional CD-ROM drive clips on
- ◆ 1.44Mb floppy drive
- ◆ PCMCIA II/III and all standard ports
- ◆ MS-DOS 6.2 and Windows 3.1 (Free Windows 95 voucher)
- ◆ Intel PCMCIA fax & data modem with software

### Portable CD ROM & Mega CD Bundle

This is available on IF credit at extra cost (£26\* per month) and includes the following:

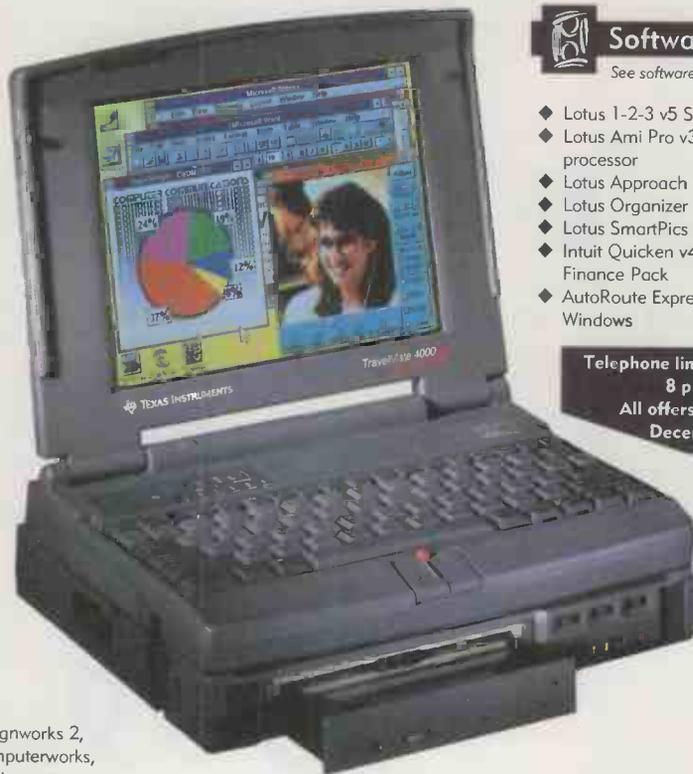
- ◆ Double speed CD-ROM drive
- ◆ Larger speaker system with controls for volume, balance and mix
- ◆ Microsoft headphones and external microphone
- ◆ NiMH battery giving option of AC or battery power
- ◆ SCSI II connector and SCSI II bay option
- ◆ Additional Software on Mega CD:-GSP Pressworks 2 and Designworks 2, TurboCAD for Windows, Pacioli 2000 Business Accounts, Computerworks, Bodyworks and Autoworks plus many more educational and leisure programs

### Software\*\*

See software section for details

- ◆ Lotus 1-2-3 v5 Spread sheet
- ◆ Lotus Ami Pro v3.1 Word processor
- ◆ Lotus Approach v3 Database
- ◆ Lotus Organizer v2
- ◆ Lotus SmartPics Graphics
- ◆ Intuit Quicken v4 Personal Finance Pack
- ◆ AutoRoute Express UK v3 for Windows

Telephone lines open until 8 p.m.  
All offers end 9th December



**TI COMMS OFFICE 4**  
486DX2-50 455Mb, 4Mb, Dual Scan

**£49\***  
Per Month

£240.15 deposit and 24 monthly payments of £79  
OR £960.15 deposit and 24 monthly payments of £49. Total price £1799 +VAT =£2136.15 inc. delivery & VAT. \*APR 0%  
8Mb model .....£149+VAT Extra

**TI COMMS OFFICE 5**  
486DX4-75 520Mb, 4Mb, TFT

**£69\***  
Per Month

£275.65 deposit and 24 monthly payments of £102  
OR £1067.65 deposit and 24 monthly payments of £69. Total price £2299 + VAT = £2723.65 inc. delivery & VAT \*APR 0%  
8Mb model .....£149+VAT Extra

**TI COMMS OFFICE 6**  
486DX4-100 520Mb, 8Mb, TFT

**£99\***  
Per Month

£335.15 deposit and 24 monthly payments of £124  
OR £935.15 deposit and 24 monthly payments of £99. Total price £2799 + VAT = £3311.15 inc. delivery & VAT \*APR 0%

**CD-ROM DOCK BUNDLE** £147.65 deposit and 24 monthly payments of £26. Total price £599 +VAT =£843.65 inc delivery & VAT. \*APR 0%

**CALL NOW!**  
Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

# Multimedia Office 95

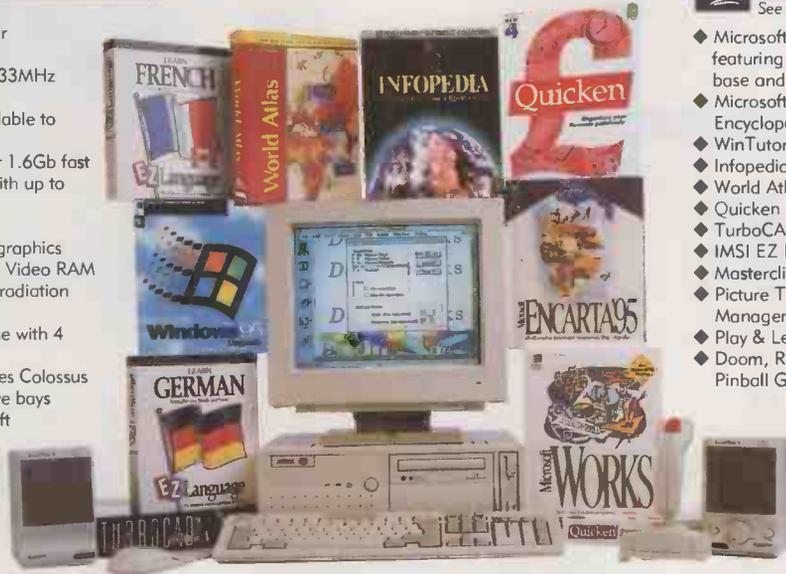


## System Specification

- ◆ 486 Models: 486DX2-66 or 486DX4-100 processors
- ◆ Intel 75, 90, 100, 120 or 133MHz Pentium® based processor
- ◆ 8Mb or 16Mb RAM expandable to 64/128Mb
- ◆ 540Mb, 850Mb, 1.08Gb or 1.6Gb fast Enhanced IDE hard disks with up to 256K cache
- ◆ 1.44Mb floppy drive
- ◆ Super fast local bus SVGA graphics controller with 1Mb or 2Mb Video RAM
- ◆ 14", 15" or 17" SVGA low radiation colour screen
- ◆ Omega / mitac desktop case with 4 drive bays and 7 slots. Model 5 features Colossus Midi-Tower case with 8 drive bays
- ◆ 102 Keyboard and Microsoft compatible mouse
- ◆ Microsoft Windows 95
- ◆ 12 months warranty extendable to 5 years

### Multimedia Hardware

- ◆ Double Speed or Quad Speed IDE CD-ROM drive
- ◆ 16-bit high quality sound card
- ◆ Twin stereo speaker system
- ◆ PC Joystick



Optional: Advanced PC TV system with Teletext ..... + £160  
 Optional: Fax & Internet Packs ..... see section at the back



## Software\*\*

See software section for details

- ◆ Microsoft Works v3 integrated package featuring word processing, spread sheet, data base and business graphics.
- ◆ Microsoft Encarta '95 Multimedia Encyclopaedia CD
- ◆ WinTutor 95 CD
- ◆ Infopedia Encyclopaedia
- ◆ World Atlas Multimedia CD
- ◆ Quicken v4 Personal Finance pack
- ◆ TurboCAD v2 for Windows CAD package
- ◆ IMSI EZ Language French, German & Spanish
- ◆ Masterclips SE Clipart
- ◆ Picture This! Graphics Management Pack
- ◆ Play & Learn Educational CD
- ◆ Doom, Raptor, Blake Stone and Pinball Games

Plus Models (£150 extra) also include the following additional software. Microsoft Office '95 Package which includes the following 4 programs (not pre-loaded)

- ◆ Microsoft Excel 95 spread sheet
- ◆ Microsoft Word 95 word processor
- ◆ Microsoft PowerPoint 95 presentation package
- ◆ Microsoft Organizer/Scheduler
- ◆ Time Almanac CD
- ◆ Dinosaur Museum CD
- ◆ UFO CD
- ◆ Bodyworks CD



## Finance from under

£49\*  
Per Month

Finance Example  
 Cash Purchase: £899 +VAT = £1078.65 inc. delivery & VAT.  
 Credit Purchase: 10% (£107.87) deposit and 24 equal monthly payments of £48.54 Total Price £1272.83 inc. delivery & VAT.

\*APR

19.8%

Telephone lines open until 8 p.m. All offers end 9th December

The Multimedia Office 95 Systems provide systems based around Microsoft's software solutions. These high specification systems have been optimised for Windows 95 and include a minimum of 8Mb or 16Mb RAM, large hard disk up to 1.6Gb, fast 486 and Pentium® processors and plenty of expansion potential. All are fully multimedia ready with fitted CD-ROM drives, 16-bit sound cards, an excellent

range of CD titles from Microsoft and others. Low cost Fax and Internet packs and PC TV with Teletext options are also available.

Multimedia Office 95 Plus models come with additional software which includes the new 32-bit version of Microsoft Office 95 and additional CD titles. With Finance options from under £49 these systems are going fast!

Multimedia Office 95/1 486DX2-66	Multimedia Office 95/2 486DX4-100	Multimedia Office 95/3 75MHz Pentium®	Multimedia Office 95/4 75MHz Pentium®	Multimedia Office 95/5 90MHz Pentium®
486DX2-66 with 8Mb RAM, 540Mb hard disk and 14" screen	486DX4-100 with 8Mb RAM, 850Mb hard disk and 14" screen	75MHz Pentium® processor with 8Mb RAM, 850Mb hard disk, 64-bit PCI graphics and 14" screen	75MHz Pentium® processor Colossus desktop with 16Mb RAM, 1.08Gb hard disk, Triton chipset 64-bit PCI graphics with 2Mb video RAM and 15" screen	90MHz Pentium® processor Colossus Midi-Tower with 16Mb RAM, 1.6Gb hard disk, Triton chipset, 64-bit PCI graphics with 2Mb video RAM and 15" screen
<b>£897</b>	<b>£997</b>	<b>£1097</b>	<b>£1497</b>	<b>£1697</b>
+VAT	+VAT	+VAT	+VAT	+VAT
Plus models with Office 95 ..... £1047	Plus models with Office 95 ..... £1147	90MHz Pentium® ..... +£79 100MHz Pentium® ..... +£179 14" to 15" upgrade ..... +£99 Plus models ..... +£199 Plus models with Office 95 ..... +£1247	90MHz Pentium® ..... +£79 100MHz Pentium® ..... +£179 15" to 17" upgrade ..... +£199 Plus models ..... +£199 Plus models with Office 95 ..... +£1647	100MHz Pentium® ..... +£100 120MHz Pentium® ..... +£250 133MHz Pentium® ..... +£350 15" to 17" upgrade ..... +£199 Plus models ..... +£199 Plus models with Office 95 ..... +£1847

CALL NOW!

Sales Lines Open  
 Mon-Fri 8.30am-7.00pm  
 Sat 9.00am-5.00pm

01282 777 111

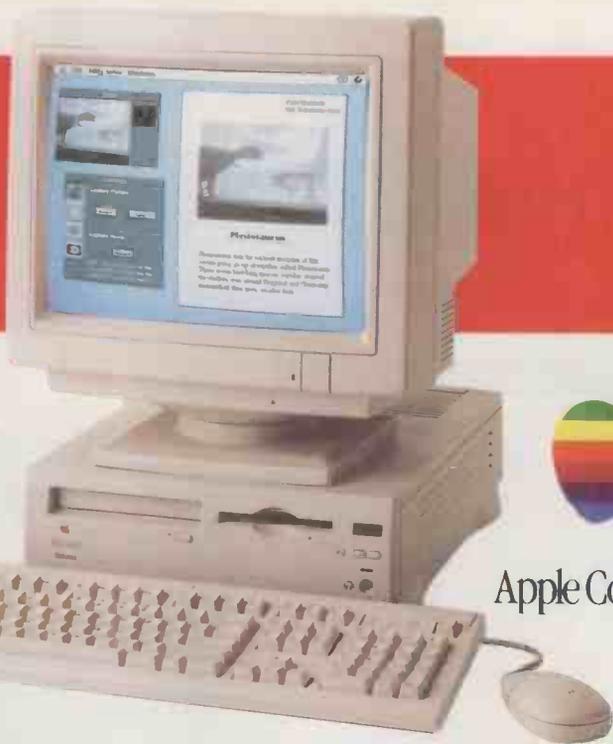
TIME  
 Computer Systems Ltd.

Granville House,  
 Blackburn Rd,  
 Simonstone,  
 Burnley, BB12 7GT





# Apple



Apple Computer

The following Apple Macintosh Performa systems offer a complete, ready to run, straight out of the box solution. They include the computer, colour display, keyboard and all the cables necessary to get your system up and running.

Finance from under

£46 \* \*APR 19.8%  
Per Month

Finance Example: Cash Purchase: £849 +VAT = £1019.90 inc. delivery & VAT. Credit Purchase: 10% (£101.99) deposit and 24 equal monthly payments of £45.90 Total Price £1203.59 inc. delivery & VAT.

## Macintosh Performa 630



### PC Specification

- ◆ 66/33 MHz Motorola 68LC040 with 32-bit data bus (66 MHz processor/33 MHz data bus)
- ◆ 4Mb of RAM expandable to 36Mb (8Mb on CD model)
- ◆ 500Mb hard disk
- ◆ 14" Performo Plus display (15" multiple scan display on CD models)
- ◆ 1Mb of DRAM display support
- ◆ 1.4Mb Apple SuperDrive floppy disk drive
- ◆ Keyboard, mouse, 2 serial ports, SCSI interface and video ports
- ◆ Communications expansion slot
- ◆ 8-bit stereo sound
- ◆ One sound-in port, front and rear headphone jacks
- ◆ Apple design keyboard and Apple desktop bus mouse II

630CD Models offer the following advantages:

- ◆ Integrated Apple CD 300i Plus CD-ROM drive
- ◆ 16-bit stereo CD playback

630CD Models with Apple Video/TV system offer the following advantages:

- ◆ Video and TV system
- ◆ Infra-red remote control
- ◆ Avid VideoShop software

### Performa 630

with 14" monitor and 4Mb RAM

£759 + VAT

### Performa 630CD Plus

with 15" monitor and 8Mb RAM

£969 + VAT

### Performa 630CD/TV Plus

with Apple Video/TV System with 15" monitor and 8Mb RAM

£1189 + VAT



### Software\*\*

- ◆ Apple System 7.5 software
- ◆ Claris Works 2.1 (Claris Works 3.0 on 6200 model) integrated software package
- ◆ At Ease 2.0 security package
- ◆ PC Exchange allows you to share and move files between your Macintosh and MS DOS or Windows environment

#### Performa Plus models also feature:

- ◆ Claris Organizer 3.0 (6200 model only)
- ◆ Mavis Beacon Teaches Typing
- ◆ A selection of clip art
- ◆ Spectre Supreme - 3D arcade game
- ◆ Rosetta Stone Power Pack: an introduction to 4 EC languages
- ◆ Grolier's New Multimedia Encyclopedia CD
- ◆ Microsoft Dinosaurs CD
- ◆ 1994 Guinness Multimedia Disc of Records CD
- ◆ San Diego Zoo presents The Animals CD
- ◆ The Tale of Benjamin Bunny CD
- ◆ Leonardo the Inventor: his drawings brought to life CD
- ◆ MacGallery Clip Art Treasure Pack (6200 model only)

## Options

**Modems**  
Global Village Teleport Gold II £135  
Global Village Teleport Platinum £245

**Removable Media**  
Iomega Zip Drive £155  
Iomega Zip Disk 100Mb for above £15

**Scanners**  
Microtek Scanmaker II £313  
Microtek Scanmaker II SP £515

**Printers**  
HP Deskwriter 320 and CSF £209  
HP Deskwriter 660C £313  
HP Deskjet 850C £375  
Epson Stylus Colour £349

**Software**  
Connectix RAM Doubler £59  
Connectix SPEED Doubler £59  
Connectix QuickCam £110  
CE QuickKeys £80  
Avid VideoShop 3.0 £299  
QuarkXPress Mac £609  
QuarkXPress PowerMac £689  
Dantz DiskFit Pro £79  
Dantz DiskFit Direct £39

## Macintosh Performa 6200



### PC Specification

- ◆ PowerPC 603 RISC processor running at 75MHz
- ◆ 256k level 2 cache
- ◆ 8Mb of RAM expandable to 36Mb
- ◆ 4Mb of ROM on 64-bit PowerPC bus
- ◆ 500Mb hard disk
- ◆ Integrated Apple CD 600i quad speed CD-ROM drive
- ◆ 16-bit stereo CD playback
- ◆ 8-bit stereo sound
- ◆ One sound-in port, front and rear head phone jacks
- ◆ 1Mb of DRAM display support
- ◆ 1.4Mb Apple SuperDrive floppy disk drive
- ◆ Keyboard, mouse, 2 serial ports, SCSI interface and video ports
- ◆ Communications expansion slot
- ◆ Apple Design keyboard and Apple desktop bus mouse II

Telephone lines open until 8 p.m.  
All offers end 9th December

### Performa 6200

with 14" monitor and 8Mb RAM

£1179 + VAT

### Performa 6200CD Plus

with 15" monitor, 8Mb RAM and CD-ROM

£1319 + VAT

### Performa 6200CD/TV Plus

with Apple Video/TV System with 15" monitor, 8Mb RAM and CD-ROM drive

£1529 + VAT

CALL NOW!

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

01282 777 111



Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

# Mobile Office

Telephone lines open until 8 p.m. All offers end 9th December

If you are looking for the ultimate notebook systems, take a look at our special deals on the incredible Colossus range of power notebooks. These systems come with fast 486DX4 processors, massive hard disks and ample RAM and are pre-loaded with the best software applications including

Lotus 1-2-3, Lotus Ami Pro, Lotus Organizer 2, Lotus Approach, Lotus SmartPics, Quicken v4 and AutoRoute Express.

They are completely modular and have a full range of docking facilities.

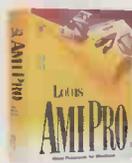
Finance from under

£59\* \*APR 19.8%  
Per Month

Finance Example: Cash Purchase: £1099 + VAT = £1313.65 inc. delivery & VAT. Credit Purchase: 10% (£131.37) deposit and 24 equal monthly payments of £59.12 Total Price £1550.25 inc. delivery & VAT.



Lotus 1-2-3



Lotus Ami Pro



Lotus Approach



Lotus Organizer



Lotus SmartPics

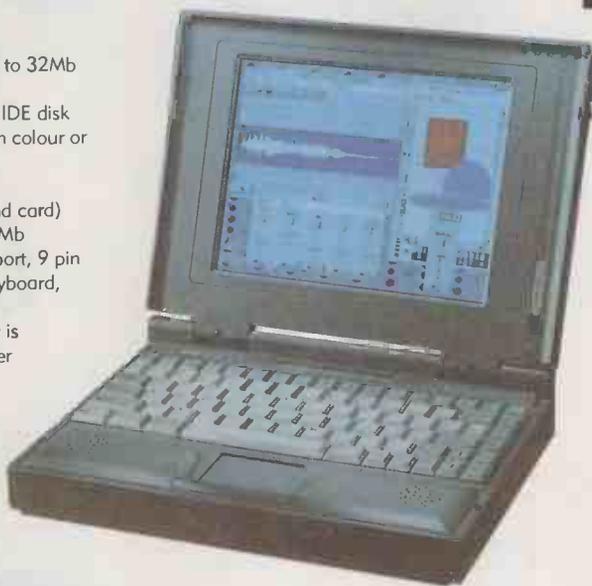


AutoRoute



## Notebook Specification

- ◆ Intel 100MHz 486DX4 processor
- ◆ 4Mb, 8Mb or 16Mb RAM expandable to 32Mb
- ◆ Removable 1.44Mb 3.5" floppy drive
- ◆ Removable 520Mb, 810Mb or 1.2Gb IDE disk
- ◆ 9.4" STN VGA mono, 10.4" dual scan colour or 9.4" TFT colour screens
- ◆ 2 PCMCIA Type II/1 Type III slot
- ◆ Built-in stereo speakers (optional sound card)
- ◆ 32-bit VESA local bus graphics with 1Mb
- ◆ One advanced bi-directional parallel port, 9 pin fast serial ports with 16550 UART, keyboard, external monitor, PS/2 mouse ports
- ◆ The latest NiMH rechargeable battery is removable. There is full advance power management
- ◆ Built-in TouchPad mouse - the best pointing device on any notebook
- ◆ LCD status display
- ◆ Dim: 287x200x47mm: Weight 6.2lbs
- ◆ 1 Year warranty extendable to 3 years



## Software\*\*

See Software Section for details

- ◆ DOS & MS Windows® 3.11 (Windows 95 optional)
- ◆ Lotus 1-2-3 v5 spread sheet
- ◆ Lotus Ami Pro v3.1 word processor
- ◆ Lotus Approach v3 database
- ◆ Lotus Organizer v2
- ◆ Lotus SmartPics graphics
- ◆ Intuit Quicken v4 personal finance pack
- ◆ AutoRoute Express v3 road atlas

Pentium® Multimedia Models  
- Call for details

Colossus Mono Notebook  
486DX4-100

with 340Mb hard disk, and 4Mb RAM

£1099

+ VAT

Colossus Dual Scan Colour Notebook  
486DX4-100

with 340Mb hard disk, and 4Mb RAM

£1499

+ VAT

Colossus TFT Colour Notebook  
486DX4-100

with 340Mb hard disk, and 4Mb RAM

£1999

+ VAT

## Other Options

Upgrade to 540Mb hard disk .....	£90
Upgrade to 810Mb hard disk .....	£260
Upgrade to 1.2Gb hard disk .....	£480
RAM Upgrade per 4Mb .....	£140
Sound card module .....	£80

Carry case .....	£25
Docking station with 2 x 5.25" drive bays .....	£369
Port replicator (mini docking station) .....	£95
Car adaptor .....	£60
NiMH battery .....	£67
SMART battery .....	£85

CALL NOW!

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

01282 777 111

TIME  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT



# Ultimate Time Machine

The PC you have always wanted. Now affordable at just £99 per month at APR 0%!

The Ultimate Time Machine is the most powerful PC system you can buy today. This system, manufactured for Time by Colossus, comes with a truly incredible specification and high quality components that are ideal for the power user.

Take a closer look at the specification which includes the fastest Intel® Pentium processors, 1.6Gb enhanced IDE hard disk, a minimum of 16Mb RAM, the fastest 64-bit s3 PCI graphics with 2Mb video RAM, superb 17" screen, super fast 28.8 modem, 3.2Gb tape back up, advanced PC TV system with Teletext and quad speed full-feature multimedia.

What makes the system truly unbeatable is the powerful range of Lotus and CD Multimedia titles - virtually everything you are ever likely to need is included.

If you could afford it, this is the machine you would buy. Now at just £99 per month on an incredible Interest Free Credit Offer, you can afford it!



APPROVED for general telecommunication systems specified in the conditions for use subject to the conditions set out in them.

## System Specification

- ◆ Intel 100 or 133 MHz Pentium® processor
- ◆ Intel Triton Chipset with 256K external cache
- ◆ 16Mb or 32Mb RAM expandable to 128Mb
- ◆ 1.6Gb fast enhanced IDE hard disk with up to 256K cache
- ◆ Super fast PCI local bus SVGA graphics controller with 2Mb video RAM
- ◆ 17" SVGA low radiation colour screen
- ◆ Colossus full-tower case with 9 drive bays and heavy duty power supply
- ◆ 1.44Mb floppy drive
- ◆ 102 Keyboard and Microsoft® compatible mouse
- ◆ Microsoft Windows 95
- ◆ 12 months warranty extendable to 5 years

- Multimedia Hardware**
- ◆ Quad speed IDE CD-ROM drive
  - ◆ 16-bit high quality sound card
  - ◆ Twin stereo speaker system
  - ◆ PC joystick
  - ◆ PC microphone

- Fax & Internet Pack**
- ◆ BABT approved 28.8 data and fax modem
  - ◆ Easy to use fax software
  - ◆ Communications software
  - ◆ Introductory subscription to CompuServe with Internet mailbox
  - ◆ Advanced PC TV system with Teletext
  - ◆ 3.2Gb tape back-up system with software

## Software\*\*

See software section for details

### Business Software

- ◆ Lotus Software suite including Lotus 1-2-3, Ami Pro, Approach, Organizer 2, SmartPics and Lotus Training
- ◆ GSP Pressworks and Designworks
- ◆ TurboCAD for Windows
- ◆ Organize Your Way
- ◆ CV & Job Search Pro
- ◆ Pacioli 2000 Business Accounts
- ◆ Masterclips SE and Picture This!

### Educational Software

- ◆ Fun School 4, Fun School Maths and Typing Tutor
- ◆ Computerworks, Bodyworks and Autoworks
- ◆ EZ Language French, German and Spanish

### Leisure Software

- ◆ PC Paintbrush
- ◆ Arts & Letters Draw
- ◆ Doom, Blake Stone, Pinball and Raptor Games

### CD Multimedia Software

- ◆ Microsoft Encarta®95 Encyclopaedia CD
- ◆ Microsoft Works CD
- ◆ Microsoft Golf CD
- ◆ Microsoft Beethoven CD
- ◆ Microsoft Dangerous Creatures CD
- ◆ Time Almanac CD
- ◆ UFO for Windows CD
- ◆ Dinosaur Museum CD

## Ultimate Time Machine 3

**£99** Per Month

£416.15 deposit and 24 monthly payments of £150 OR  
£1640.15 deposit and 24 monthly payments of £99.  
Total price £3399 +VAT = £4016.15 inc delivery & VAT.  
\*APR 0%

133MHz Pentium model ..... +£250  
32Mb models ..... £Call  
Plus model with Additional MS Office 95 ... +£150

\*APR

**0% INTEREST FREE CREDIT**

Interest Free Credit is available subject to status. Written quotations are available on request. Be sure you can afford the payments before entering into a credit agreement. See page ii for Interest Free example.

## Just Look At The Spec !

- 100MHz, or 133MHz Pentium® CPU
- 1.6Gb enhanced IDE hard disk
- 17" NI MPRII screen
- 28.8 Fax/data modem

- 16Mb or 32Mb RAM; 256K cache
- S3 64-bit Graphics with 2Mb video RAM
- 3.2Gb tape back-up
- Advanced PC TV with teletext

- Quad speed multimedia
- 9 bay Colossus tower
- The best software bundle in the UK
- Superb CD multimedia titles

**CALL NOW!**

Sales Lines Open  
Mon-Fri 8.30am-7.00pm  
Sat 9.00am-5.00pm

**01282 777 111**

**TIME**  
Computer Systems Ltd.

Granville House,  
Blackburn Rd,  
Simonstone,  
Burnley, BB12 7GT

# Discover the hottest prices since the dawning of the age of the computer

**IF YOU'RE BUYING A NEW PC, YOU CAN'T AFFORD TO CLOSE YOUR EYES TO THE MIND-BLOWING VALUE THAT ONLY TINY COMPUTERS CAN NOW OFFER YOU!**

**586P - 75 MHz  
with Windows 95**

75MHz Pentium® Processor Based  
8mb (FAST) EDO RAM 540Mb Hard Disk  
14" SVGA Colour Monitor  
Fast 64 bit PCI 1Mb Windows  
Accelerator Graphics Card  
Plug 'n' Play  
Quad Speed CD Rom  
16 bit Sound Card with speakers  
**Windows 95 Full Version**

**£949** + VAT

*Unbeatable-Limited Offer*

**tiny**  
direct to you!

Turn over  
and be even  
more  
amazed!

**GUARANTEED  
LOWEST  
PRICES IN  
THE UK!**



# TINY Computers

## Lowest Prices Guaranteed

**VISIT OUR  
LOCAL  
SHOWROOMS**  
see over page

### 486DX2-50MHz Cache

#### FULLY CONFIGURED SYSTEM

- 1MB RAM Upgradeable
- Supports EDO RAM
- 210MB HDD
- 14" SVGA Colour Monitor
- 16 bit VGA Adapter Card
- 3.5" 1.44MB FDD
- Pentium P24T Upgradeable
- 6 spare PCI/ISA slots
- 102 Key Keyboard
- 8K Cache
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel
- Desktop case



**4MB  
OPTION  
£449**

#### FINANCE OPTION

£452.37 incl. VAT & Del.  
(less 10% deposit)  
= **£21.04 per month**

Over 24 months APR 23.9%  
Total repayment  
£550.20

# £369

### 486DX2-66MHz Cache

#### FULLY CONFIGURED SYSTEM

- 4MB RAM Upgradeable
- Supports EDO RAM
- 540MB Fast HDD with 128K Cache
- 14" SVGA Colour Monitor
- PCI Local Bus 1MB Graphics Windows Accelerator Card
- PCI Enhanced IDE Controller
- Maths Co-Processor
- 6 spare PCI/ISA slots
- 3.5" 1.44MB FDD
- Pentium P24T Upgradeable
- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop case



**FOR SPECIAL  
OFFER ON  
4MB OPTION  
CALL**

# £519

**Choice of CD  
software!**

**STUDENT &  
EDUCATIONAL  
DISCOUNTS**

**UPGRADE  
TO 1Gb  
CALL!**

**MODEM WITH  
INTERNET SOFTWARE  
CALL!**

**WINDOWS 95  
FULL VERSION  
ON SELECTED  
MACHINES**

IBM  
COMPATIBLE



**Choice of CD  
software!**

**CALL FOR THIS  
MONTHS  
SPECIAL  
OFFERS**

**UPGRADE  
TO 1Gb  
CALL!**

**UPGRADE  
15" & 17"  
MONITORS  
CALL!**

IBM  
COMPATIBLE



#### MULTIMEDIA OPTION

- 4MB RAM Upgradeable
- Supports EDO RAM
- 210MB HDD
- 14" SVGA Colour Monitor
- Multimedia Kit with Dual Speed Multisession CD ROM Drive & 16 bit Stereo Soundcard with Speakers
- 512K SVGA Adapter Card
- 3.5" 1.44MB FDD
- 6 spare PCI/ISA slots
- Pentium P24T Upgradeable
- 102 Key Keyboard
- 8K Cache
- 2 x Fast Serial Ports
- 1 x Parallel Port
- 1 x Game Port
- High Quality Steel Desktop case



**FOR  
SPECIAL  
OFFER ON  
QUAD SPEED  
CALL**

# £529

#### MULTIMEDIA OPTION

- 8MB RAM Upgradeable
- Supports EDO RAM
- 540MB Fast HDD with 128K Cache
- 14" SVGA Colour Monitor
- Multimedia Kit with Dual Speed Multisession CD ROM Drive & 16 bit Stereo Soundcard with Speakers
- PCI Local Bus 1MB Graphics Windows Accelerator Card
- PCI Enhanced IDE Controller
- 6 spare PCI/ISA slots
- Maths Co-Processor
- 3.5" 1.44MB FDD
- Pentium P24T Upgradeable
- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop case



**FOR  
SPECIAL  
OFFER ON  
QUAD SPEED  
CALL**

#### FINANCE OPTION

£828.37 incl. VAT & Del.  
(less 10% deposit)  
= **£38.52 per month**

Over 24 months APR 23.9%  
Total repayment  
£1007.31

# £689

#### TINY EXTRAS

- Choice of 14", 15" & 17" SVGA Monitors
- Choice of Hard Disks 210Mb, 540Mb, 1Gb IDE, 2Gb SCSI,
- Graphics - 64 bit PCI
- Soundcard Wave Table 32 SB compatible
- Modem
- Dual and Quad Speed CD Roms
- PCI Network Card
- Mouse, Dos and Windows
- Tape Streamer
- Lots more available!

**ALL OUR MACHINES ARE PCI  
LATEST TECHNOLOGY NOT  
OUTDATED VESA. BEWARE OF  
THIS WHEN COMPARING  
SPECIFICATIONS**

PLEASE RUSH ME MORE INFORMATION ON TINY COMPUTERS

NAME .....  
ADDRESS .....  
POSTCODE .....  
TEL ..... FAX .....

SEND TO: TINY COMPUTERS LTD, REDHILL BUSINESS PARK,  
BONEHURST ROAD, SALSFORD, REDHILL, SURREY RH1 5YB.

**CALL 01293-821333  
FOR INSTANT ACTION**

# "Staggering Value" *PC Direct*

## Fastest Delivery, Best Service.

**SAME DAY  
DESPATCH**

### 486DX4-100MHz Cache

#### FULLY CONFIGURED SYSTEM

- 8MB RAM Upgradeable
- Supports EDO RAM
- 540MB Fast HDD with 128K Cache
- 14" SVGA Colour Monitor
- PCI Local Bus 1MB Graphics Windows Accelerator Card
- PCI Enhanced IDE Controller
- 3.5" 1.44MB FDD
- 6 spare PCI/ISA slots
- Maths Co-Processor
- Pentium P24T Upgradeable
- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop case



**£659**

Choice of CD software!



MODEM WITH INTERNET SOFTWARE CALL!

UPGRADE TO 1Gb CALL!

UPGRADE 15" & 17" MONITORS CALL!

IBM COMPATIBLE

#### MULTIMEDIA OPTION

- 8MB RAM Upgradeable
- Supports EDO RAM
- 540MB Fast HDD with 128K Cache
- 14" SVGA Colour Monitor
- Multimedia Kit with Dual Speed Multisession CD ROM Drive & 16 bit Stereo Sound-card with Speakers
- PCI Local Bus 1MB Graphics Windows Accelerator Card
- PCI Enhanced IDE Controller
- 3.5" 1.44MB FDD
- 6 spare PCI/ISA slots
- Maths Co-Processor
- Pentium P24T Upgradeable
- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop case



FOR SPECIAL OFFER ON QUAD SPEED CALL

**£729**

"We honestly can't understand how they have done it for the price" *PC DIRECT*

"Unbeatable value for money" *PC TODAY*

**MULTI £MILLION SALES  
PRICES REVIEWED DAILY!**



PRICES EXCLUDE VAT & DELIVERY

### 586P-75MHz Cache

#### FULLY CONFIGURED SYSTEM

- P75 Pentium® Processor Based
- 8MB (FAST) EDO RAM Upgradeable
- 540 MB Fast HDD with 128K Cache
- 14" SVGA Colour Monitor
- Fast 64 bit PCI with 1Mb Windows Acc-Graphics card
- PCI Enhanced IDE Controller
- 3.5" 1.44MB FDD
- 6 spare PCI/ISA slots
- Plug 'n' Play
- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop case



intel inside

**£749**

#### MULTIMEDIA OPTION

- P75 Pentium® Processor Based
- 8MB (FAST) EDO RAM Upgradeable
- 540 MB Fast HDD with 128K Cache
- Multimedia Kit with Dual Speed Multisession CD ROM Drive & 16 bit Stereo Sound-card with Speakers
- 14" SVGA Colour Monitor

FOR SPECIAL OFFER ON QUAD SPEED CALL

Choice of CD software!

**£819**

Pentium is a registered trademark of Intel corporation

### 586P-90MHz Cache

#### FULLY CONFIGURED SYSTEM

- P90 Pentium® Processor Based
- 8MB (FAST) EDO RAM Upgradeable
- 1GB Fast IDE HDD (Mode 4) with 256K Cache
- 14" SVGA Colour Monitor
- Fast 64 bit PCI with 1Mb Windows Acc-Graphics card
- PCI Enhanced IDE Controller
- 3.5" 1.44MB FDD
- 6 spare PCI/ISA slots
- Plug 'n' Play
- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop case



intel inside

**£869**

#### MULTIMEDIA OPTION

- P90 Pentium® Processor Based
- 8MB (FAST) EDO RAM Upgradeable
- 1GB Fast IDE HDD with 256K Cache
- Multimedia Kit with Dual Speed Multisession CD ROM Drive & 16 bit Stereo Sound-card with Speakers
- 14" SVGA Colour Monitor

FOR SPECIAL OFFER ON QUAD SPEED CALL

Choice of CD software!

**£939**

CALL **01293-821333**  
FOR INSTANT ACTION



SPECIAL DEALER DISCOUNTS AND TERMS AVAILABLE

CALL FOR THIS MONTHS SPECIAL OFFERS

EDUCATION SPECIALS. CALL FOR OUR SPECIAL PRICES

FINANCE & LEASING AVAILABLE ON ALL MACHINES

12 MONTH UK BACK TO BASE WARRANTY

ALL OUR PC'S ARE GUARANTEED TO RUN ALL SOFTWARE THAT OPERATES ON EQUIVALENT IBM

FREE LIFETIME TELEPHONE SUPPORT

TAILOR MADE SYSTEMS

BULK ORDER DEALER DISCOUNTS

**SPECIAL OFFER  
ON PENTIUMS  
IN NOVEMBER  
CALL FOR  
DETAILS**

# MORE PENTIUM POWER AT AMAZING PRICES!!!

## 586P-75MHz Cache

### FULLY CONFIGURED SYSTEM

- Pentium 75MHz Processor Based
- 8MB (FAST) EDO RAM Upgradeable
- 1GB IDE Fast HDD (Mode 4) with 256k Cache
- Fast 64 bit PCI with 1Mb Windows Acc-Graphics Card
- 15" SVGA Colour Monitor
- PCI Enhanced IDE Controller
- 3.5" 1.44 FDD
- Zif Socket
- 6 Spare PCI/ISA Slots
- Play 'n' Plug
- 102 Key Keyboard
- 2 x Serial Ports
- 1 x Parallel Port
- Game Port
- High Quality Steel Desktop Case
- Multimedia Kit with Double Speed Multisession CD ROM Drive & 16 bit Stereo Sound-card with Speakers

**PCI LOCAL BUS**



# £959

Choice of CD software!

DEALER AND OEM DISCOUNTS



IBM COMPATIBLE

## 586P-75MHz Cache

- Pentium 75MHz Processor Based
- 16MB (FAST) EDO RAM Upgradeable
- 1GB Fast IDE HDD (Mode 4) with 256K cache
- Fast 64 bit PCI with 2Mb Windows Acc-Graphics Card
- 17" SVGA Colour Monitor
- PCI Enhanced IDE Controller
- 3.5" 1.44 FDD
- Zif Socket
- 6 Spare PCI/ISA Slots
- Play 'n' Plug
- 102 Key Keyboard
- 2 x Serial Ports
- 1 x Parallel Port
- Game Port
- High Quality Steel Desktop Case
- Windows 95 Full Version
- Multimedia Kit with Quad Speed Multisession CD ROM Drive & 16 bit Stereo Sound-card with Speakers

**PCI LOCAL BUS**

WITH WINDOWS 95 FULL VERSION



# £1469

## 586P-90MHz Cache

### FULLY CONFIGURED SYSTEM

- Pentium 90MHz Processor Based
- 8MB (FAST) EDO RAM Upgradeable
- 1GB IDE Fast HDD (Mode 4) with 256k Cache
- Fast 64 bit PCI with 1Mb Windows Acc-Graphics Card
- 15" SVGA Colour Monitor
- PCI Enhanced IDE Controller
- 3.5" 1.44 FDD
- Zif Socket
- 6 Spare PCI/ISA Slots
- Play 'n' Plug
- 102 Key Keyboard
- 2 x Serial Ports
- 1 x Parallel Port
- Game Port
- High Quality Steel Desktop Case
- Multimedia Kit with Double Speed Multisession CD ROM Drive & 16 bit Stereo Sound-card with Speakers

**PCI LOCAL BUS**



# £1039

Choice of CD software!

NATIONWIDE SHOWROOMS



IBM COMPATIBLE

## 586P-90MHz Cache

- Pentium 90MHz Processor Based
- 16MB (FAST) EDO RAM Upgradeable
- 1GB IDE Fast HDD (Mode 4) with 256k Cache
- Fast 64 bit PCI with 2Mb Windows Acc-Graphics Card
- 17" SVGA Colour Monitor
- PCI Enhanced IDE Controller
- 3.5" 1.44 FDD
- Zif Socket
- 6 Spare PCI/ISA Slots
- Play 'n' Plug
- 102 Key Keyboard
- 2 x Serial Ports
- 1 x Parallel Port
- Game Port
- High Quality Steel Desktop Case
- Windows 95 Full Version
- Multimedia Kit with Quad Speed Multisession CD ROM Drive & 16 bit Stereo Sound-card with Speakers

**PCI LOCAL BUS**

WITH WINDOWS 95 FULL VERSION



# £1549



SPECIAL OFFER ON ENCARTA 95 WHEN BOUGHT WITH MULTIMEDIA MACHINES

CALL **01293-821333**  
FOR INSTANT ACTION

PRICES EXCLUDE VAT & DELIVERY

# TINY COMPUTERS.....

Established 5 years with a turnover of £31 million in 1994. We have sustained growth and a strong financial status. All our computers are ready to run and

subject to a vigorous 24 hour burn in. Every computer sold has a FREE telephone lifetime warranty.

## YOUR GUARANTEE OF SATISFACTION

- Each machine is fully assembled and subject to a rigorous 24 hour burning-in Quality Control Test
- Upgradeable and reliable, with plenty of room for extra disc drives and add-on cards
- IBM\* Compatible
- FREE LIFETIME Technical Support
- 12 month UK back to base warranty
- Fastest ever stock delivery
- Service and care

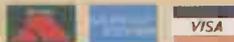
\*IBM is the registered trademark of International Business Machines

**BLUE CHIP CLIENTS INCLUDE:** SUZUKI • MINISTRY OF DEFENCE • BBC • AGFA  
• CUSTOM & EXCISE • HOMEOFFICE • AND MANY MORE!

## PHONE OR FAX YOUR ORDER TODAY!

Have your Credit/Debit card ready and call the number below.

### FINANCE & LEASING AVAILABLE



*TINY COMPUTERS LTD is a Licensed Credit Broker, written quotations available*

Beware of companies who charge your credit card and take weeks to deliver. We promise not to charge your credit card until the day your order is despatched.

**BY POST** - Enclose a cheque for the full amount made payable to TINY COMPUTERS LTD and write your cheque guarantee card number and the expiry date on the reverse.

**BY CREDIT CARD** - Provide your credit card details including expiry date.

**BY FAX** - Send a list of the products you require together with credit card details including expiry date, your name, address and telephone number to the number below.

**CALL NOW FOR THIS MONTH'S SPECIAL OFFERS!**

# 01293-821333

## OR FAX: 01293-822514

### SHOWROOMS NOW OPEN

**LONDON SHOWROOM**  
SONIC FOTO CENTER,  
256 TOTTENHAM COURT RD  
LONDON W1A 9AD,  
Tel: 0171-636 7613

**NEWCASTLE SHOWROOM**  
7 HIGH FRIARS,  
ELDON SQUARE  
NEWCASTLE NE1 7JB  
Tel: 0191-261 5252

**GLASGOW SHOWROOM**  
220 ARGYLE STREET  
GLASGOW G2 7HA  
Tel: 0141-204 2300

**MANCHESTER SHOWROOM**  
VOYAGERS WALK (OPP. SPOILS),  
ARNDALE CENTRE, MANCHESTER M4 3AT  
Tel: 0161-835 1611

**NOTTINGHAM SHOWROOM**  
UNIT 57, UPPER MALL (next to boots),  
THE VICTORIA CENTRE, NOTTINGHAM  
NG1 3QJ Tel: 0115-941 9461

**BRISTOL SHOWROOM (OPENING OCT 95)**  
UNION GALLERY (OPP. SCENIC LIFT),  
THE GALLERIES, SHOPPING CENTRE  
BROADMEAD BRISTOL BS1 3XD  
Tel: 01179-300099

All trademarks acknowledged.

All prices and manufacturers specifications are subject to change without notice.

Please check availability before ordering. Goods are offered for sale subject to our standard conditions of sale available on request. E&OE.

**TINY COMPUTERS LTD**

REDHILL BUSINESS PARK, BONEHURST ROAD, SALFORDS, SURREY RH1 5YB.

**GUARANTEED  
LOWEST PRICES  
IN THE UK**

**SAME DAY  
DESPATCH**

**TINY**  
direct to you!

# CD ROM SYSTEMS

EDUCATIONAL AND LEISURE PRODUCTS

A SMALL SELECTION FROM OUR HUGE RANGE OF TITLES - PLEASE CALL FOR YOUR FREE CATALOGUE



ATLAS'S		REFERENCE AND EDUCATION		LITERATURE		MUSIC		LANGUAGES		RELIGION		CHILDREN'S		GAMES		HOME AND HOBBY		DTP		SCIENCE					
3D Atlas	36.95	100 Years of Motoring	29.95	A Midsummer Night's Dream	NEW	Beatles: A Hard Days Night	17.95	Asterix Learns French	53.95	Bible Library (16 Bibles on one CD)	16.95	3D Body Adventure (6+)	19.95	Award Winners Platinum	14.95	3D Interior Designer	NEW	14.95	Clipart Warehouse	12.95	A Brief History of The World	29.95			
DK World Reference Atlas	39.95	Bodyworks 4.0	NEW	Dickens Collection	15.95	Chadwick and the Sneaky Egg Thief	19.95	Berlitz French	GREAT VALUE	79.95	Bible Study Guide	14.95	A Christmas Story	NEW	21.95	Astrolgy	NEW	12.95	Clipart Heaven 2	19.95	Animals of San Diego Zoo	9.95			
Global Explorer	46.95	Chambers English Dictionary	43.95	Greater and Lesser Mysteries	12.95	Counting on Frank (8-11)	26.95	Also available for German, Italian, Spanish	29.95	Compton's Multimedia Bible	27.95	3D Bug Adventure (3-8)	27.95	Apache Langhau	NEW	21.95	Medical Dictionary	15.95	Corel Gallery	29.95	Chemistry Set	109.95			
Map n' Facts	26.95	Compton's Encyclopedia '95	12.95	Monarch Notes	12.95	Director's Lab	NEW	Also available for German, Italian, Spanish	19.95	Dead Sea Scrolls	31.95	3D Dinosaur Adventure (3-10)	19.95	Are You Afraid Of The Dark	NEW	27.95	Corel Draw 3.0	47.95	Electricity and Magnetism	29.95	Interactive Periodic Table	SAVE	31.95		
World Atlas 5.0	9.95	DK History of the World	33.95	Macbeth	NEW	EA Kids Arts Centre (3+)	21.95	Also available for German, Italian, Spanish	29.95	The Circus	25.95	10 out of 10 (Please Call For Details)	16.95	Microsoft Wine Guide	22.95	Family Tree Maker 2.0	NEW	35.95	Interactive Space Encyclopedia	25.95	Pharmassit	SPECIAL	12.95		
		DK Encyclopedia Of Nature	33.95	Romeo and Juliet	31.95	Around the World in 80 Days (5-8)	22.95	Concise Oxford Dictionary	VALUE	The Ultimate Haunted House	22.95	Adventures with Edison	24.95	Microsoft Dangerous Creatures	NEW	22.95	Garden Encyclopedia	NEW	29.95	Prescription Drugs	12.95	Herbalist	29.95	Mayo Clinic Family Health	14.95
		DK Encyclopedia of Science	33.95	Shakespeare: The Complete Works	27.95	EA Kids Arts Centre (3+)	21.95	Microsoft Encarta 95	NEW	Magic Bus Tour Human Body (6-10)	22.95	Aladdin Activity Centre (5+)	24.95	Microsoft Encarta 95	NEW	22.95	Family Doctor	14.95	Medical Dictionary	15.95	Microsoft Julia Childs Cooking	22.95	Microsoft Fine Artist	22.95	
		DK Ultimate Human Body	33.95	Shakespeare Collection	15.95	Arthur's Teacher Trouble (Unboxed)	9.95	Microsoft 500 Nations	22.95	Baileys Book House	12.95	EA Kids Arts Centre (3+)	21.95	Microsoft Ancient Lands	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Creative Writer	22.95		
		Grolier Encyclopedia 95 (call for Max price)	12.95	Arthur's Birthday Surprise (3+)	26.95	Bernstein Bear	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Arthur's Teacher Trouble (Unboxed)	9.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Grolier Prehistoria	15.95	Baileys Book House	12.95	Chadwick and the Sneaky Egg Thief	19.95	Microsoft Bookshelf 95	NEW	Baileys Book House	12.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Hutchinsons Encyclopedia '95 SAVE	32.95	Bernstein Bear	28.95	Counting on Frank (8-11)	26.95	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Infopedia	16.95	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Leonardo The Inventor	16.95	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft 500 Nations	22.95	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Ancient Lands	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		
		Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	Director's Lab	NEW	Microsoft Bookshelf 95	NEW	Bernstein Bear	28.95	EA Kids Arts Centre (3+)	21.95	Microsoft Bookshelf 95	NEW	22.95	Family Tree Maker 2.0	NEW	35.95	Microsoft Wine Guide	22.95	Microsoft Fine Artist	22.95		

# MULTIMEDIA PRICE BARRIER SMASHED!



THIS SOFTWARE AVAILABLE CALL!

## FULLY CONFIGURED UNBEATABLE SUPERDEALS 486DX2-66MHz

- 4Mb RAM Upgradeable
- Supports EDO RAM
- 540Mb Fast HDD with 128K Cache
- 14" SGVA Colour Monitor
- PCI Local bus 1MB Graphics Windows Acc-Card
- PCI Enhanced IDE Controller
- Maths Co-processor
- Pentium P24T Upgradeable
- 3.5" 1.44Mb FDD

Multimedia Kit with Dual Speed Multisession  
CD ROM Drive & 16 bit Stereo Soundcard with  
Speakers

- 6 Spare PCI/ISA Slots
- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop Case



**SAME  
DAY  
DESPATCH!**

**ABSOLUTELY  
UNBEATABLE  
TINY PRICE!!**

**£589**

## 486DX4-100MHz

- 8Mb RAM Upgradeable
- Supports EDO RAM
- 1Gb Fast IDE HDD (Mode 4) with 256K Cache
- 14" SGVA Colour Monitor
- PCI Local bus 1MB Graphics Windows Acc-Card
- PCI Enhanced IDE Controller
- Maths Co-processor
- Pentium P24T Upgradeable
- 3.5" 1.44Mb FDD
- 6 Spare PCI/ISA Slots

Multimedia Kit with Dual Speed Multisession  
CD ROM Drive & 16 bit Stereo Soundcard with  
Speakers

- 102 Key Keyboard
- 2 x Fast Serial Ports
- 1 x Parallel Port
- High Quality Steel Desktop Case



**ABSOLUTELY  
UNBEATABLE  
TINY PRICE!!**

**£769**

## 586P-75MHz

- P75 Pentium® Processor Based
- 8Mb (FAST) EDO RAM Upgradeable
- 1Gb Fast IDE HDD (Mode 4) with 256K Cache
- 14" SGVA Colour Monitor
- Fast 64 bit PCI with 1Mb Windows Acc-graphics card
- 3.5" 1.44Mb FDD
- 6 Spare PCI/ISA Slots
- Plug 'n' Play
- 102 Key Keyboard
- 2 x Fast Serial Ports

Multimedia Kit with Dual Speed Multisession  
CD ROM Drive & 16 bit Stereo Soundcard with  
Speakers

- 1 x Parallel Port
- 1 x Game Port
- High Quality Steel Desktop Case



**ABSOLUTELY  
UNBEATABLE  
TINY PRICE!!**

**£859**

## SHOWROOMS

**LONDON SHOWROOM**  
THE SONIC FOTO CENTRE  
256 TOTTENHAM COURT ROAD  
LONDON W1A 9AD

TELEPHONE: 0171-636 7613

OPEN MON - SAT 9.30am - 6.30pm

**GLASGOW SHOWROOM**

220 ARGYLE STREET

GLASGOW G2 7HA

TELEPHONE: 0141-204 2300

OPEN MON - SAT 9.00am - 5.30pm

**NEWCASTLE SHOWROOM**

7 HIGH FRIARS ELDON SQUARE

NEWCASTLE NE1 7JB

TELEPHONE: 0191-261 5252

OPEN MON - SAT 9.00am - 5.30pm

**MANCHESTER SHOWROOM**

VOYAGERS WALK (Opp. SPOILS)

ARNDALE CENTRE

MANCHESTER M4 3AT

TELEPHONE: 0161-835 1611

OPEN MON - SAT 9.00am - 6.00pm

**NOTTINGHAM SHOWROOM**

UNIT 57, UPPER MALL (next to Boots)

THE VICTORIA CENTRE

NOTTINGHAM NG1 3QJ

TELEPHONE: 0115-941 9461

OPEN MON - SAT 9.00am - 6.00pm

**BRISTOL SHOWROOM**

UNION GALLERY (opp. Scenic Lift)

THE GALLERIES SHOPPING CENTRE

BROADMEAD BRISTOL BS1 3XD

TELEPHONE: 01179-300099

OPEN MON - FRI 9.00am - 5.30pm

**TINY COMPUTERS LTD**

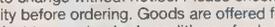
REDHILL BUSINESS PARK, BONEHURST ROAD,

SALFORDS SURREY RH1 5YB

TEL: 01293-821333

OPEN MON - FRI 9.30am - 5.00pm

NO SURCHARGE ON CREDIT CARDS



All trademarks acknowledged.

All prices and manufacturers specifications are subject to change without notice. Please check availability before ordering. Goods are offered for sale subject to our standard conditions of sale available on request. E&OE.

**tiny**  
direct to you!

CALL THE HOTLINE NOW!  
**01293-821333**

**GUARANTEED LOWEST  
PRICES IN THE UK**

Prices exclude VAT & Delivery FAX: 01293-822514

NORMAL NEXT DAY DELIVERY

TINY COMPUTERS LTD, REDHILL BUSINESS PARK, BONEHURST ROAD, SALFORDS, SURREY RH1 5YB

# BYTEWISE TECHNOLOGY.....

Bytewise Technology is unique in producing the black range of computers and supplying black parts and accessories to the industry in the U.K. and abroad.

Furthermore, we build computers to suit your needs, you can select from a range of high capacity storage, memory upgrade and powerful type of CPU.

All our systems are configured and thoroughly tested with a variety of software windows applications.

If you want something to look different why not order one now and try it yourself !!!!

**For a complete black system please add £40.00 to system prices below.**



## Swift (PENTIUM)

Intel Pentium Processor • 256K Cache • 8MB RAM  
70ns upgradable to 128MB • 540MB EIDE Hard Disk •  
EIDE PCI Controller Card with Fast 2s & 1p • 3.5"  
1.44MB Floppy drive • 1MB PCI Diamond Stealth  
DRAM upgradable to 2MB Windows Accelerator SVGA  
Card • 14" .28DP Super VGANI/LR Colour Monitor •  
102 Key Enhanced U.K Keyboard • Microsoft  
Compatible Mouse • Desktop or Minitower case

Pentium 75MHz	£790.00
Pentium 90MHz	£910.00
Pentium 100MHz	£1025.00
Pentium 120MHz	£1120.00
Pentium 133MHz	£1200.00

## Swift 486

486 Processor • 256K Cache • 3VL Bus • 4MB  
RAM 70ns upgradable to 64MB • 540MB EIDE Hard  
Disk • VLB/EIDE Controller Card with 2s, 1p & 1G  
Port • 3.5" 1.44MB Floppy drive • 1MB SVGA VLB  
upgradable to 2MB Windows Accelerator Card  
• 14" .28DP Super VGA NI/LR Colour Monitor  
• 102 Enhanced U.K Keyboard • Microsoft Compatible  
Mouse • Desktop or Minitower case.

486DX4-100	£590.00
486DX2-80	£570.00
486DX2-66	£550.00
486DX2-50	£530.00
486SX2-50	£495.00

## Swift Multi Media

Same as other systems specifications,  
all our Multimedia systems come with:

- Microsoft Encarta/ MS Works/ Money/ Dangerous Creatures/  
Golf and Scenes add:
- For Panasonic 562 Dual speed, Soundblaster 16 Bit compatible  
and speakers £150.00
- As above with Mitsumi Quad speed IDE £199.00
- Toshiba XM-5302B Quad speed IDE CD-Rom, Soundblaster 16  
Sound Card and Zyfi 2 speakers £215.00
- As above with Soundblaster AWE 32 £280.00

See next page for more Multimedia packs and parts.

Radio Card: Radio FX lets you listen to your  
favourite FM Stereo £38.00

**UPGRADING REPAIRS AND OTHER SERVICES ARE AVAILABLE**

We accept orders from Education and  
Public Sector Organisations.

Bytewise is a long established company who have been  
supplying computers and peripherals to thousands of  
customers locally, nationally and internationally

### Internet Connection:

When you purchase a computer with a Fax-Modem card from us  
we will install and configure ready to use at no extra cost.

**CALL NOW ON 0171-275 8853 OR FAX ON 0171-275 8344**

# HIGH QUALITY COMPUTERS & PARTS

## MOTHERBOARDS

Pentium 133MHz 256K Cache	£665
Pentium 120MHz 256K Cache	£560
Pentium 100MHz 256K Cache	£430
Pentium 90MHz 256K Cache	£355
Pentium 75MHz 256K Cache	£295
<b>486 VLB WITH CPU</b>	
486SX2-50 256k cache & VLB	£100
486DX2-50 256k cache & VLB	£110
Intel 486DX2-66 256k cache & VLB	£150
IBM 486DX2-66 256k cache & VLB	£115
486DX4-75 256k cache & VLB	£160
486DX4-100 256k cache & VLB	£175
AMD 486DX4-100 256k cache & VLB	£150
IBM 486DX4-100 256k cache & VLB	£140
<b>486 PCI WITH CPU ADD</b>	<b>£20</b>
<b>386 Motherboard</b>	
386SX-40	£42
386DX-40 128k cache	£60

## CPU

Intel 80486 SX-25	£35
Intel 80486 SX-50	£40
Intel 80486DX-33	£95
Intel 80486DX2-50	£45
Intel 80486DX2-66	£78
IBM 80486DX2-66	£40
Intel 80486 DX4-75	£85
Intel 80486DX4-100	£110
PENTIUM 75MHz	£135
PENTIUM 90MHz	£215
PENTIUM 100MHz	£295
PENTIUM 120MHz	£425
PENTIUM 133MHz	£525

## MEMORY

4MB RAM MODULE 72 PIN	£92
4MB RAM MODULE 72 PIN w/parity	£115
4MB EDO RAM MODULE 72 PIN	£115
8MB RAM MODULE 72 PIN	£190
8MB RAM MODULE 72 PIN w/parity	£220
8MB EDO RAM MODULE 72 PIN	£230
16MB RAM MODULE 72 PIN	£340
16MB RAM MODULE 72 PIN w/parity	£380
16MB EDO RAM MODULE 72 PIN	£390
32MB RAM MODULE 72 PIN	£690
4MB RAM MODULE 30 PIN	£98
1MB RAM MODULE 30 PIN	£28
256KB RAM	£10

## HARD DRIVES

<b>IDE DRIVES</b>	
Seagate IDE 428MB	£99
Seagate IDE 545MB	£110
Seagate IDE 850MB	£140
Seagate IDE 1.28GB	£175
Western Digital 1.6MB IDE	£255
<b>SCSI DRIVES</b>	
Seagate SCSI II 1.0GB	£280
Seagate SCSI II W 1.0GB	£354
Seagate SCSI II 2.1GB	£545
Seagate SCSI II W 2.1GB	£740
Seagate SCSI II 4.0GB	£725
Seagate SCSI 9.0GB	£1800
Fujitsu 528MB	£130
Fujitsu 1.0G	£199
Fujitsu 2.0G	£465
Fujitsu 4.0G	£685
Micropolis 2.0GB	£535
Micropolis 4.0GB	£740
Micropolis 9.0GB	£1415
HP 1.0 GB	£295
HP 2.0 GB	£450
<b>2.5" DRIVES</b>	
Seagate IDE 260MB	£175
Seagate IDE 455MB	£270
Fujitsu SCSI 264MB	£185
Fujitsu SCSI 532MB	£205

## CASES WITH PSU

Multi-Media Desktop Case	£80
<b>Economy range</b>	
Desktop with display	£30
Minitower with display	£29
Slimline case	£39
Midtower with display	£65
Large Tower	£75
<b>Procase range</b>	
109M Desktop with display	£40
222M Desktop with display	£54
609M Minitower with display	£39
902M Minitower with display	£54
Midtower with display	£70
Large Tower	£92
<b>Delux range</b>	
KS330D Minitower w/display	£57
KS730D Desktop w/display	£57
KS130 Full Tower w/display	£96

## DISPLAY CARDS

VGA 256K 16-bit	£25
VGA 512K 16-bit	£30
VGA 1MB 16-bit	£40
<b>CIRRUS LOGIC</b>	
Cirrus Logic 512KB ISA	£32
Cirrus Logic 1MB ISA	£45
Cirrus Logic 1MB VLB	£55
Cirrus Logic 1MB PCI	£60
<b>OTHERS</b>	
Trident 1MB PCI	£55
Diamond Stealth SE 1MB VLB/PCI	£70
Diamond Stealth 64 1MB VLB/PCI	£95
Diamond Stealth 64 2MB VLB/PCI	£115
Diamond Stealth 64 2MB VRAMVLB/PCI	£215
Diamond VIPER 2MB VLB/PCI	£230
Orchid Fahrenheit pro 64 2MB VLB/PCI	£245
Orchid Kelvin 64 VLB/PCI	£175

## I/O CARDS

IDE controller (2HDD,2FDD, 2S, 1P, G)	£12
Enhanced IDE Multi I/O VL Bus	£18
DTC Enhanced Multi I/O VLB card	£25
IDE Multi I/O PCI Bus	£40
Promise Cache controller	£79
Promise VLB Cache controller	£115
<b>SCSI</b>	
Adaptec 1505 Complete Kit ISA	£45
Adaptec 1515 Complete Kit ISA	£70
Adaptec 1542 Complete Kit ISA	£175
Adaptec 2842 Complete Kit VLB	£165
Adaptec 2742 Complete Kit EISA	£265
Adaptec 2940 Complete Kit PCI	£215
DTC3130 32 Bit Fast SCSI 2 PCI	£75
DTC3270 32 Bit Fast SCSI 2 VLB	£90
DTC3280 16 Bit ISA	£65

## FLOPPY DISK DRIVES

1.44MB 3.5" Mitsumi	£19
1.44MB 3.5" Teac	£25
1.44MB 3.5" Sony/Mitsubishi	£20
1.2MB 5.25" Teac	£42
1.2MB 5.25" Sony/Mitsubishi	£39
1.2MB 5.25" Mitsumi	£40
<b>MOUSE</b>	
Mouse	£8
Mouse and Pad	£10
Logitech Mouse Pilot II	£22
Microsoft V2.0	£25
PS2 Mouse	£20
Logitech Cordless Mouse	£61

## PRINTERS

Panasonic KX-P1150 9 Pin	£98
Panasonic KX-P2023 24 Pin	£130
Panasonic KX-P2124 24 Pin Colour	£210
HP Deskjet 600	£220
HP Deskjet 660C	£299
Canon BJ30	£155
Canon BJ200ex	£175
OKI OL 400EX	£295
Panasonic KX-P6100 Laser	£285
Panasonic KX-P6150 Laser	£320
Panasonic KX-P4440 Laser	£705
HP Laserjet 5L	£380
HP Laserjet 5 Plus	£599
HP Laserjet 4 Plus	£980

## PCMCIA

US Rebotec WorldPort 2496 Fax/Modem	£145
Wordport V.34 Fax/Modem	£185
Longshine 14.4k Fax Modem	£115
Longshine 16 Bit Ethernet BNC/TP	£95
3COM Ethernet Combo	£169
3COM TP	£105
SMC TP	£85
SMC Ethernet Combo	£115

## PSU

200W for Minitower or Desktop	£26
230W for Minitower or Desktop	£45
250W for Big Tower	£55
300W for Big Tower	£60
250W Big L Type	£60

## UPS

250VA Mini Guard (Mini Tower Type)	£75
APC 400VA	£230
APC 700VA	£260

## Delivery :

£15 for the Systems  
£10 for Cases or Monitors  
£4 for small Items

## MONITORS

14" Super VGA Colour .39DP	£130
14" Super VGA Colour .28DP	£140
14" SVGA Colour, LR	£145
14" SVGA Colour NI & LR	£160
14" VGA Mono	£70
15" SVGA NI/LR MPR II	£225
17" SVGA NI/LR MPR II	£475
<b>PHILIPS</b>	
14" PHL 14B LR	£220
14" PHL 14C LR	£190
15" PHL 15A LR	£285
15" PHL 15B LR	£275
17" PHL 17C	£460
20" PHL 20C	£795
<b>SONY</b>	
17" SF1	£575
20" 20SEV	£1390
20" 20SEI	£1500

## KEYBOARDS

Windows 95 Keyboard	£18
AT 102 English	£12
PS2 102 Keyboard	£25
Chicony 102 Key Industrial	£20
Cherry G83	£30
Keyboard/Track ball	£30
AT English+other language	£65

## SCANNERS

Addup Hand Held 256 Gray Scale	£49
Addup Hand Held Colour	£99
Logitech Scanman 256 Gray Scale	£95
Logitech Scanman 32 Colour 24 Bit	£195
Logitech Scanman Easy Touch	£120
Mustek Paragon 600 24 Bit F/bed	£299
Mustek Paragon 1200 24 Bit F/bed	£389
Canon IX-4015 Colour Scanner	£560

## BACKUP SYSTEMS

Jumbo 350MB	£85
Jumbo 700MB	£130
Jumbo 1.36GB	£195
KE10 External Kit	£77
Tracker 350MB External	£170
Tracker 700MB External	£220
Truvan 800MB Internal	£130
Exabyte 2501 2GB Drive	£340
Exabyte DAT 2GB Drive	£480
Exabyte DAT 2GB Complete Kit	£660
Exabyte DAT 4GB Drive	£610
Exabyte DAT 4GB Complete Kit	£815
Excell 8505 Drive only	£1295

<b>Tapes</b>	
DC 2060 120MB	£12
DC 6250 250MB	£16
DC 6525 525MB	£19
DL 9100 1.0GB	£26
DL 90 DAT 4mm 4.0GB	£17
DL 120 DAT 4mm 4.0GB	£20
DC 9120 PT25 Media 1.2GB	£34
DC 9200 PT50 Media 2.0GB	£38

## MULTI MEDIA



Panasonic 562 CD-ROM Drive	£55
Panasonic 574 CD-ROM IDE Drive	£110
Panasonic 504 SCSI CD-ROM Drive	£155
Mitsumi Quad Speed IDE Drive	£110
NEC Quad Speed IDE Drive	£115
NEC Six Speed SCSI Drive	£295
Sounblaster 16 bit Compatible	£45
Sounblaster 16 bit Value IDE	£70
Sounblaster pro with ASP	£115
Sounblaster AWE 32 bit with ASP	£160

## Multimedia Packages:

- Toshiba Quad CD-ROM, Optimum 16 bit Sound card, Zyfi 2 Speakers and Lotus 123, AmiPro, Approach, Screencam & Lotus Smartpics £265
- As Above but with Sound Blaster 16 £275
- 8 Speed CD-ROM, 16 Bit 1MB Wavetable IDE Sound Card, Yamaha Speakers & 5 Titles £450

## JET BLACK PARTS

Black Slimline	£58
Black Desktop	£58
Black Minitower	£59
Black Large Tower	£126



Black Keyboard	£26
Black Mouse	£15
1.44MB Floppy Drive	£30
1.2MB Floppy Drive	£42
14" Super VGA Colour	£160
14" Super VGA Colour NI/LR	£180
Speakers	£20

## NETWORK CARDS

NE2000 16 Bit coax	£30
NE2000 10Base T (UTP)	£32

<b>3Com</b>	
3Com 3C509	£76
3Com 3C509 Combo	£90
3Com 3C579 32 Bit EISA	£165

<b>SMC</b>	
SMC Elite Ultra	£65
SMC Elite Ultra Combo	£72
SMC E32C 32 Bit EISA	£155

Novell	
Eagle BNC	£65
Eagle TP	£60
Eagle Combo	£70

<b>Accessories</b>	
Boot ROM	£12
BNC(Terminator)	£3
Ethernet Cables3M W/BNC	£10
HUBS 8RJ45 + 1 BNC	£167
HUBS 12RJ45 + 1 BNC +1 AUI	£265

## FAX-MODEM CARDS

14400 Fax-Modem Internal or Ext.	£70
28800 Fax-Modem Internal or Ext.	£110

<b>US Rebotec</b>	
Sportster 14,400 Int/Ext	£120
Sportster 28,000 Int/Ext	£180
Courier V 34 Int/Ext	£270

<b>Pace</b>	
Linnet Message Desk	£210
Netlink Linnet 34 FX	£210
Netlink 14.4	£95
Microline FX 32+PC	£165
Microline FX 34PC	£260

## ACCESSORIES

Keyboard adaptor to PS2	£7
Removable HDD Kit	£15
Heat sink with Fan	£10
Printer Cable	£5
SCSI Cable	£10
Laplink Cable	£10
3.5" to 5.25" Adaptor	£5

## SOFTWARE

MS-DOS 6.22	£35
Windows 95 Upgrade	£59
Windows 95 full Version OEM	£79
Windows 95 full Version OEM CD	£75
Windows 3.11 FWG	£55
MS-DOS 6.22 & Windows 3.11	£75
Novel 3.12 Susers	£430
Novel 3.12 Lusers	£950
Novel 4.1 Susers CD	£430
Novel 4.1 Lusers CD	£950
Novell Personal Network	£48

## Showroom Opening

Times:  
**Mon to Fri**  
10.00am to 6.00pm  
**Sat**  
10.00am to 2pm



All prices exclude VAT and delivery

Bytewise Technology Ltd

25-Downham Road, London N1 5AA

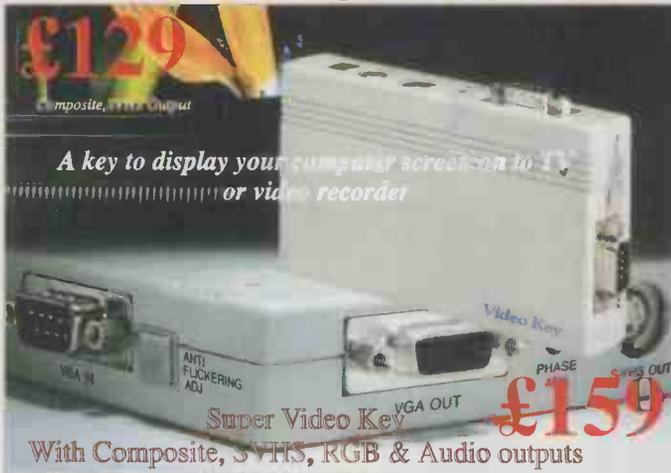
Tel: 0171-275 8853

Fax: 0171-275 8344

# PC to TV Convertors

**£129**  
Composite, SVHS, RGB & Audio outputs

A key to display your computer screen on to TV or video recorder



**£159**  
With Composite, SVHS, RGB & Audio outputs

## Fully Remote Control

PC to TV Converter  
No Software driver required



- \* Composite, SVHS, RGB Outputs
- \* TV Brightness Control
- \* Flicker-free
- \* Screen Freeze/Unfreeze
- \* Horizontal/Vertical panning With Zoom feature
- \* Extensive picture Position/Attributes adjustments feature

**£219**

## Multimedia TV/VIDEO Interface for your PC



Display Real-time full motion pictures and grab your chosen frame from

- \* TV (On board Tuner)
- \* Camcorder
- \* VCR
- \* Laser disk

Full Broadcast Quality Displays up to 16 Million colours  
High VGA resolution support up to 1024x 768  
Stereo Audio Output  
Optional MPEG playback and Teletext modules are also available

**£159**

Teletext Module for the above **£39**  
MPEG I Compatible Upgrade Module for above **£139**

## VGA Splitter (1 in 4)

(Up to 50 Meter)

**£99**



## Teletext Card + Tuner **£99**

## Fax/Data Modem External **£79**

14.4 Kbps/Fax 9600 Hayes Compatible. B.T. Approved Internal **£69**

\* Double Speed Multi Session CDROM

\* 16bit Stereo Sound Card & CD interface **£169**

- \* Analogue Joystick
- \* Amplified speakers
- \* 10 CD Titles



Quad Speed CD-ROM, 600K Transfer rate, IDE Interface, Multi-Mission, KODAK PHOTO CD, VIDEO CD, CDI COMPATIBLE.

**£119**

includes : Audio/IDE Data Cables, Manuals and Drivers.



Total Solution Supplier



Price/Performance Leader



Quality Assurance



Service and Support



# UCS

Tel:

(01902)

28688

Fax: (01902)

28670



\* All prices exclude VAT, carriage and are subject to availability.  
\* All prices are subject to change without prior notice.

# Industrial WorkStations

Industrial Workstation with 14" Colour CRT Monitor



- \* Highly-Integrated PC workstation
- \* 1024x768 colour CRT Monitor
- \* 19" rack/panelmount
- \* 250-watt power supply
- \* 8 PC/AT compatible slots
- \* 27-key membrane keypad

Industrial Workstation with 10" Colour CRT Monitor

AWS-860 **£1823**

Industrial workstation with 9.4" TFT LCD Display

AWS-850CT **£3099**

Panel PC with 9.4" DSTN Display

MiPC-50CS **£1453**

Panel PC with 640x200 EL Display

MiPC-52E **£1453**

Keypad Panel (20 function keys)

for MiPC-50 Series **£145**

MiPC-5011 **£145**

Keypad Panel (56 function keys)

MiPC-5021 **£155**

# Industrial PC Chassis

14-slot Rackmount IPC Chassis



- \* 19" rackmount chassis
- \* 250-watt PSU (300-watt optional)
- \* Shock mounted disk drive bay
- \* Holds three 5 1/4" drives and one 3 1/2" drive

IPC-610A **£429**

Universal Rackmount Kit for 14" Monitors



- \* Accommodates 14" monitors
- \* 19" rack/panelmount
- \* Provides hold-down device
- \* Touchscreen support

6-slot Wallmount IPC Chassis **£238**

IPC-6806 **£292**

Microbox IPC Chassis **£98**

MBPC-640 **£98**

8-slot PC-bus Card Cage **£379**

IPC-610MB **£379**

# Application Software

GENIE PCLS-920



- \* Real-time DA&C, graphic display & data logging (MS Windows)
- \* Icon-based, object oriented
- \* Unlimited number of blocks & I/O devices
- \* User programmable blocks
- \* Supports most LabCards & ADAM 4000 Series

**£180**

PC-Scope PCLS-800



- \* Menu-driven digital storage oscilloscope
- \* Single-shot or continuous real-time data capture

**£37**

## CPU CARDS

All in one Pentium 60/66 PCI/ISA CPU Card



- \* 2S/1P/2FDD/4HDD interfaces
- \* Fast SCSI-II interface
- \* Up to 192MB DRAM
- \* 256KB cache memory
- \* 60°C operation, POST LEDs
- \* 12-level watchdog timer

PCA-6156 (No CPU) £860

All in one 486DX4 CPU Card with Flash/ROM Disk



- \* 2S/1P/2FDD/2HDD interfaces
- \* Up to 64MB DRAM
- \* 256KB cache memory
- \* On-board 1.44MB Flash/ROM disk
- \* PC/104 expansion
- \* 12-level watchdog timer

PCA-6147 (No CPU) £270

Half-size all in one 486 CPU Card with Flash/ROM Disk (No CPU)

PCA-6143P £243

Half-size all in one 386SX CPU Card with Flash/ROM Disk

PCA-6134 £248

Half-size all in one 386SX-25 CPU Card

PCA-6133 £196

Half-size all in one 286-16 CPU Card

PCA-6123 £147

### PCI-bus Passive Backplane Series



- \* 3 PCI slots, 4 or 9 ISA slots
- \* 1 dedicated slot for PCI CPU card
- \* 4-layer PCB with ground and power planes
- \* Plug-in termination resistors
- \* Terminal block connector and LED power indicators

£137

### PC-BUS Passive Backplane Series

6,8,12 and 20 slot boards also available  
Dual PC-BUS £73

PC/AT-bus Optical Expansion Kit

PCX-797 £599

PC/AT-bus Expansion Kit

PCX-795 £209

## Digital Input and Output

### Digital I/O Counter Card



- \* 32-bit digital I/O
- \* 3 programmable counters
- \* High output driving capacity
- \* Large breadboard area

PCA-6147 £95

32-channel Isolated Digital I/O Card

PCL-730 £102

144-bit Digital I/O Card

PCL-722 £165

Relay Actuator and Isolated D/I Card

PCL-725 £104

24/48-bit Digital I/O Cards

PCL-724/731 £74

Remote Digital I/O Card

PCR-420 £145

## Best Buys

### Programmable I/O Card:

- \* 48 programmable I/O lines
- \* 3 Independent 16 bit counter
- \* Address selectable
- \* 16 LED I/O indicators

£24

### PC AD/DA Converter:

- \* 12 bit resolution
- \* 16 Single ended A/D input
- \* One channel analogue output
- \* Port address selectable

£49

### PC Auto Boot RAM/ROM Disk card:

- \* PC 512K Disk Card
- \* Accepts 64KEPROM (27512)
- \* Accepts 32K SRAM (62256)
- \* Rechargeable Battery
- \* Watch-dog Timer

£46

## Solid-State Storage

### Dual Flash/RAM/ROM Disk Card



- \* Emulates up to two FDDs
- \* 12 MB maximum memory size
- \* Power-on auto-boot feature
- \* On-board EPROM programming circuitry

PCA-6147 £144

### Flash/RAM/ROM Disk Card

PCD-892 £78

### Flash/RAM/ROM Disk Module CPU

PCD-8931 £78/68

### PCMCIA Card Carrier Board

PCD-894A £134

### PCMCIA Card Drive

PCD-895A £199

## Adam 4000 Series

### General Features



- \* RS-485 to host (2-wire)
- \* Field-configurable via software
- \* ASCII command/response protocol
- \* +10 to +30 VDC power requirement
- \* Mounts easily on panel, DIN-rail or piggyback stack

### Analog Input Module

ADAM-4011 £131

### Analog (Transmitter) Input Module

ADAM-4014D £167

### 8-channel Analog Input Module

ADAM-4017 £167

### Analog Output Module

ADAM-4021 £131

### Digital I/O Module

ADAM-4050 £95

### Isolated Digital Input Module

ADAM-4052 £95

### Relay Output Module

ADAM-4060 £95

### Counter/Frequency Input Module

ADAM-4080D £167



### The Power of Touch

Industrial Touch Screens Offer Ring now for further information

PCA-6570 £650

## Motion Control

### 3-axis Stepping Motor Control Card

- \* Step rate up to 16 Kpps
- \* 3 intelligent chips for simultaneous control of up to 3 motors
- \* 5 DI per axis for limit switching
- \* Half-sized PC add-on card PCA-6147

£234

### 3-axis Servo Motor Control Card

PCL-832 £323

## Device Programmers

EPROM Programmer (16K-1024K) £149

4 Gang EPROM Programmer (16K-1024) £199

Universal Device Programmer (ALL-03a) £399

Universal Device Programmer (ALL-07) £549

## Industrial Comms.

### 4-port RS-232/422/485 Interface Card



- \* Each port individually configurable for RS-232/422/485
- \* 16C550 UARTs with 16-byte FIFO
- \* Automatic RS-485 data flow control

- \* Extended "AT" Interrupt selection
- \* Free Dos driver (PC-ComLIB) included

PCA-6147 £129

### 8-port Intelligent RS-232/422 Card



- \* 8-port RS-232 interface
- \* 12-MHz 80286 processor
- \* Speeds up to 38.4kbps (8-ports)

- \* Optional isolated RS-422 interface
- \* Free Dos and Windows driver, Datascope utility (PC-ComLIB) included

PCA-6147 £275

Isolated Dual-port RS-232/Current-loop Interface Card

PCL-741 £110

General-purpose/Isolated RS-422/485 Interface Cards

PCL-743B/745B £62/92

8-port RS-232 to RS-422 Converters

PCL-8441/8442 £95/259

Intelligent Multiport RS-232 Controller

PCL-747 £385

16-bit Jumperless Ethernet Card

PCL-843 £54

Serial/Parallel Card

Serial RS232 £19

(Com1,2,3,4 Selectable) £12

Serial 16550 Chip (FIFO) £19

Dual Serial (FIFO) £35

Dual RS232 16550 (Com 1,2,3,4 Selectable) £35

4 Port RS232 £45

8 Port RS232 £119

8 Port Intelligent RS232 Card £295

Dual port RS422/485 £91

IEEE-488 Interface Board £159

RS 232/422 or 485 Converter self powered £50

RS 232/20mA Current Loop Converter £69

## PC/104 Modules

### 386SX-33 CPU Module



- \* Low power consumption
- \* Up to 4MB ZIP DRAM
- \* Built in RTC with lithium battery backup
- \* Single +5 V operation
- \* For embedded applications
- \* 60° operation,

PCA-6147 £248

Super I/O Module £87

Super VGA Module £149

Ethernet Module £92

30-KHz A/D Module £310

PCMCIA Module £210

Flat Panel/CRT VGA Module £192

Solid State Disk Module £77

Four port RS-232 Module £102

48-channel DIO Module £105

Secondary PCMCIA Module £115

Isolated RS-232 and RS-422/485 Module (two port) £172

Please call us for free catalogue and price list

Universal Control Systems U.K. Ltd.  
36, Temple Street, Wolverhampton, WV2 4AN.

Tel: (01902) 28688

Fax: (01902) 28670



\* All prices exclude VAT, carriage and are subject to availability.  
\* All prices are subject to change without prior notice.

# Discover the **Universa** MKII

When a PC carries the Aries brand you know you are going to get the system you really want at the price you really want, without sacrificing features or quality.

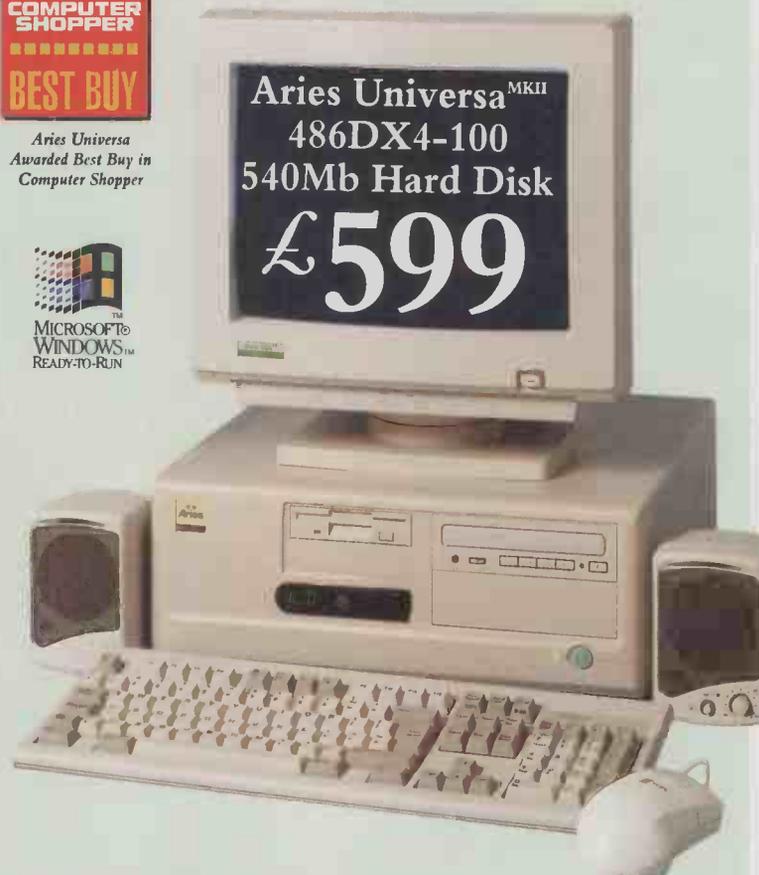
The New Aries Universa MKII systems come with a bundle of free software including Moneybox to get your home finances in order, and we offer the option of including the world's best selling integrated package - Microsoft Office v4.2, all for a quite remarkable price.

Enter the amazing world of multimedia with two low-cost upgrade packages that provide everything you need, including a complete range of Microsoft CD software.

Built to the most exacting standards, offering lots of expansion for the future and backed by the UK's premier computer dealer. You really can't buy better. Anywhere.



Aries Universa  
Awarded Best Buy in  
Computer Shopper



Shown above with MultiMedia kit (optional)  
Monitor/Case may be cosmetically different to that shown.  
Software boxes shown for illustrative purposes only.

## ALL UNIVERSA SYSTEMS ARE BUNDLED WITH THE FOLLOWING SOFTWARE



All software is pre-loaded for your convenience\*

## Universa 486DX SYSTEMS

- ◆ 4Mb RAM expandable to 64Mb
- ◆ 540Mb Hard Disk
- ◆ 128K External Cache RAM
- ◆ Processor Upgradable to Pentium® Overdrive P24T
- ◆ Windows Accelerator SuperVGA Graphics Controller Card
- ◆ IDE Hard Disk & Floppy Drive Controller
- ◆ 3 x VESA & 4 x ISA expansion slots
- ◆ Dual Serial & Parallel Port
- ◆ Expandable Desktop Case
- ◆ 102 Key Enhanced Keyboard
- ◆ 14" Super VGA Non-Interlace Colour Monitor
- ◆ 3.5" 1.44Mb Floppy Drive
- ◆ 102 key enhanced keyboard
- ◆ Microsoft compatible mouse
- ◆ MS DOS v6.22 & MS Windows v3.11
- ◆ 12 Months Parts & Labour Warranty
- ◆ Technical Support Hotline

## Universa PENTIUM®-based SYSTEMS

- ◆ 8Mb RAM expandable to 128Mb
- ◆ 540Mb Hard Disk
- ◆ 256K External Cache RAM
- ◆ Advanced Pentium® upgradable motherboard using Type 5 ZIF socket
- ◆ EPA EnergyStar Compliant
- ◆ 64 bit SuperVGA Graphics Controller Card with 1Mb Video Memory
- ◆ Enhanced IDE I/F supporting 4 drives
- ◆ 3 x PCI/4 x 16 bit exp. slots (1 shared)
- ◆ Enhanced Parallel Port (EPP/ECP)
- ◆ Two Enhanced Serial Ports - 16550 UART
- ◆ 102 Key Enhanced Keyboard
- ◆ 14" SVGA Non-Interlace Colour Monitor
- ◆ 3.5" 1.44Mb Floppy Drive
- ◆ 102 key enhanced keyboard
- ◆ Microsoft compatible mouse
- ◆ MS DOS v6.22 & MS Windows v3.11
- ◆ 12 Months Parts & Labour Warranty
- ◆ Technical Support Hotline

### Aries Universa 486DX Systems

Description	Price	Finance per month
486DX2 66MHz	£579	—
486DX4 100MHz	£599	—
486DX2 66MHz	£799	£42*
486DX4 100MHz	£819	£43*



### OPTIONS FOR UNIVERSA SYSTEMS:

4Mb to 8Mb RAM upgrade	£110
540Mb to 1Gb Hard Disk Upgrade	£68
Upgrade to 15" Super VGA Colour 1024 x 768 Non Interlace Monitor	£99
12 Months On-Site Maintenance	£35
3 years On-Site Maintenance	£118

\* See example of calculations  
† All software supplied pre-loaded for your convenience with built-in tutorial. Disks and manuals available as an optional extra.

### Universa Pentium-based Systems

Description	Price	Finance per month
Pentium 75MHz	£849	£45*
Pentium 90MHz	£899	£47*
Pentium 75MHz	£1038	£55*
Pentium 90MHz	£1098	£58*



### OPTIONS FOR UNIVERSA SYSTEMS:

8Mb to 16Mb RAM Upgrade	£185
540Mb to 1Gb Hard Disk Upgrade	£68
Upgrade to 15" Super VGA Colour 1024 x 768 Non Interlace Monitor	£99
12 Months On-Site Maintenance	£35
3 years On-Site Maintenance	£118

\* See example of calculations  
† All software supplied pre-loaded for your convenience with built-in tutorial. Disks and manuals available as an optional extra.

## UPGRADE ANY **Universa** PC TO A COMPLETE MULTIMEDIA SYSTEM

### MultiMedia Kits MM2 & MM4

- ◆ Dual Speed (MM2 Kit) or Quad Speed (MM4 kit) CD ROM Drive
- ◆ Sound Blaster 16 Compatible Sound Card
- ◆ Aries HiFi Speaker Set (10W per channel)
- ◆ Microsoft CD Bundle Pack (see panel)

Dual Speed Kit MM2

£129

Quad Speed Kit MM4

£189



MultiMedia Kit prices only applicable when purchased with a PC

### Complete Bundle Software Pack Included

- MS Encarta 1995
- MS MultiMedia Works
- MS Dangerous Creatures
- MS Money ● MS Golf
- MS Scenes (3.5" disks)

APR **18.5%** Finance calculation example: **Cash Price: £799 + VAT = £938.83 Deposit: 10% £93.88 and 24 equal payments of £41.84 Total Price: £1098.04** Finance is available subject to status. Be sure you can afford the payments prior to entering into an agreement. Price excludes carriage

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

# Universa<sup>MKII</sup> LCF Systems

## Ultra Low Cost Finance

APR **9.9%** **LIMITED PERIOD ONLY**

Aries Universa<sup>MKII</sup>  
486DX4-100  
540Mb Hard Disk  
Bundled Software  
**£32** per month



Shown above with MultiMedia kit, 15" monitor and 80 watt speakers (optional). Monitor/Case may be cosmetically different to that shown. Software boxes shown for illustrative purposes only.

### ALL UNIVERSA LCF SYSTEMS ARE BUNDLED WITH THE FOLLOWING SOFTWARE

#### APPLICATIONS & OPERATING SYSTEM



#### LIFESTYLE, REFERENCE & UTILITIES



#### ENTERTAINMENT



#### EDUCATION, BOOKSHELF & LANGUAGES



All software is pre-loaded for your convenience\*

## Universa 486DX SYSTEMS

- ◆ 4Mb RAM expandable to 64Mb
- ◆ 540Mb Hard Disk
- ◆ 128K External Cache RAM
- ◆ Processor Upgradable to Pentium® Overdrive P24T
- ◆ Windows Accelerator SuperVGA Graphics Controller Card
- ◆ IDE Hard Disk & Floppy Drive Controller
- ◆ 3 x VESA & 4 x ISA expansion slots
- ◆ Dual Serial & Parallel Port
- ◆ Expandable Desktop Case
- ◆ 102 Key Enhanced Keyboard
- ◆ 14" Super VGA Non-Interlace Colour Monitor
- ◆ 3.5" 1.44Mb Floppy Drive
- ◆ 102 key enhanced keyboard
- ◆ Microsoft compatible mouse
- ◆ MS DOS v6.22 & MS Windows v3.11
- ◆ 12 Months Parts & Labour Warranty
- ◆ Technical Support Hotline

## Universa PENTIUM®-based SYSTEMS

- ◆ 8Mb RAM expandable to 128Mb
- ◆ 540Mb Hard Disk
- ◆ 256K External Cache RAM
- ◆ Advanced Pentium® upgradable motherboard using Type 5 ZIF socket
- ◆ EPA EnergyStar Compliant
- ◆ 64 bit SuperVGA Graphics Controller Card with 1Mb Video Memory
- ◆ Enhanced IDE I/F supporting 4 drives
- ◆ 3 x PCI/4 x 16 bit exp. slots (1 shared)
- ◆ Enhanced Parallel Port (EPP/ECP)
- ◆ Two Enhanced Serial Ports - 16550 UART
- ◆ 102 Key Enhanced Keyboard
- ◆ 14" SVGA Non-Interlace Colour Monitor
- ◆ 3.5" 1.44Mb Floppy Drive
- ◆ 102 key enhanced keyboard
- ◆ Microsoft compatible mouse
- ◆ MS DOS v6.22 & MS Windows v3.11
- ◆ 12 Months Parts & Labour Warranty
- ◆ Technical Support Hotline

### Aries Universa 486DX Systems

Description	Price	Finance per month
486DX2 66MHz	£679	£32*
486DX4 100MHz	£699	£33*
486DX2 66MHz	£899	£42*
486DX4 100MHz	£919	£43*

*See MultiMedia Panel* **DUAL SPEED MULTIMEDIA KIT £129** *See MultiMedia Panel* **QUAD SPEED MULTIMEDIA KIT £189**

**OPTIONS FOR UNIVERSA SYSTEMS:**

4Mb to 8Mb RAM upgrade	£110
540Mb to 1Gb Hard Disk Upgrade	£68
Upgrade to 15" Super VGA Colour 1024 x 768 Non Interlace Monitor	£99
12 Months On-Site Maintenance	£35
3 years On-Site Maintenance	£118

\* See example of calculations  
† All software supplied pre-loaded for your convenience with built-in tutorial. Disks and manuals available as an optional extra.

### Universa Pentium-based Systems

Description	Price	Finance per month
Pentium 75MHz	£949	£44*
Pentium 90MHz	£999	£46*
Pentium 75MHz	£1138	£53*
Pentium 90MHz	£1198	£55*

*See MultiMedia Panel* **DUAL SPEED MULTIMEDIA KIT £129** *See MultiMedia Panel* **QUAD SPEED MULTIMEDIA KIT £189**

**OPTIONS FOR UNIVERSA SYSTEMS:**

8Mb to 16Mb RAM Upgrade	£185
540Mb to 1Gb Hard Disk Upgrade	£68
Upgrade to 15" Super VGA Colour 1024 x 768 Non Interlace Monitor	£99
12 Months On-Site Maintenance	£35
3 years On-Site Maintenance	£118

\* See example of calculations  
† All software supplied pre-loaded for your convenience with built-in tutorial. Disks and manuals available as an optional extra.

APR **9.9%** Finance calculation example: **Cash Price: £679 + VAT = £797.83 Deposit: 10% £119.67 and 24 equal payments of £31.12 Total Price: £866.56** Finance is available subject to status. Be sure you can afford the payments prior to entering into an agreement. Price excludes carriage

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.



## Watford Electronics Ltd

Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN. Tel: 01923 237774



## SALES HOTLINE

**01582 745555**

FAX: 01582 488588



All Prices exclude Carriage & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

# Aries *The Sign of Quality*

The New Aries Perfecta PCI range is even by Watford's own high standards a breathtaking upgrade on the previous ranges. Designed without compromise for today's PC professional. Perfecta PCI Systems feature the hottest new local bus technology from Intel, PCI. Jointly developed by Intel and other industry leaders, PCI picks up where other bus architectures leave off,

providing greater system performance via a wider data path and increased expandability.

Incorporating a host of advanced features for improved performance, future-proof upgradability, a peace-of-mind **6 year warranty** and prices you've come to expect from Watford - you could say the new range is quite simply perfect!

**ASK FOR THE NO COST OPTION**



**Microsoft WINDOWS 95**  
Installed on your Perfecta PC at no extra charge

**INTERNET READY**



with the Aries range of Modems

## Perfecta® PCI

Genuine PCI performance at exceptional prices. These new Perfecta PCI systems incorporate a host of advanced features for improved performance including 9FX graphics cards to unleash the full power of Windows. Choose from the popular priced standard systems or include the industry-standard Microsoft Office software package. Whichever you choose you are assured of incredible value.

- ◆ 540Mb Fast IDE Hard Disk
- ◆ 4Mb RAM expandable to 128Mb
- ◆ 256K External Cache RAM exp. to 512K
- ◆ Write back & Write through Cache supported
- ◆ Advanced integrated upgradable motherboard
- ◆ Processor upgradable to Pentium Overdrive (Type 3 ZIF Socket on board)
- ◆ EPA Energy Star Compliant
- ◆ GrafixStar 300 64 bit Graphics Card with 1Mb Video Memory
- ◆ 3.5" 1.44Mb Floppy Drive
- ◆ Enhanced Parallel Port (EPP/ECP)
- ◆ Two enhanced Serial Ports using 16550 UART
- ◆ Enhanced IDE interface supporting four drives
- ◆ 3 x PCI & 4 x 16 bit expansion slots (1x PCI/16 bit shared slot)
- ◆ 102 key Enhanced Keyboard
- ◆ 14" Super VGA Low Radiation MPRII Non-Interlace Colour Monitor (0.28mm dot pitch)
- ◆ MS DOS v6.22 & MS Windows v3.11 OR MS Windows 95
- ◆ SIX Year Warranty consisting of: 12 months On-Site Parts & Labour Warranty Five Years (return to base) Labour Only Warranty
- ◆ Technical Support Hotline

Aries Perfecta PCI Systems		
Description	Price	Finance per month from
486DX2-66MHz	<b>£699</b>	<b>£38</b>
486DX4-100MHz	<b>£729</b>	<b>£39</b>
 Above system with 8Mb RAM and Microsoft Office v4.2		
486DX2-66MHz	<b>£915</b>	<b>£49</b>
486DX4-100MHz	<b>£945</b>	<b>£50</b>

Perfecta PCI Upgrade Option		
Part No.	Description	Price
PCI-01	4Mb to 8Mb RAM Upgrade	<b>£115</b>
PCI-02	4Mb to 16Mb RAM Upgrade	<b>£345</b>
PCI-05	Upgrade to GrafixStar 300 2Mb 64 bit Video Graphics Card	<b>£59</b>
PCI-10	1Gb IDE Hard Disk Drive instead of 540Mb IDE Drive	<b>£68</b>
PCI-20	Upgrade to 15" Aries 6000 Digital Control, Non-Interlaced (1280x1024) Low Radiation MPRII Monitor	<b>£79</b>
P5-30	MS Office - Manuals & Disks	<b>£49</b>

**6 YEAR WARRANTY**

**ENHANCED HIGH SPEED SERIAL PORTS 16550**

**1MB VIDEOLOGIC GRAPHICS CARD**



Shown with optional MultiMedia Kit

**DUAL SPEED MULTIMEDIA KIT**  
See MultiMedia Panel **£129**

**QUAD SPEED MULTIMEDIA KIT**  
See MultiMedia Panel **£189**



Shown with MultiMedia Kit with Aries HiFi Plus 15 Watt Speakers and 15" Aries 6000 monitor (optional)

**DUAL SPEED MULTIMEDIA KIT**  
See MultiMedia Panel **£129**

**QUAD SPEED MULTIMEDIA KIT**  
See MultiMedia Panel **£189**

## Perfecta® P5

Perfecta P5 systems make no compromises on quality or performance while continuing Aries reputation for superb value. With Pentium processors ensuring stunning speeds and a full range of options and low-cost multimedia kits you can personally customise your PC for your own needs.

- ◆ 540Mb Fast IDE Hard Disk
- ◆ 8Mb RAM expandable to 128Mb
- ◆ 256K External Cache RAM upg. to 512K
- ◆ Advanced integrated Pentium upgradable motherboard using Type 5 ZIF Socket
- ◆ EPA Energy Star Compliant
- ◆ GrafixStar 300 64 bit Graphics Card with 1Mb Video Memory
- ◆ 3.5" 1.44Mb Floppy Drive
- ◆ Enhanced Parallel Port (EPP/ECP)
- ◆ 2 enhanced Serial Ports using 16550 UART
- ◆ Enhanced IDE interface supporting four drives
- ◆ 3 x PCI & 4 x 16 bit expansion slots (1x PCI/16 bit shared slot)
- ◆ 102 key Enhanced keyboard
- ◆ 14" Super VGA Low Radiation MPRII Non-Interlace Colour Monitor (0.28mm)
- ◆ MS DOS v6.22 & MS Windows v3.11 OR MS Windows 95
- ◆ SIX year Warranty consisting of: 12 months On-Site Parts & Labour Warranty Five Years (return to base) Labour Only Warranty
- ◆ Technical Support Hotline

Aries Perfecta P5 Systems		
Description	Price	Finance per month from
Pentium P75	<b>£925</b>	<b>£49</b>
Pentium P90	<b>£995</b>	<b>£53</b>
 Above system with 1Gb HD and Microsoft Office v4.2		
Pentium P75	<b>£1110</b>	<b>£59</b>
Pentium P90	<b>£1180</b>	<b>£63</b>

Perfecta P5 Upgrade Options		
Part No.	Description	Price
P5-01	8Mb to 16Mb RAM Upgrade	<b>£230</b>
P5-02	8Mb to 32Mb RAM Upgrade	<b>£690</b>
P5-05	Upgrade to 512K External Cache RAM	<b>£69</b>
P5-06	Upgrade to GrafixStar 300 2Mb DRAM 64 bit Video Graphics Card	<b>£59</b>
P5-07	Upgrade to GrafixStar 700 2Mb VRAM 64 bit Graphics Card	<b>£99</b>
P5-10	1Gb IDE HDD instead of 540Mb IDE	<b>£68</b>
P5-11	2Gb IDE Hard Disk Drive instead of 540Mb IDE Drive	<b>£258</b>
P5-15	Upgrade to Full Tower Case	<b>£45</b>
P5-20	Upgrade to 15" Aries 6000 Digital Controlled Non-Interlaced (1280x1024) Low Radiation MPRII Monitor	<b>£79</b>
P5-21	Upgrade to 17" Panasonic PanaSync TX-D1733 Monitor (0.27mm DP)	<b>£345</b>
P5-22	Upgrade to 17" Panasonic PanaSync 17MM TX-D1733F with Built-in TopDome Sound & Microphone	<b>£395</b>
P5-30	MS Office - Manuals & Disks	<b>£49</b>

**intel inside pentium**

**LOW COST CREDIT APR 18.5%**  
Available on all Perfecta PC's. See example on previous pages

Case design may vary from that shown

# Aries *The Sign of Quality*

## Perfecta® P5 Triton

### The Ultimate Performers

Looking for the fastest PC's around? The search is over. The Perfecta P5 Triton Ultimate Performers have arrived. Fast. Powerful. Built to run your toughest applications at staggering speeds and designed for the increasingly strenuous demands of today's business PC user. The P5 Triton systems feature the latest Intel Triton chipset designed to get the ultimate performance from the Pentium processor. Combine this with high speed EDO-RAM and a Pipeline Burst Cache upgrade and you have a system that is probably the finest example of Power Computing available anywhere.

- ◆ 8Mb EDO RAM expandable to 128Mb
- ◆ 1Gb Fast IDE Hard Disk
- ◆ 256K External Cache RAM expandable to 512K
- ◆ Pipelined Burst Cache Module supported
- ◆ 100MB/sec PCI Data Streaming
- ◆ Plug & Play (ISA) support for MS Windows 95
- ◆ Advanced Integrated upgradable motherboard with Intel Triton Chipset
- ◆ Processor upgradable to Pentium 200MHz using Type 7 ZIF Socket
- ◆ EPA Energy Star Compliant
- ◆ GrafixStar 300 64 bit Graphics Card with 2Mb Video Memory
- ◆ 3.5" 1.44Mb Floppy Drive
- ◆ Enhanced Parallel Port (EPP/ECP)
- ◆ Two enhanced Serial Ports using 16550 UART
- ◆ Enhanced IDE Interface supporting four drives
- ◆ 3 x PCI & 4 x 16 bit expansion slots (1x PCI/16 bit shared slot)
- ◆ 102 Key Enhanced keyboard
- ◆ 15" Digital Controlled, Non-Interlaced (1280x1024) Low Radiation MPRII Colour Monitor (0.28mm dot pitch)
- ◆ MS DOS v6.22 & MS Windows v3.11 OR MS Windows 95
- ◆ SIX year Warranty consisting of:  
12 months On-Site Parts & Labour Warranty  
Five Years (return to base) Labour Only Warranty
- ◆ Technical Support Hotline



Shown with optional MultiMedia Kit and Aries Digital Plus 80 Watt Speakers

**6 YEAR WARRANTY**

**ENHANCED HIGH SPEED SERIAL PORTS 16550**

**2MB VIDEOLOGIC GRAPHICS CARD**

#### Aries Perfecta P5 Triton Systems

Description	Price	Finance per month from
Pentium P90	<b>£1249</b>	<b>£67</b>
Pentium P120	<b>£1449</b>	<b>£77</b>
Pentium P133	<b>£1539</b>	<b>£82</b>



**CALL for SPECIAL PRICES for MICROSOFT OFFICE v4.2** when purchasing the above range of PC's

#### Perfecta P5 Triton Upgrade Options

Part No.	Description	Price
P5-Tr01	8Mb to 16Mb EDO RAM Upgrade	£256
P5-Tr02	8Mb to 32Mb EDO RAM Upgrade	£768
P5-Tr03	8Mb to 64Mb EDO RAM Upgrade	£POA
P5-Tr04	Upgrade to 256K Pipeline-Burst Cache Module	£50
P5-Tr05	Upgrade to 512K Pipeline-Burst Cache Module	£100
P5-Tr06	Upgrade to GrafixStar 700 2Mb VRAM 64 bit Graphics Card	£78
P5-Tr10	2Gb IDE Hard Disk Drive instead of 1Gb IDE Drive	£195
P5-Tr11	2Gb SCSI Hard Disk Drive instead of 1Gb IDE Drive	£448
P5-Tr15	Upgrade to Full Tower Case	£45
P5-Tr20	Upgrade to 17" Panasonic PanaSync TX-D1733 Monitor (0.27mm DP)	£275
P5-Tr21	Upgrade to 17" Panasonic PanaSync 17MM TX-D1733F with Built-in TopDome Sound & Microphone	£325
P5-Tr22	Upgrade to 20" Panasonic PanaSync TX-D2051 Monitor	£840
P5-Tr23	Upgrade to 21" Panasonic PanaSync TX-D2131 Monitor	£1180
P5-Tr30	MS Office - Manuals & Disks	£49

Case design may vary from that shown

**LOW COST CREDIT APR 18.5%**  
Available on all Perfecta PC's. See example on previous pages

**DUAL SPEED MULTIMEDIA KIT £129**  
See MultiMedia Panel

**QUAD SPEED MULTIMEDIA KIT £189**  
See MultiMedia Panel



**pentium** PROCESSOR

## UPGRADE ANY Perfecta PC TO A COMPLETE MULTIMEDIA SYSTEM

#### Perfecta MultiMedia Kits MM2 & MM4

- ◆ Dual Speed (MM2 Kit) or Quad Speed (MM4 kit) CD ROM Drive
- ◆ Creative Sound Blaster 16 Sound Card
- ◆ Aries HiFi Speaker Set (10W per channel)
- ◆ Microsoft CD Bundle Pack (see panel)

Dual Speed Kit MM2 **£129**  
Quad Speed Kit MM4 **£189**

#### Optional Speaker Upgrades

(only available with Multimedia MM2 & MM4 kits)

Part No.	Description	Price
P-Spk01	Aries HiFi Plus (15W per channel)	£9
P-Spk02	Aries Digital (25W per channel)	£18
P-Spk03	Aries Digital Plus (80W per channel)	£29
P-Spk04	Aries Ultra Power (80W per channel)	£39

**Genuine Sound BLASTER**



#### Complete Bundle Software Pack Included

- MS Encarta 1995
- MS MultiMedia Works
- MS Dangerous Creatures
- MS Money
- MS Golf
- MS Scenes (3.5" disks)

MultiMedia Kit prices only applicable when purchased with a Perfecta PC



#### Microsoft Office 4.2 Includes:

- ◆ MS Office Manager
- ◆ MS Word for Windows v6
- ◆ MS Excel for Windows v5
- ◆ MS Powerpoint for Windows v4
- ◆ MS Mail (Licence)

Supplied when you purchase disks & manuals  
Office Software supplied pre-loaded for your convenience with built-in tutorial. Disks & manuals available as an optional extra.

Advert valid from 01/11/95 to 30/11/95

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.

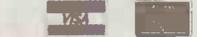


**Watford Electronics Ltd**

Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN. Tel: 01923 237774



**SALES HOTLINE**  
**01582 745555**  
FAX: 01582 488588



All Prices exclude Carriage & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

# The Aries Perfecta® 7000 Series

## The Most Advanced Yet!

Introducing a new range of beautifully designed notebooks that genuinely give you the power and facilities you expect from your desktop PC. The Aries Perfecta 7000 is packed with intelligent energy-saving features that ensure you get longer life and safer data. PCMCIA flexibility gives fax/modem communications on the move and Ethernet in the office (with optional cards). With a choice of processors up to DX4 100MHz and RAM expandable to a mammoth 32Mb, the 7000 packs the power to run your Windows applications, and an ergonomic design to make them easier to use. While the standard trackball or the new optional trackpoint control stick allows you to control the cursor smoothly and effortlessly.

We've taken the portable computer a long way, think where you can take it.



SK/DX4 Models

Notebook shown here with 19mm Trackball with 2 buttons supplied as standard



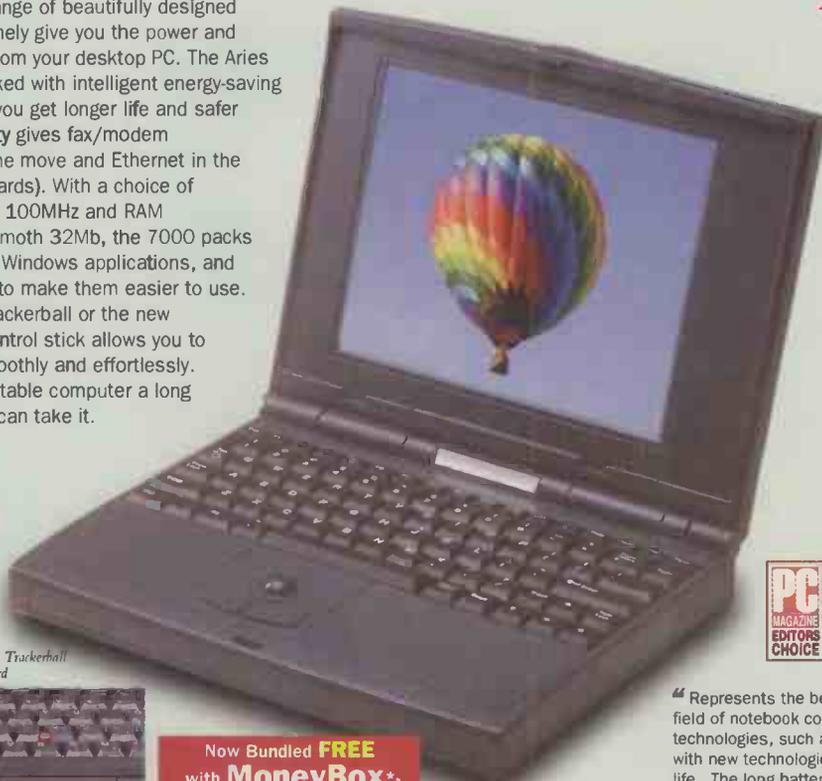
Ergonomically designed sloping palm rest



Notebook shown here with Optional TrackPoint Control Stick

Now Bundled **FREE** with **MoneyBox\*** Personal Finance Organiser - Worth **£29**

\* Pre-loaded for your convenience, Manual/Disk available as an option.



**FREE**  
16 bit Soundcard (fitted) with any purchase of a Notebook this month  
**WORTH £49**

Notebooks from	
Mono	<b>£969</b>
Colour Dual Scan	<b>£1299</b>
Colour TFT	<b>£1799</b>

"With plenty of processing power, (and) enough battery life to handle a transcontinental flight easily, ...a value winner." "...the lightest full-size notebook in the roundup; it also had excellent battery life..., optional audio and a good price..."

PC MAGAZINE, Cover Story: Notebooks

"...A great Windows PC, and an excellent value." "...the fact that you get the amount of performance we did from a battery charge speaks highly of the engineering."

LAPTOP BUYERS GUIDE & HANDBOOK, First Look



"Ranks above many famous-name notebooks. And in terms of pointing devices, it's definitely got them outnumbered." "...deserves a spot on your short list."

COMPUTER SHOPPER, PC Reviews

"Represents the best kind of innovation in the rapidly changing field of notebook computers. It keeps the best of proven technologies, such as a sharp display, and complements them with new technologies, such as those employed to stretch battery life. The long battery life makes it a good choice for anyone who needs a basic notebook that also delivers solid performance."

WINDOWS MAGAZINE, WinLab First Impressions

Reviews done on identical Notebook in the USA

### LOW POWER 3.3V

All the components in the notebook run at 3.3V, giving up to three times longer life.

### SUSPEND TO DISK

Suspend to memory or suspend to disk ensures data is never lost when you leave the notebook.

### SUPERB PERFORMANCE

CPU Upgrade up to Intel DX4-100. External connectivity enhanced by use of 16C550 Serial Port and Parallel Port with support for EPP/ECP.

### INTERNAL STATUS INDICATOR PANEL

12 distinct icons will display, flash or change appearance to give you a complete report on the state of the machine including a 5 step graduated remaining charge gauge.

### FULLY MODULARISED DESIGN

- ◆ Removable Hard Disk
- ◆ Upgradable Memory to 32Mb
- ◆ Upgradable CPU to DX4-100
- ◆ Upgradable Screen Mono-TFT
- ◆ Exchangable Keyboard
- ◆ Optional Docking Station

### ADVANCED POWER MANAGEMENT

Complete with a comprehensive set of 16 features that will allow you to customise the operation of the machine to your benefit.

### REPLACEABLE HARD DISK DRIVE

Running out of space? Replace the Hard Disk Drive easily. The system BIOS will automatically detect the new HDD

### EXTERNAL STATUS INDICATOR

"At a glance" multi colour indicator on the top cover shows if machine is charging, charged, suspended with battery charging or charged.

### FLEXIBLE PCMCIA

Compartment for two type I/II or one type III PCMCIA slot with removable cover.

## Aries Perfecta 7000 Series Notebooks

- ◆ Intel Low Powered Enhanced CPU
- ◆ 4Mb RAM expandable to 32Mb
- ◆ 340Mb Removable Hard Disk Drive
- ◆ Advanced Power Management
- ◆ LCD Status Indicator
- ◆ Fully Modularised Design - Upgradable CPU, LCD, Removable Hard Disk & Keyboard
- ◆ 1Mb VESA Bus Video with GUI accelerator
- ◆ Advance PMU Function
- ◆ Mono/Stereo 16 bit Sound System (Optional)
- ◆ Audio Line (In/Out) with volume control
- ◆ Built-in Speaker/Microphone (requires sound system)
- ◆ 1.44Mb 3.5" Floppy Drive
- ◆ 82 key QWERTY Keyboard
- ◆ 19mm Trackball (Optional Track-point device)
- ◆ PCMCIA slots (2 x Type II/1 x Type III)
- ◆ Hi-Speed 16C550 Serial Port
- ◆ Enhanced Parallel Port (EPP/ECP support)
- ◆ External Super VGA Monitor Port (1024x768 256 Colours)
- ◆ Simultaneous Display capability
- ◆ External Keyboard/PS/2 Mouse connector
- ◆ Optional Internal 14.4K Fax/Modem
- ◆ Rechargeable NiMH Battery Pack
- ◆ MS-DOS v6.22 & Windows v3.11 plus MoneyBox\* Personal Finance Organiser
- ◆ Weight: 3Kg ◆ Carrying Case

All prices are for standard 340Mb Hard Disk, Supplied with **FREE** Carrying Case

7000 Series Display	7100 10" Mono 64 Grey Scale	Finance per month from	7300 10" Colour Dual Scan	Finance per month from	7400 10" Colour TFT Active Matrix	Finance per month from
SL i486SX™-33	<b>£969</b>	£37	<b>£1299</b>	£49	<b>£1799</b>	£68
SL i486DX4™-75	<b>£999</b>	£38	<b>£1349</b>	£51	<b>£1825</b>	£69
SL i486DX4™-100	<b>£1099</b>	£42	<b>£1399</b>	£53	<b>£1899</b>	£72

APR **18.5%**

Finance calculation example: Cash Price: £969 + Carriage and VAT = £1152.68 Deposit 10% £115.27 and 36 equal monthly payments of £37.07 Total Price £1334.52. Finance is available subject to status. Be sure you can afford the payments prior to entering into an agreement

## PERFECTA 7000 OFFICE COMMUNICATIONS UPGRADE

Turn your Aries 7000 notebook into a complete voice mail system with the Aries Office Communications Workstation Kit. Suitable for home or business, supporting multiple mail boxes, Fax on Demand, and data communications. The Aries Office Communications Workstation Kit contains high speed V32bis (14400 baud) Voice/Fax Modem and software package, providing users with remote access to voice, fax and data messages.

**SPECIAL OFFER £125**

### ADDITIONAL OPTIONS

- 4 to 8Mb RAM Upgrade\* £159
- 4 to 16Mb RAM Upgrade\* £525
- 4 to 32Mb RAM Upgrade\* £1089
- Track-point device £25
- 8 bit Internal Sound Card £25
- 16 bit Internal Sound Card £49
- Aries HiFi Speakers £29
- PCMCIA 9600 Fax/Modem £59
- PCMCIA US Robotics Worldport 14400 Fax/Modem £165
- PCMCIA Ethernet Card £99
- Spare NiMH Battery Pack £69
- Spare AC Mains Adaptor £49
- Car Lighter Adaptor £29
- Docking Station £339
- External Keyboard £25
- Internal V32bis 14.4K Fax/Modem (non-approved) with software £125

\*Requires module exchange

7000 Notebook Hard Disk Upgrades (Prices valid when purchasing Notebooks only)

UGA0530/A	340Mb to 540Mb HDD	<b>£125</b>
UGA0540/A	340Mb to 800Mb HDD	<b>£249</b>

### 1 YEAR SUPPORT

All Perfecta Notebooks are covered by a **FREE 12 Months Warranty** in mainland UK.

### 2 YEAR GOLD CARE

For 12% of the cost, we will collect, repair and return your notebook within mainland UK for the first 24 months.

### HOTLINE SUPPORT

All Perfecta Notebooks are covered by Hotline Support. We want you to get the best from your machine, so we offer a comprehensive support package over the phone.



**Watford Electronics Ltd**

Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN. Tel: 01923 237774



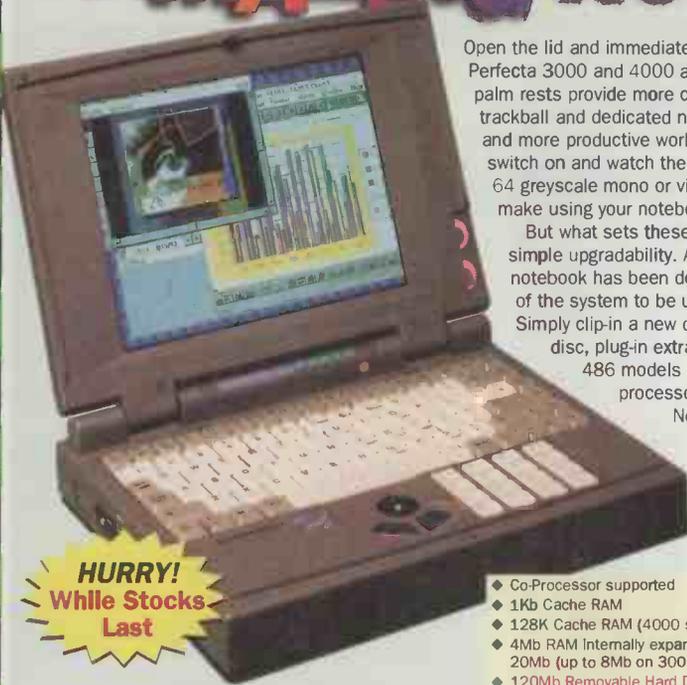
**SALES HOTLINE**  
**01582 745555**  
FAX: 01582 485888



All Prices exclude Carriage & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

# AMAZING Notebook Offers



Open the lid and immediately you see what sets the Perfecta 3000 and 4000 apart. Ergonomically designed palm rests provide more comfortable use; the built-in trackball and dedicated numeric keypad allow easier and more productive work in confined spaces; then switch on and watch the display leap to life. The bright 64 greyscale mono or vivid Dual Scan colour display make using your notebook a pleasure.

But what sets these new ranges apart is the simple upgradability. As your needs grow the notebook has been designed to allow key elements of the system to be upgraded within seconds.

Simply clip-in a new display, slot-in a new hard disc, plug-in extra memory and on the Intel 486 models simply drop-in a new processor.

Never has so many features, processing power, usability, convenience, flexibility and security been available in a notebook.

**Perfecta**  
486SLC 33 Mono **£499**

**Perfecta**  
486SLC 33 Colour **£699**

## CLEARANCE PRICES WHILST STOCKS LAST

Display	10" Mono 64 Grey Scale	10" Colour Dual Scan
<b>3000 Series</b>	<b>3100</b>	<b>3300</b>
486SLC-33	£499	£699
<b>4000 Series</b>	<b>4100</b>	<b>4300</b>
486SX-33C	£599	£799
486DX2-66C	£699	£899

**HURRY!**  
While Stocks  
Last

COMPUTER  
SHOPPER  
BEST BUY

PC PLUS  
RECOMMENDED

BUY BEST BUY BEST  
WHAT?  
PC PLUS

◆ Upgrade to:  
340Mb HD £129  
510Mb HD £179

- ◆ Co-Processor supported
- ◆ 1Kb Cache RAM
- ◆ 128K Cache RAM (4000 series)
- ◆ 4Mb RAM Internally expandable to 20Mb (up to 8Mb on 3000 series)
- ◆ 120Mb Removable Hard Drive (250/340/540Mb options)
- ◆ 1.44Mb 3.5" Internal Floppy
- ◆ 84 Key Qwerty UK Keyboard
- ◆ 16mm Logitech Trackball
- ◆ 16 Key Built-in Separate Numeric Keypad

- ◆ 1 x 9-pin D Type Serial Port
- ◆ 2 x Parallel Port (1 enhanced bi-directional)
- ◆ Future Domain SCSI Port (3000 Series) Adaptec SCSI-II Port (4000 Series)
- ◆ 15-pin VGA D type External Monitor Port
- ◆ External Modes Supported: 800 x 600 256 colour, 1024 x 768 16 colour
- ◆ Simultaneous Display - LCD and External Video (not 3300/4300 models)
- ◆ Intelligent Power Management
- ◆ Security Password

- ◆ 5-level Power Meter
- ◆ External Keyboard Port
- ◆ Rechargeable Battery Pack
- ◆ 80-250V Universal Mains Adaptor /Charger
- ◆ 70 Minute Turbo Charge
- ◆ Car Battery Adaptor option
- ◆ Optional Fax Modem up to 28,000 baud
- ◆ Carry Case included
- ◆ Dimensions 226 x 295 x 52
- ◆ Weight (inc. battery) 3Kg
- ◆ 3 Months return to base warranty

## NEW Canon BJ-30 Bubblejet Printer

Ultra compact, high quality,  
no compromise.

### Versatile and practical

The BJ-30 is tiny yet it prints onto plain A4 or letterhead paper, envelopes and overhead transparencies. It weighs only 1.4kg so it's light enough and small enough to tuck into a briefcase. If you use word processing, spreadsheets or accounts software, if you use a notebook PC or sometimes work at home, the new BJ-30 is the ideal solution for all your occasional printer needs.

### Easy to use

The printer is simple to set up and easy to use following the enclosed "Quick Start Guide". You can select and control the printing features of the BJ-30 either on screen with your software, or by using the distinctive LCD printer control panel.

### Speed and Quality

The BJ-30 uses the new BJ-10 cartridge system, with a 128 nozzle print head. This gives a high print speed of 2.2 pages per minute and offers a built "smoothing" function for high quality text and graphics at an effective resolution of 720 x 360 dpi.

### Minimum Maintenance

It is virtually maintenance free, with snap-in replaceable ink tanks and a separate print head unit. An auto-capping and cleaning system ensures trouble free operation.

### Software Friendly

The BJ-30 works with all packages. In addition to the advanced Windows™ driver, a comprehensive range of MS-DOS® and IBM Proprinter™ emulations can also switch automatically when you change applications.



**£139**

### The new portable and affordable black and white computer printer.

- ◆ Portable printer, Weight 1.4kg
- ◆ Resolution 360x360dpi, with 'Smoothing' function gives an effective 720x360dpi
- ◆ Prints on plain paper, glossy & coated papers, back print film, envelopes and OHP
- ◆ Integral cut sheet paper feeder holds 30 sheets of A4 or 5 envelopes
- ◆ Up to 2.2 pages per minute in High Speed mode
- ◆ 6 resident typefaces & 20 scalable TrueType fonts
- ◆ Compatible with Windows, all major MS-DOS software, Amiga and Acorn drivers freely available

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.



**Watford Electronics Ltd**  
Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN. Tel: 01923 237774



**SALES HOTLINE**  
**01582 745555**  
FAX: 01582 488588

VISA  
All Prices exclude Charge & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

# AMAZING Networking Offers

## GENIUS ETHERNET PRODUCTS

### GE2000 II Ethernet Adapter

The GE2000 II is a 16-bit Ethernet card which is 100% Novell NE2000 compatible. Installation is simple - just plug in and run the easy to use setup software.

- ◆ BNC and UTP connections (AUI optional)
- ◆ 35% faster than Novell NE2000 card
- ◆ Supports NetWare, FFWG & TCP/IP

Single: £27 5 pack: £129



**£27**

Personal NetWare & GE2000 Card  
Genius GE2000 II Ethernet card  
and Novell Personal NetWare software\*  
**SPECIAL OFFER PRICE £45**



**£65**

### E3000 II Parallel Port Adapter

The E3000 II is a parallel port Ethernet adapter offering higher performance than any similar priced model available.

- ◆ BNC and UTP connections as standard
- ◆ Through connection for local printer
- ◆ Simultaneous printer & LAN connectivity
- ◆ PS/2 mouse port power lead or mains PSU

Single: £65 5 pack: £339

ME3000 II PCMCIA Ethernet Card  
A high performance Ethernet adapter for use in notebooks with a PCMCIA slot. Has both BNC and UTP connections.  
**SPECIAL OFFER PRICE £81**

### GE2500 PCI Ethernet Adapter

The GE2500 is a new high performance Ethernet adapter for use in PCI based computers. Uses bus mastering for low CPU & bus utilization, thus improving overall performance.

- ◆ BNC and UTP connections (AUI option)
- ◆ Software configurable & auto media detect
- ◆ Supports NetWare, FFWG, PCNFS & TCP/IP

Single: £89 5 pack: £439



**£89**

### GE2000 PnP Ethernet Adapter

The GE2000PnP is a 16-bit NE2000 compatible Ethernet adapter which support the new ePlug & Play standard, and is ideal for use with MS Windows 95 operating system.

- ◆ Plug & Play NE2000 compatible card
- ◆ BNC and UTP connectors as standard
- ◆ Supports NetWare, FFWG, PCNFS & TCP/IP
- ◆ Full duplex transmission

Single: £35 5 pack: £169

### GH4080/GH4160 Ethernet Hubs

The GH4080 and GH4160 are compact, stylish UTP Ethernet hubs, providing either 8 or 16 ports. The units are ideal for small to medium size workgroup applications.

- ◆ 8 or 16 UTP ports, 1x BNC connection
- ◆ Compact size and very lightweight
- ◆ Daisy chain port for stacking hubs together
- ◆ LED indicators display port status

GH4080: £89 GH4160: £90A

### GE2000 PnP Ethernet Adapter

The GE2000PnP is a 16-bit NE2000 compatible Ethernet adapter which support the new ePlug & Play standard, and is ideal for use with MS Windows 95 operating system.

- ◆ Plug & Play NE2000 compatible card
- ◆ BNC and UTP connectors as standard
- ◆ Supports NetWare, FFWG, PCNFS & TCP/IP
- ◆ Full duplex transmission

Single: £35 5 pack: £169



**£35**

Top quality products from Genius' No. 1 UK supplier

## ETHERNET CABLING

Length	1m	3m	5m	10m	15m	20m	30m	50m	100m	300m
Thin Ethernet	£3	£5	£6	£8	£10	£15	£21	£29	£35	£115
UTP	£2	£4	£6	£9	£13	£16	£22	£30	-	£109

## UPS SYSTEMS

American Power Conversion	Price
BK250i - 250VA Backup UPS	£83
BK600i - 600VA Backup UPS	£159
SU250i - 250VA Smart UPS	£175
SU600i - 600VA Smart UPS	£219
SU900i - 900VA Smart UPS	£389
SU1200i - 1.2kVA Smart UPS	£510
SU2000i - 2kVA Smart UPS	£979
LineR600 600VA Conditioner	£119
LineR1250 1.2kVA Conditioner	£139
Matrix 3kVA UPS	£1839
Matrix 5kVA UPS	£2699
PowerChute Plus shutdown software	£49
Hewlett Packard	
PowerWise L600 - 600VA Backup UPS	£249
PowerWise L900 - 900VA Backup UPS	£389
PowerWise 1000VA Smart UPS	£629
PowerWise 2100VA SmartUPS	£949
PowerWise Assistant software	from £89

## TOOLS & CONNECTORS

Connectors	1-9	10+
50ohm BNC Male Crimp Plug	£0.95	£0.85
50ohm BNC T-connector	£1.70	£1.60
50ohm BNC In-line Coupler	£1.65	£1.60
50ohm BNC Terminator	£0.90	£0.80
50ohm BNC Terminator & Earth	£1.20	£1.10
RJ45 Male Crimp Plug	£0.35	£0.30
Thin Ethernet Socket Systems		
Safertap Outlet - surface or flush mount	£18	
Safertap 2.5m drop lead	£17	
Safertap Outlet & 2.5m drop lead	£33	
AMP Thinnest Tap Outlet	£17	
AMP Thinnest Tap 2.5m drop lead	£15	
UTP Cabling Accessories		
Dual RJ45 Outlet - flush mount	£14	
24way 19T RJ45 Patch Panel	£124	
Tools and Accessories		
Thin Ethernet BNC Crimp Tool	£12	
Thin Ethernet Cable Stripper	£7	
RJ45 Crimp Tool	£12	
Round Cable Stripper	£11	

## NOVELL NETWORK

No of Users	5	10	25	50	100	250	Manuals
NetWare 3.12	£385	£905	£1351	£1940	£2540	£4575	£155
NetWare 4.1 CD	£413	£944	£1436	£2035	£2865	£5950	£135

Education and Upgrade Packs available - call 01582 745555 for details

## ETHERNET ADAPTERS

16-bit ISA Ethernet Adapters	Connections	SingleCard Pack	Five Card Pack
3Com Etherlink III - 3C509B	BNC	CNA0610 £66	CNA1900 £319
3Com Etherlink III - 3C509B-Combo	BNC/UTP/AUI	CNA0630 £73	CNA1920 £355
Aries NE2000 II	BNC/UTP	CNA0040 £25	CNA1710 £119
D-Link DE-220CT	BNC/UTP	CNA1570 £65	CNA1730 £379
Genius GE2000 II	BNC/UTP	CNA1130 £27	CNA0940 £129
Genius GE2000 Plug & Play	BNC/UTP	CNA2130 £35	CNA2140 £169
Intel EtherExpress Pro 10	BNC/UTP	CNA1260 £62	CNA1270 £289
Intel EtherExpress Pro 10 Flash	BNC/UTP	CNA1280 £69	CNA1280 £319
Novell NE2000+	BNC	CNA1510 £48	CNA2070 £215
Novell NE2000+	UTP	CNA1250 £48	CNA2080 £215
SMC Elite 16C Ultra	BNC/UTP/AUI	CNA0890 £62	CNA1210 £344
SMC EtherEZ	BNC/UTP	CNA2620 £66	CNA2660 £335
32-bit EISA Ethernet Adapters			
3Com Etherlink III - 3C579B	BNC/AUI	CNA0710 £139	CNA1950 £699
3Com Etherlink III - 3C579B-TP	UTP/AUI	CNA0720 £139	CNA1960 £699
Genius E1320	BNC/UTP/AUI	CNA1370 £169	CNA0980 £830
Intel EtherExpress 32C Flash	BNC/UTP	CNA1420 £155	
Intel EtherExpress 32C Ultra	BNC/UTP	CNA1780 £143	CNA1740 £829
MCA (PS/2) Ethernet Adapters			
3Com Etherlink III - 3C529B	BNC/AUI	CNA0730 £139	CNA1930 £709
3Com Etherlink III - 3C529B-TP	UTP/AUI	CNA0740 £139	CNA1940 £709
Genius E1162M	BNC/UTP/AUI	CNA1360 £159	CNA0960 £779
32-bit PCI Ethernet Adapters			
3Com Etherlink III - 3C590B-Combo	BNC/UTP	CNA0430 £124	CNA0440 £475
D-Link DE-530CT	BNC/UTP	CNA2710 £95	
Genius GE2500	BNC/UTP	CNA2110 £89	CNA2120 £439
SMC EtherPower	BNC/UTP	CNA1240 £93	CNA2700 £579
Parallel Port Ethernet Adapters			
D-Link DE-620CT	BNC/UTP	CNA1660 £105	
Genius E3000 II	BNC/UTP	CNA1145 £65	CNA1230 £319
SMC EliteNote	BNC/UTP	CNA1630 £149	
PCMCIA Ethernet Adapters			
3Com Etherlink III - 3C589B-Combo	BNC/UTP	CNA1490 £130	
D-Link DE-650CT	BNC/UTP	CNA2720 £135	
Genius ME3000 II	BNC/UTP	CNA1620 £81	CNA1770 £395
SMC EliteCard	BNC/UTP	CNA2630 £144	

## HUBS/REPEATERS

3Com	TP	BNC	AUI	SNMP	Price
LinkBuilder TP12	12	-	1	-	£229
LinkBuilder FMS II	12	opt	1	opt	£389
Aries					
EH-8	8	1	-	-	£119
EH-16	16	1	1	-	£279
EH-32	32	1	1	-	£459
Genius					
GH4080 Palmtop	8	1	-	-	£89
GH4160 19" rack	16	1	-	-	£149
GH1000 19" rack	12	1	1	opt	£249
GR5050 Palmtop	-	3	1	-	£122
ER5020 19" rack	-	2	2	-	£122
ER5040 19" rack	-	4	4	-	£225
Hewlett Packard					
AdvanceStack 8U	8	opt	opt	opt	£135
AdvanceStack 12U	12	opt	opt	opt	£369
AdvanceStack 24U	24	-	1	-	£619
SMC					
Elite 3812TP	12	1	1	opt	£399
Tiger TP6	6	-	1	-	£145
Tiger TP12	12	-	1	-	£259
Tiger CX3	-	3	1	-	£219

## PEER TO PEER NETWORKING

### MS Windows 95 Networking Kits

Thinking of upgrading to the new Windows 95 and also networking your PCs? Why not take advantage of these special packs we have put together at very special prices.

Net95 Kit 1 - 2 User Upgrade Kit	£159
Net95 Kit 2 - 3 User Upgrade Kit	£239
Net95 Kit 3 - 5 User Upgrade Kit	£399
Net95 Kit 4 - Additional User Upgrade Kit	£85

All kits include Ethernet card, software, 5m cables and connectors

### Personal NetWare Networking Kits

Link up to 30 PCs with Novellis low cost peer-to-peer software, and have shared access to hard disks, printers, CD ROM all at the click of a mouse button. With support for both DOS and MS Windows, it is the ideal solution for small scale installations.

Net95 Kit 1 - 2 User Kit	£89
Net95 Kit 2 - 5 User Kit	£210
Net95 Kit 3 - Additional User Kit	£49
Net95 Kit 4 - 1 User Notebook Kit	£109

All kits include Ethernet card, software\*, 5m cables and connectors

## ETHERNET TRANSCEIVERS

Excel					
10base2 BNC Transceiver					£25
10baseT RJ45 Transceiver					£22
Genius					
E6000 10baseT RJ45 Transceiver					£27
E6001 10base5 "N" Transceiver					£26
E6002 10base2 BNC Transceiver					£67
E6003 10base5 Tap Transceiver					£38

## PRINTER SERVERS

**Genius GPS300 Print Server**  
The GPS300 Pocket Print Server is the ideal solution to your NetWare printing requirements. It is a compact pocket sized unit which plugs directly into the Centronics port on your printer and connects directly to your network via BNC or RJ45 UTP connections.  
**Special Offer Introductory Price: £115**

Hewlett Packard					
JetDirect - Internal for LJ4/4Si					£269
JetDirect - External					£229
D-Link					
DE950 External					£285
Intel					
NetPort Express EL					£249
NetPort Express XL					£299

Note: above are for use with Novell NetWare only

## NETWORKING SOFTWARE

Lotus cc:Mail R2.0 Mobile WIN	£109
Lotus cc:Mail R2.0 Desktop WIN	£65
MS Windows for Workgroups v3.11	£89
MS Windows for Workgroups Add-On WIN	£41
MS Windows for Workgroups Add-On DOS	£43
MS Windows NT v3.5 Server	£595
MS Windows NT v3.5 Workstation	£225
MS Mail v3.2 PC Server	£299
Novell Personal NetWare - 1 User	£45
Sage MainLan v4 - 1 User	£49



**WATFORD**  
the No.1 Choice  
**PRICE PROMISE**  
If you can find a better price call us, we'll try and beat it.

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.



**Watford Electronics Ltd**

Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN



**SALES HOTLINE**  
**01582 745555**



All Prices exclude Carriage & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

**FREE**  
Admission,  
Seminars,  
Refreshments  
& Parking

# Hands-on Open Day

at our Luton Showroom

See  
Microsoft  
Windows '95  
in Action  
all day!

**Sunday 26th November 1995**  
**from 10.00am to 4.30pm**

In association with  
Computer Shopper,  
PC Direct & Personal  
Computer World

The Watford Electronics Christmas Open Day is the ideal opportunity to find that special Christmas present at a very special price, and take away a **FREE GIFT** with every purchase\*.

There are 'hands-on' opportunities for you to try out all the latest products in the PC market. And Seminars, Presentations and Demonstrations throughout the day for both the home and business user. We'll have experts on hand to guide you through the multimedia maze and show you how to surf the Internet.

Our technical and sales support team will be there to assist and advise you on the best products for all your computing needs and representatives from a host of leading computer companies will be on hand to answer your questions. Try it and then buy it - for the young and old (and those in between) -

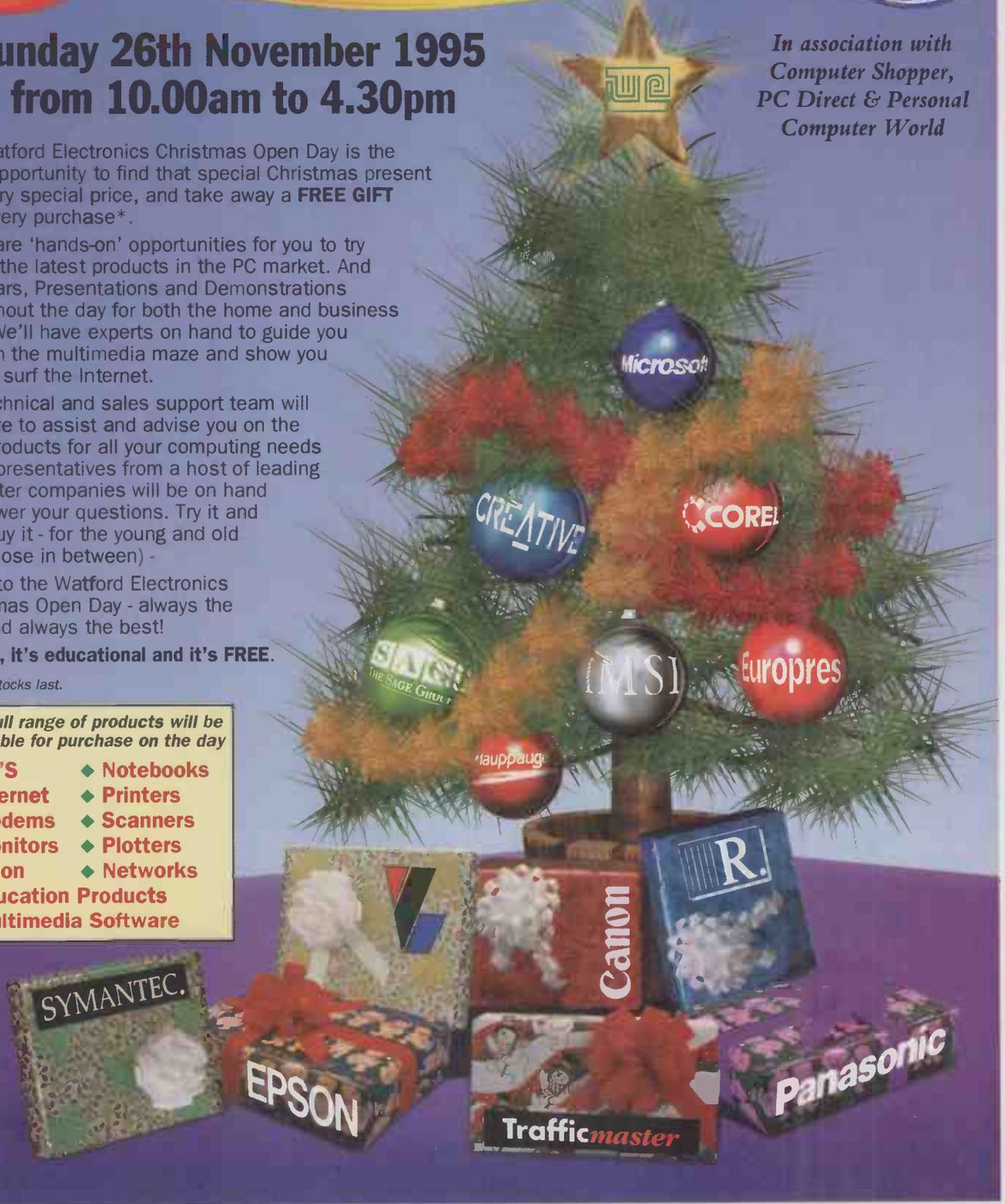
Come to the Watford Electronics Christmas Open Day - always the first and always the best!

**it's fun, it's educational and it's FREE.**

\* While stocks last.

**Our full range of products will be available for purchase on the day**

- ◆ **PC'S**
- ◆ **Internet**
- ◆ **Modems**
- ◆ **Monitors**
- ◆ **Psion**
- ◆ **Education Products**
- ◆ **Multimedia Software**
- ◆ **Notebooks**
- ◆ **Printers**
- ◆ **Scanners**
- ◆ **Plotters**
- ◆ **Networks**



## Watford Electronics Ltd

Jessa House, Finway (off Dallow Road), Luton LU1 1TR. Tel: 01582 487777

**Direction to Jessa House from the M1 Motorway:**

Exit off junction 11 of the M1. If coming from the south, turn right at the roundabout (under the motorway); or from the North, turn immediately left. At the first roundabout turn right. Pass 'DO-IT-ALL' on the left. Over a bridge, across three roundabouts with B&Q on your left. You are now in Dallow Road. After half a mile you pass BESTWAYS on the left. Finway is now the first turning on the left.

Credit Card/Sales Order Line: 0582 745555 • Technical Support: 0582 745500 • Switchboard: 0582 487777

# 2

# GREAT REASONS TO BUY PERFECT OFFICE NOW!

# 1

Get a **FREE Upgrade** to PerfectOffice 7 for Windows 95

# 2

Pay the **Competitive Upgrade Price** for PerfectOffice if you have any version of Windows

Anyone purchasing PerfectOffice (any version) from now until 30 days after PerfectOffice 7 for Windows 95 version is available, will receive a Free upgrade license to the Windows 95 version. Excludes media and documentation.

## PerfectOffice v3.0 for Windows The Perfect Place to Work

With PerfectOffice™, Novell have truly responded to your needs by integrating all of WordPerfect's leading business applications into one computing solution.

PerfectOffice is the first suite to give you all the features you've requested: software that's easy to use, open network integration and a convenient way to build custom solutions on top of your suite. All of which will revolutionise the way you perceive software suites today. As well as provide you with a truly effective solution to utilise all that your computer can do.

**GREAT OFFER**  
PerfectOffice v3.0  
**only £115**  
(Version Upgrade from any WordPerfect or Novell Product)  
While Stocks Last

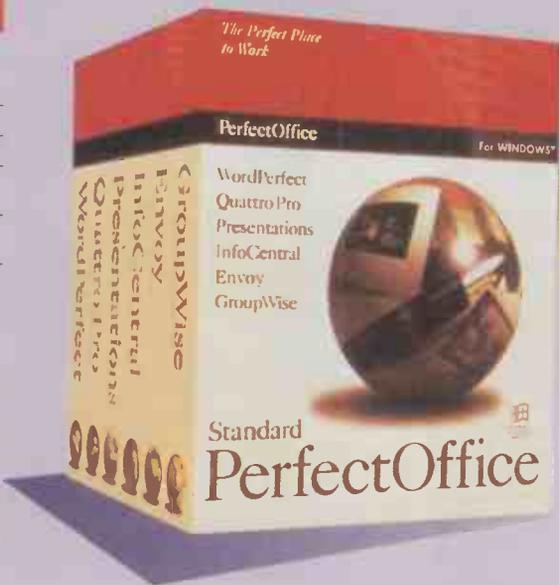
### PerfectOffice Standard

Consists of:

WordPerfect	word processor
Quattro Pro	spreadsheet
Presentations	presentation graphics
Info Central	personal information manager
GroupWise	e-mail, calendaring and scheduling client
Envoy	electronic publisher and viewer

**only £145\*\***

Full CD Version	<b>£263</b>
Version Upgrade from any WordPerfect or Novell Product	<b>£115</b>
CD Upgrade	<b>£119</b>



### PerfectOffice Professional

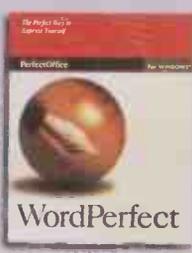
**NOW IN STOCK**

Consists of:

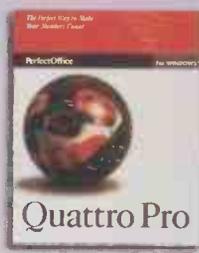
WordPerfect	word processor
QuattroPro	spreadsheet
Paradox	database
Presentations	presentation graphics
InfoCentral	personal information manager
GroupWise	e-mail, calendaring and scheduling client
Envoy	electronic publisher and viewer
AppWare	visual application development program

**Version Upgrade**  
**only £175**

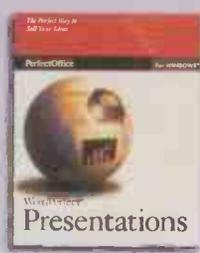
CD Upgrade	<b>£170</b>
Full 3.5" Version	<b>£345</b>
Full CD Version	<b>£349</b>



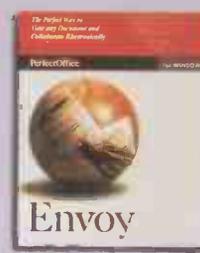
The Perfect Way to Create Documents



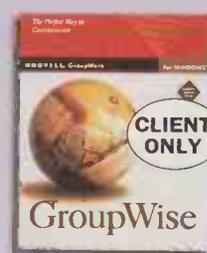
The Perfect Way to Make Numbers Count



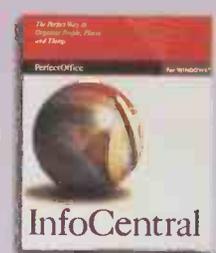
The Perfect Way to Sell Your Ideas



The Perfect Way to View And Document



The Perfect Way to Share Information



The Perfect Way to Organise People, Places and Things

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.

**Watford Electronics Ltd**  
Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN



**SALES HOTLINE**  
**01582 745555**

**VISA** **ACCESS**  
All Prices exclude Carriage & VAT @ 17.5%

**Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777**

# HIGHSPEED FAX-MODEMS

Enter the realm of high speed communications with Aries's new XLink range of fax-modems. Available in both internal PC card and external pocket versions, the XLink range will open up a whole host of national and international possibilities. Error correction and data compression are standard on all models. Fax your friends in Florida, transmit TIFFs to Turkey, enter the Internet and discover the growing world of comms with an Aries XLink Fax-Modem.

## ARIES XLink RANGE: Choose from V.32bis & V.34

All models feature:

- ◆ 28,800 (V.34) or 14,400 (V.32bis) bps top data transmission speed
- ◆ V.32, V.32bis, V.23, V.22, V.22bis & V.21
- ◆ Error Correction to MNP2-5 and V.42 standards
- ◆ Data compression to MNP5 and V.42bis standards
- ◆ Call back security
- ◆ Sync & Async Operation
- ◆ Group 3, Class I & II Fax at up to 14400bps V.17)
- ◆ Group 1 and 2 fax compatible (V.27ter and V.29)
- ◆ 16550 UART Buffer (Internal models only)
- ◆ Fully Hayes compatible
- ◆ 3 years warranty
- ◆ BABT Approved plus additional Six European Approvals
- ◆ Supplied complete with Delrina Winfax Lite, DOS Fax Lite plus COMit Lite for DOS and Windows

Option: High Speed Serial Card (16550 UART) £29

**Surf the Net**  
with Aries XLink Modems you can connect globally using the InterNet via CompuServe or other Internet Providers like Demon. Includes **FREE** Introductory Subscription to **CompuServe**



**FREE**  
**28 Day Access**  
to the **InterNET**

**3 YEAR WARRANTY**

Case may be cosmetically different to that shown

**NEW LOW PRICES**

Internal Modem Card

**14,400 BPS V.32 bis**

External Modem XL-144E **£69**

Internal Modem XL-144i **£72**

**28,800 BPS V.34 CLASS**

External Modem XL-V34-288E **£142**

Internal Modem XL-V34-288i **£145**

# Aries Award-Winning Scanners

**SPECIAL OFFER**  
from only **£199**

Optional Automatic Sheet Feeder available with all Aries Relisys Scanners

Colour Transparency reader

The Relisys Scanner has been voted the 'BEST SCANNER OF THE YEAR' by the readers of PC Direct

"better all round, and therefore a Best Buy, is Watford's Relisys...which combines value for money and good software support with quality output"

**UNBEATABLE LOW PRICES**

ISO 9001  
Manufactured to BSI Quality Standard Certificate

With the Aries Relisys you'll open up a whole new world of possibilities. Imagine being able to scan pictures, diagrams, photographs in perfectly matched colour. To use unlimited zoom to create precisely the size you need. And then to combine them with other files to produce truly professional documents.

Aries Relisys Scanners are the perfect answer for Desk Top Publishing (DTP) and Optical Character Recognition (OCR) applications in the PC environment. With Firmware Interpolated, they have outstanding Scanning Resolution in addition to stunning colours (16.7 million) and mono (256 greyscales) definition. Now industry standard TWAIN compliant, Aries Relisys Scanners can be used directly with Windows software.

With the new Hi-speed scanners you can scan an A4 image in colour in just minutes. And in a breathtaking 15 seconds deliver an A4 mono. It's simplicity itself to set up and use, and the new comprehensive range offers a model for every need.

## Aries Relisys Scanners

VM3420 SCSI II 256 Grey Scale **£199**

VM3520 SCSI II 16.7 million Colours 24 bit **£299**

- ◆ Up to 1200dpi resolution
- ◆ TWAIN standard
- ◆ Opt. Document Feeder
- ◆ Bundled Software
- ◆ Optional Transparency Adapter (Mono only)

## Auto Document Feeders

- ◆ Capacity: 50 pages **ADF-30 £259**
- ◆ Paper size - Max: 8.5"x14" - Min: 5.0" x 7.2" **ADF-40 £295**
- ◆ Paper Thickness .05 to .15mm sheet **ADF-60 £345**

All Aries Relisys models will scan full A4 legal size

**FREE Software worth over £500**

The Relisys comes bundled with these FREE packages (requires Windows 3.1)

◆ Micrografix Picture Publisher v4 LE- Graphics Image Scanning/Editing

◆ Calera Wordscan or Xerox Textbridge OCR (optical character recognition)

## Aries Relisys Hi-Speed SCSI II COLOUR Flatbed Scanners

Aries	RELI 2412 2400dpi	RELI 4816 4800dpi	RELI 9624 9600dpi
Flat Bed Scanner type	Colour	Colour	Colour
Scanning Process	Single Pass	Single Pass	Single Pass
Image Data Colour - 24 bit	16.7 million	16.7 million	16.7 million
Image Data mono - 8 bit	256 Greyscale	256 Greyscale	256 Greyscale
Effective Scanning Area	216 x 356mm	216 x 356mm	216 x 356mm
Zoom Out Feature	Unlimited	Unlimited	Unlimited
Resolution - Optical Interpolated	300 x 1200dpi 2400	400 x 1600dpi 4800	600 x 2400dpi 9600
Brightness/Contrast Settings	256/256	256/256	256/256
Interface	SCSI II	SCSI II	SCSI II
Auto Document Option	ADF-30	ADF-40	ADF-60
Transparency Adaptor	VMT-68S optional £295	VMT-68S optional £295	Included - Worth £500
<b>New Low Prices</b>	<b>£475</b>	<b>£599</b>	<b>£1225</b>

\* Resolution quoted is the maximum achievable using interpolation. 8Mb recommended on your PC.

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.



**Watford Electronics Ltd**

Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN. Tel: 01923 237774



**SALES HOTLINE**  
**01582 745555**



All Prices exclude Carriage & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

**FREE**  
MicroGrafx  
Suite CD\* With  
every Software  
order (\*Trial Pack)  
While Stocks Last

# SOFTWARE

**FREE**  
MicroGrafx  
Suite CD\* With  
every Software  
order (\*Trial Pack)  
While Stocks Last

ONCE AGAIN WATFORD IS ACCLAIMED AS  
THE UK'S PREMIER SOFTWARE SUPPLIER



**SPECIALLY DISCOUNTED PRICES**  
available for non-profit making organisations, educational establishments,  
charities, teachers, students and other educational users.  
Call now for Prices

**KEYS**

- CCP = Compliance Checking Product
- LLP = Lotus Licence Pack
- MLP = Microsoft Licence Pack
- Comp = Competitive (or U/G sidegrade) upgrade
- U/G = Upgrade
- DOS = Program designed to work in DOS environment
- WIN = Program designed for MS Windows 3.1 or later

**ACCOUNTING**

GST Business Expenses	£20
GST Motoring Expenses	£9
GST Purchasing Manager	£20
Intuit Quick Books v3.0 for Windows	£82
Intuit QuickBooks DOS v6.0	£29
Intuit QuickBooks for Windows v4.0	£25
Intuit QuickBooks for Windows v4.0 CD	£25
Intuit QuickBooks UK Deluxe Business Pack v4.0	£45
Intuit QuickBooks UK Deluxe Home Pack v4.0	£45
Intuit Quick Tax Return 1995	£25
MegaTec TAS Books	£76
MegaTec TAS Books Multi User LAN	£170
MegaTec TAS Books Payroll	£78
MegaTec TAS Books Payroll Multi User	£185
MegaTec TAS Books II	£499
MS Money for Windows v3.0	£26
M.Y.O.B. v5 Small Business Accounting	£165
Pegasus Solo Accounts	£65
Pegasus Solo Payroll	£41
RMG BusinessPlan Builder v2	£85
Sage Instant Accounting WIN	£85
Sage Instant Payroll WIN	£69
Sage Instant Business Pack	£129
Sage Moneywise for Windows v2	£29
Sage Sterling v2 Accountant Plus WIN v3	£270
Sage Sterling v2 Accountant WIN v3	£189
Sage Sterling v2 Bookkeeper WIN v3	£143
Sage Sterling v2 Financial Controller WIN v3	£349
Sage Sterling A/C Plus WIN LAN	£463
Sage Sterling Accountant DOS v7	£159
Sage Sterling Accountant Plus DOS v7	£240
Sage Sterling Bookkeeper DOS v7	£55
Sage Sterling Fin. Controller LAN DOS v7	£497
Sage Sterling Financial Cont. WIN LAN	£548
Sage Sterling Financial Controller DOS v7	£317
Sage Sterling Job Costing	£106
Sage Sterling Job Costing LAN	£175
Sage Sterling Moneywise & Invoicing	£36
Sage Sterling Payroll for Windows	£129
Sage Sterling Payroll II DOS LAN	£165
Sage Sterling Payroll II DOS v5.0	£129
Stanford Epsilon DOS Plus v1.3 Single User	£249
Stanford Epsilon DOS v1.3 Network	£325
Stanford Epsilon DOS v1.3 Single User	£149
Stanford Epsilon Plus v1.3 Network	£399
Tax Calc for WIN	£29

**BUSINESS TOOLS**

Borland ReportSmith WIN v2.0	£59
Corel Office Companion	£22
Delrina Perform	£43
Delrina Perform Pro Plus WIN	£180
Goldsoft allClear III	£89
IMSI Formtool Gold WIN	£43
Longman Logotron Pinpoint WIN	£239
Lotus MarketPower CD	£295
Lotus Organizer WIN R2.01	£79
Lotus Organizer R2.01 Upgrade	£44
Lotus Organizer WIN R2.01-LLP	£75
MS Office Assistant WIN	£55
MS Schedule+ WIN v1.0 Starter Pack Dual Media	£87

MS Schedule+ WIN 95	£72
MS Schedule+ WIN 95 1 MLP	£69
Sareen Officetalk	£85
Polaris PackRat v5.0	£189
RMG Ecco Simplicity WIN	£45
RMG Ecco Professional WIN	£125
RMG Sidekick for Windows	£28
RMG Sidekick 95 for WIN 95	£28
RMG Org Plus WIN v3	£85
Sage Telemagic S/ User DOS	£169
Softkey Calendar Plus DOS	£29
Softkey Calendar Plus WIN	£29
Softkey Keyform Designer Win	£26
Spinnaker Address Book Plus DOS	£39
Spinnaker Calendar Creator WIN	£19
Spinnaker Labels Unlimited DOS	£25
Spinnaker Labels Unlimited WIN	£26
Suoner Pro (Addstar)	£29
Symantec ACT! WIN v2.0	£130
WP MainStreet InfoCentral win 1.0	£38

**CAD**

Autodesk AutoCAD LT R2 WIN 3.5" or CD	£354
Autodesk AutoCAD LT R2 upg from R1	£95
Autodesk AutoCAD LT R2 upg from Autosketch	£299
Autodesk AutoCAD LT R2 upg from Generic CAD	£199
Autodesk AutoSketch WIN R2	£95
Autodesk Generic CAD DOS v6.1	£345
ComputerEasy Estimator Plus DOS	£44
ComputerEasy Floor Plan Landscaping	£29
ComputerEasy Floor Plan Office Symbols	£29
ComputerEasy Floor Plan Plus 3D WIN	£45
ComputerEasy Floor Plan Plus DOS	£45
ComputerEasy Floor Plan Plus WIN	£47
FastCAD 3D Design Plus WIN v2	£89
FastCAD CADvance WIN v6	£355
FastCAD EasyCAD DOS v2	£79
FastCAD EasyCAD WIN	£79
FastCAD Estimator Windows	£55
FastCAD FastCAD 3D DOS	£355
FastCAD VisualCAD	£199
IMSI TurboCAD DOS v3.2	£53
IMSI TurboCAD WIN v2 Incl. CD	£53
RMG Drafix CAD Ultra 386 DOS v4.1	£129
RMG Drafix Electrical Library	£118
RMG Drafix Windows CAD v2.1	£45
RMG Drafix Windows CAD Prof.	£135
RMG Planix WIN Office Management	£86
RMG Planix Home Architect	£39
Softkey Key CAD WIN	£28

**CLIP ART IMAGES & SOUND CLIPS**

Adobe Gallery Effects	POA
Corel Artshow 3 Book & CD	£15
Corel Artshow 4 Book & CD	£19
Corel Artshow 5 Book & CD	£20
Corel Gallery CD	£24
Corel Gallery Clip Art V2	£44
Corel Prof. Photos CD-ROMS (Various)	£13
IMSI MasterClips 6000 CD	£59
Lotus SmartPics Clip Art WIN	£79
MS Sound Bits WIN Classic Hollywood Movies	£14

MS Sound Bits WIN Hanna Barbera Dual Media	£14
SPC Clip Art Borders & Backgrounds	£17
SPC Clip Art Business	£12
SPC Clip Art Cartoons	£12
SPC Clip Art More Cartoons	£12
SPC Clip Art Education	£12
SPC Clip Art Food & Drink	£16
SPC Clip Art Maps	£12
SPC Harvard Clip Art CD Collection	£22
Visual 3D Clipart Business Library	£43
Visual 3D Clipart Architects	£35
Visual 3D Clipart Business Library	£45
Spinnaker PFS: WIN Power Album	£26
WP MainStreet Clip Art: Kids	£19
WP MainStreet Clip Art: Premium CD	£35

**COMMUNICATIONS**

CompuServe Value Pack	£16
DataSoft DataTalk 4 v1.1	£39
Datastorm ProComm Plus EC DOS	£54
Datastorm ProComm Plus NW 5-User	£269
Datastorm ProComm Plus WIN	£55
DCA Crosstalk Mk IV DOS v2.1	£163
DCA Crosstalk Win v2.2	£105
Delrina Communications suite	£69
Delrina DoxFax Pro v2	£37
Delrina WinComm Pro	£53
Delrina WinFax Pro Ntwk Starter Pk (1 server 2 Users)	£176
Delrina WinFax Pro v4	£54
Delrina WinFax Pro v4 Upgrade	£32
Hayes Smartcom WIN	£46
Internet In A Box v2	£89
Internet In A Box v2 Upgrade	£49
Lantastic Winport v5 for WFWG	£99
Lantastic Winport v5 for 1 Modern	£135
Lantastic Winport v5 for 2 Modern	£210
Lantastic Winport v5 for 4 Modern	£335
Lotus cc:Fax v1.2	£1,049
Microcom Carbon Copy Plus v6.2 DOS	£72
Microcom Carbon Copy v3.0 WIN	£73
MS Mail PC 3.2 Post Office Upg. WIN for Wkgprs	£220
Perisoft Smartem 320 DOS v3.0	£89
Perisoft Smartem 340 WIN v3.0	£155
Shapeware Trj Datafax v4	£49
Stac Reachout Modem Host/View WIN	£79
Stac Reachout Modem Host WIN	£57
Stac Reachout Modem View Win	£57
Stac Reachout Modem 5 User LAN add on	£130
Softkone Mirror III DOS	£110
Symantec PC Anywhere DOS v5.0	£89
Symantec PC Anywhere DOS v5.0 Host	£58
Symantec PC Anywhere DOS v5.0 Remote	£85
Symantec PC Anywhere WIN Host v2	£85
Symantec PC Anywhere WIN Remote v2	£89
Symantec PC Anywhere WIN v2	£85
Telesystems QmodemPro WIN 95	£72
Travelling Software Commworks WIN	£95
Travelling Software Laplink V DOS	£58
Travelling Software Laplink V Net 1-Node	£59
Travelling Software Laplink WIN v6	£82
Travelling Software Laplink Host WIN	POA
WP MainStreet ExpressFax+ WIN	£29

**DATABASES**

Alpha 5 WIN	£69
Alpha 5 Home & Business Edition	£38
Borland dBase 5.0 DOS	£299
Borland dBase 5.0 DOS LAN Licence	£189
Borland dBase 5.0 Upg DOS to WIN	£109
Borland dBase 5.0 WIN LAN Licence	£189
Borland dBase IV v2.0 & Compiler Upg from v1.5	£139
Borland Paradox v5.0 WIN	£89
Borland RapidFile DOS v1.2	£187
Borland Reflex DOS v2.0	£172
Borland Visual dBase for WIN v5.5	£209
Borland Visual dBase Upg for WIN v5.5	£65
Bus. Slim. Cardbox for Windows	£192
Bus. Slim. Cardbox Plus DOS R4.1	£176
CA Clipper Tools III DOS v1.0	£259
CA Clipper v5.2 DOS	£289
Claris Filemaker Pro v2.1 WIN	£80
Compsort Delta Five Personal	£63
Compsort Delta Five Rile	£298
Compsort Equinox WIN v1.0	£245
DataEase Developers Edition v4.53	£699
DataEase Execs 5 pack	£595
DataEase v4.53 LAN Pack 3-User	£525
DataEase v5.0 DOS	£370
DataEase v5.0 WIN	£98
DataEase v5.1 User N/wk Lic.	£235
Lotus Agenda v2 (Dual Format)	£265
Lotus Approach R3 1-LLP	£73
Lotus Approach WIN R3	£81
Lotus 1-2-3 Upg & Approach	£119
MS Access WIN v2.0	£220
MS Access WIN v2.0 1-MLP	£195
MS Access WIN v2.0 CCP Upgrade	£82
MS Access WIN v2.0 Developer Toolkit	£225
MS Access WIN v2.0 Tradeup Competitive Upg	£120
MS Access WIN 95	£225
MS Access WIN 95 CCP Upgrade	£82
MS Access WIN 95 Comp. Upg.	£107
MS Access WIN 95 1 MLP	£195
MS FoxPro DOS v2.6 Professional Edition	£275
MS FoxPro DOS v2.6 Standard Edition	£71
MS FoxPro WIN v2.6 Professional Edition	£276
MS FoxPro WIN v2.6 Standard Edition	£71
MS Visual FoxPro WIN v3 Standard Edition	£142
MS Visual FoxPro WIN v3 Prof. Edition	£311
Softkey Database Plus WIN	£29
SPI Open Access II v4 Single User	£349
WP DataPerfect DOS v2.3	£79

**DESKTOP PUBLISHING**

Aldus Pagemaker Classic WIN	£53
Aldus Pagemaker v5 WIN	£375
Aldus Pagemaker v5 WIN 5-User	£1,375
Corel Ventura Comp Upg to v5 (3.5" & CD)	£115
Corel Ventura Comp Upg to v5 (CD)	£60
Corel Ventura v4.2 WIN (3.5" & CD)	£115
Corel Ventura v4.2 WIN (CD only)	£79
Corel Ventura v5.0 (3.5" & CD)	£245
Corel Ventura v5.0 CD Version	£199
GST 1st Press DOS	£22
GST Timeworks V3 DOS	£55

GST Pressworks2 WIN	£25
GST Pressworks2 Power Pack	£53
MS Publisher for Windows 95 3.5" or CD	£61
MS Publisher v2.0 WIN	£62
MS Publisher v2.0 WIN 1-MLP	£57
MS Publisher v2.0 WIN Design Pack	£28
Quark XPress WIN v3.3	£559
Serif Page Plus WIN v3	£45
Serif Page Plus Publishing Suite CD	£75
Softkey Publisher DOS	£33
Spinnaker PFS: DOS First Publisher	£25
Spinnaker PFS: WIN First Publisher	£20

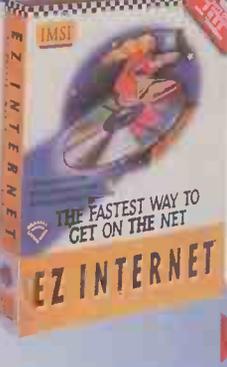
**EDUCATION & TYPING TUTORS**

10 out of 10 Dinosaurs	£15
10 out of 10 Driving Test	£15
10 out of 10 English	£15
10 out of 10 French	£15
10 out of 10 Maths (Number)	£22
10 out of 10 Spelling Structured	£22
Corel Wildcards CD	£18
Corel Adventures with Edison CD	£18
Corel Nikolai's Trains CD	£18
Corel Wild Board Games CD	£18
Corel Blue Tortoise CD	£18
EA Kid Pix WIN	£23
Europress ADU GCSE - English	£27
Europress Flying Fingers - Typing Tutor	£19
Europress Fun School 4 5-7's	£15
Europress Fun School 4 Over 7 - 11	£19
Europress Fun School in Dreamland 4 - 7	£19
Europress Fun School in Spaceland 8 - 9	£19
Europress Fun School in Timeland 8 - 11	£19
Europress Funtech Typing v2 DOS	£18
Mavis Beacon Teaches Typing v2 WIN	£20
MS Creative Writer & Fine Artist CD	POA
MS Creative Writer WIN CD	£19
MS Creative Writer WIN v1.0	£19
MS Fine Artist WIN CD	£19
MS Fine Artist WIN v1.0	£19
MS School Bus Human Body CD	£27
MS School Bus Solar System CD	£27
Nextbase A/Route Explorer DOS v1.2	£46
WP MainStreet Mickey's Memory DOS	£19
WP MainStreet Read With Me Vol 1	£21
WP MainStreet Write With Me	£34

**FONTS & FONT MANAGERS**

Adobe Acrobat Pro v2	£289
Adobe Font Folio WIN	POA
Adobe Plus Pack	£105
Adobe Streamline WIN v3	£135
Adobe Type Manager WIN v3	£45
Adobe Super Type Manager WIN	POA
Adobe TypeSet 1	£49
Adobe TypeSet 2	£52
Adobe TypeSet 3	£59
Agfa Discovery TrueType Pack WIN	£68
Bitstream Facelift WIN v2.0	£49
Bitstream 'L'ii Bits Flitstone Font Pk	£15
Bitstream 'L'ii Bits Winter Holiday	£15
Bitstream Makeup WIN	£65

**EZ Internet** The fastest way to get on the Net



The EZ Internet CD provides all the multimedia tutorials you need to give you the know-how, plus all the communications software you need to use the Net. You can learn all about the Internet and how to use the different software programs at your own pace, so within minutes of logging on to the Internet you can be visiting World Wide Web sites, downloading software and sending E-mail. EZ Internet includes seven days FREE access via Cityscape and will also save you up to 50% of your registration fee if you decide to continue. Log on to a new world and join the millions of Internet users world-wide - it's amazingly EZ.

7 days free access to the Internet

£26

**PLUS: Additional Visio Shapes!**

£39 each

In addition to the SmartShapes™ included in Visio, you can select from an exciting range of 15 add-on SmartShape™ products for your particular diagramming tasks or projects. Simply add the shapes you need, when you need them!

- ◆ Advanced Flowcharts (fully internationalised)
- ◆ Advanced Network Diagrams
- ◆ Advanced Electrical Engineering
- ◆ Marketing (fully internationalised)
- ◆ Advanced Software Diagrams (fully internationalised)
- ◆ Advanced Space Planning
- ◆ Chemistry
- ◆ Chemical Engineering
- ◆ Biotechnology/Medicine
- ◆ Mechanical Engineering
- ◆ Petroleum Engineering
- ◆ Insurance/Law Enforcement
- ◆ Home Planning
- ◆ Kids
- ◆ Landscape Planning

# 4 Great New Software Products from Europress

## Fun School 5

Fun School in Dreamland (4-7's), Space (6-9), Time (8-11), multi-curricular educational software covering English, maths, geography, history, creative art, music and telling the time. Available on 3.5" disk and CD.

£19

Runs on Windows 95 & Windows 3.1

## BBC Gardeners' World 3D Garden Designer 2

With 800 trees, shrubs and plants to choose from, the huge database in this product is invaluable as a reference guide alone - the CD version has over 200 full colour photographs!

- Automatically shows how your garden will mature.
- View your designs in 3D from different angles.
- Copes with sloping and irregular plots
- Depicts where shadows fall.
- Available on 3.5" disk and CD.

£25

## Treasure Island

Also available Alice In Wonderland. This swashbuckling tale makes ideal material for an interactive book. Children join Jim Hawkins in his adventures with Long John Silver and his bloodthirsty buccaneers in their pursuit of buried treasure. Recorded in superb Dolby Surround Sound and includes explanations of unusual words. Available on CD

£15

Runs on Windows 95 & Windows 3.1

## Mini Office

This totally new office system includes fully integrated wordprocessor, databases and spreadsheets and also features powerful report and chart generating facilities.

- Outstanding graphics give business reports a professional polish.
- Many common elements to simplify use.
- Supports OLE for ease of data transfer between applications.
- Multiple document interface allows more than one file to be opened simultaneously.
- Versatile database and spreadsheet.
- Available on 3.5" disk and CD.

£25

Runs on Windows 95 & Windows 3.1

Bitstream Type Essentials	£85
Fontware Face Pack 1	£18
Fontware Face Pack 2	£19
Fontware Font Fountain WIN	£58
Fontware TrueType DOS	£59
GST Headline Fonts Collection	£15
GST TrueType Fonts Collection 1	£12
MS TrueType Font Pack Vol 1 WIN Dual Media	£45
MS TrueType Font Pack Vol 2 WIN Dual Media	£46
MS TrueType HP Font Pack WIN Dual Media	£40
Softkey Key Fonts DOS	£29
Softkey Key Fonts Pro WIN	£29
Softkey Key Fonts WIN	£29
Softkey More Key Fonts DOS	£29
Softkey More Key Fonts WIN	£29
WP Bitstream Fontware for WordPerfect	£49

## GRAPHICS - DRAWING & DESIGN

Adobe Illustrator PS WIN v4	£315
Adobe Photoshop WIN v3.0	£382
Aldus Photostylizer v2	£360
ComputerEasy Draw WIN	£45
Corel Draw v3 Upgrade to v5	£148
Corel Draw v3 WIN (3.5" + CD)	£138
Corel Draw v3 CD only	£61
Corel Draw v4 Upgrade to v5	£114
Corel Draw v4 Upgrade to v5 CD only	£95
Corel Draw v4 WIN 1-User	£104
Corel Draw v4 WIN (3.5" + 2x CD)	£83
Corel Draw v4 WIN CD	£354
Corel Draw v5 WIN (3.5" + CD)	£277
Corel Draw v5 WIN CD	£259
Corel Draw v6 WIN 95 CD	£225
Corel Draw v3/4 Upgrade to v6 CD	£145
Corel Draw v3 Upgrade to v6 CD only	£137
CorelFlow for Windows (3.5" + CD)	£47
Corel Photopaint v5 Plus	£339
Crystal Flying Fonts Pro WIN	£137
Crystal Topics v5.1	£25
Learning Corel Draw v3 CD	£25
Learning Corel Draw v4 CD	£25
Learning Corel Draw v5 CD	£25
EL Hanna Barbera Animation Workshop	£76
Gold Disk Animation Works Interface WIN	£29
Gold Disk Professional Draw WIN v1	£69
GST 1st Design WIN	£23
GST DesignWorks v2 & Pressworks WIN	£79
GST DesignWorks v2 WIN	£59
GST DesignWorks v2 CD	£64
Infograms Disney Animation Studio	£59
IMSI Graphics Converter Gold WIN	£29
Micrografix ABC Flowcharter v4	£215
Micrografix Charisma WIN	£181
Micrografix Designer v4.1	£262
Micrografix Graphics Works	£75
Micrografix ABC Graphics Suite CD	£220
Micrografix ABC Graphics SuiteComp. Upg CD	£95
Micrografix Photomagic	£58
Micrografix Picture Publisher v5	£265
Micrografix Picture Publisher v4	£199
Micrografix U/G to Picture Publish v4 from LE	£66
Micrografix Windows Draw v3	£67
RMG Art & Letters Apprentice WIN v1.2	£46
RMG Easyflow WIN	£95
RMG Inspiration for Windows	£95
RMG TrueSpace CD	£149
Seiff DrawPlus v2.0	£35
softkey 3D Design DOS	£29

Softkey DrawPlus DOS	£29
Softkey DrawPlus WIN	£29
Softkey PC Paintbrush	£25
Softkey Photofinish WIN v3	£52
SPC Harvard ChartXL	£69
SPC Harvard Draw WIN	£289
Visio Shapes - Adv. Elec. Engineering	£29
Visio Shapes - Adv. Flowcharting	£29
Visio Shapes - Adv. Network Diagrams	£39
Visio Shapes - Adv. Space Planning	£39
Visio Shapes - Biotechnology/Medicine	£39
Visio Shapes - Chemical Engineering	£39
Visio Shapes - Home Planning	£29
Visio Shapes - Insurance	£39
Visio Shapes - Marketing	£39
Visio Shapes - Mechanical Engineering	£39
Visio Shapes - Petroleum Engineering	£39
Visio Shapes - Software Diagrams	£39
Visio v3.0 WIN 10 Pack Lic.	£720
Visio v4 for WIN 95	£99
Visio v4 WIN 95 Upgrade	£58
Visio Express For Office WIN	£29
Visio Express For SmartSuite	£19
Visual Reality v2 for Windows	£199
Visual Reality v1.5 + Pro 3D	£95
Visual Simply 3D SuperPack	£69

## GRAPHICS - PRESENTATION

Aldus Persuasion v3 WIN	£189
Borland Applause II v1.5 DOS	£269
Borland Applause II v1.5 Network Ready	£697
Gold Disk Ad Impact WIN	£75
Gold Disk Astound 2 WIN	£145
Lotus Freelance Graphics DOS R4	£219
Lotus Freelance Graphics WIN R2.1	£255
Lotus ScreenCam v2 WIN	£85
Macromedia Freehand v5	£395
Micrografix ABC Toolkit	£379
Micrografix Charisma v4 3.5"	£179
Micrografix Designer v4.1	£289
Micrografix Snapgraph WIN	£49
MS Powerpoint WIN 95	£225
MS Powerpoint WIN 95 CCP Upgrade	£82
MS Powerpoint WIN 95 1 MLP	£195
MS Powerpoint WIN 95 Comp. Upg.	£107
MS Powerpoint WIN v4	£224
MS Powerpoint v4 CCP Upgrade	£82
MS Powerpoint WIN v4 1-MLP	£199
SPC ASAP WIN	£95
SPC Harvard Graphics DOS v3.0	£275
SPC Harvard Graphics Upg v2.3 to v3.0	£93
SPC Harvard Graphics WIN v3 Comp. Upgrade	£129
SPC Harvard Graphics WIN v3.0	£189
SPC Harvard Spotlight WIN v1.0	£89
SPC HGW v2.0 Power Graphics Pack	£145
WP Presentations DOS 2.0	£79
WP Presentations WIN 2.0	£59
WP Presentations WIN v2 Comp U/G	£59
Visual Textures for Professional	£75

## HOME INTEREST & LIFESTYLE

Adobe Premiere V4 WIN	£339
Excabulor The Lottery Analyser	£18
Europress BBC 3D Gardeners World	£25
Europress BBC 3D Garden Designer 2 CD	£13
Europress BBC 3D Interior Designer CD	£15
Gold Disk Video Director WIN v1	£41

Gold Disk Video Director WIN v2	£75
GST Instant Recipes	£16
GST Video Library WIN	£16
GST Wine Cellar	£16
RMG Family Tree Maker	£35
SMC AutoWorks	£30
SMC BodyWorks v3	£32
SMC BodyWorks v3	£29
SMC Chemistry Works	£34
Softkey Home Designer CD	£29
Softkey Home Inventory DOS	£29
Spinnaker CV / Job Search	£27

## INTEGRATED PACKAGES & BUNDLES

Aldus PC Collection 2.0 WIN	£795
Borland Turbo Pascal DOS v7	£367
Borland Framework IV v1.0 DOS	£374
Borland Office v2 Competitive Upg.	£59
CA Simply Business WIN	£99
CA Super Office	£62
Corel Office Companion CD	£62
Clarix Works v3 WIN	£61
Clarix Works v4 (WIN 95 only)	£126
Clarix Works v4 Upgrade	£47
Lotus SmartSuite v4 (Inc WordPro 96) 3.5" or CD	£279
Lotus SmartSuite v4 competitive Upgrade 3.5" or CD	£156
Lotus SmartSuite v4 (Inc WordPro 96) 1.1LP	£284
Lotus Symphony R3 DOS	£373
Lotus Works DOS R3	£79
MS Office for Windows 95 3.5" or CD	£325
MS Office CCP Upgrade for WIN 95 3.5" or CD	£139
MS Office Competitive Upgrade for Windows 95	£182
MS Office for Windows 95 1MLP	£320
MS Office v4.2 for Windows CD	£235
MS Office v4.2 CCP Upg for Windows	£159
MS Office v4.2 Comp. Upg for windows	£214
MS Office v4.2 for Windows 1 MLP	£285
MS Office Pro for Windows 95 3.5" or CD	£425
MS Office Pro CCP Upgrade for Windows 95	£204
MS Office Pro Competitive Upgrade for Windows 95	£245
MS Office Pro for Windows 95 1 MLP	£424
MS Office Pro CCP Upg for windows	£242
MS Office Pro v4.3 for windows CD	£420
MS Office Pro v4.3 Comp. Upg for windows	£262
MS Office Pro v4.3 1 MLP for windows	£359
MS Office Pro v4.3 20-MMLP for windows	£7,142
MS Office Pro v4.3 CCP Upg for windows	£274
MS Works for DOS v3.0	£82
MS Works for DOS v3.0 1 MLP	£74
MS Works for WIN v3.0	£82
MS Works for WIN v3.0 CD	£59
MS Works for WIN v3.0 CCP Upgrade	£46
MS Works for WIN v3.0 1 MLP	£73
MS Works for WIN v3.0 20-MMLP	£1,329
MS Works for WIN 95	£54
MS Works for WIN 95 CD	£59
Novell PerfectOffice WIN v3.0	£145
Novell PerfectOffice WIN v3.0 CD	£263
Novell PerfectOffice v3.0 Version Upgrade	£116
Novell PerfectOffice v3.0 Comp Upgrade	£119
Novell PerfectOffice v3.0 Professional	£145
Novell PerfectOffice v3.0 Professional CD	£345
Novell PerfectOffice v3.0 Pro ver upg	£349
Novell PerfectOffice v3.0 Pro ver upg CD	£175
Novell PerfectOffice v3.0 Pro Trade upg	£170
Novell PerfectOffice v3.0 Pro Trade upg CD	£199
Spinnaker PFS: DOS First Choice	£29

Spinnaker Window Works v2	£29
Spinnaker Window Works CD	£29
Symantec Q&A DOS v4.0	£215
Symantec Q&A WIN v4.0	£135
TopLevel Complete Works	£69
WP MainStreet Works DOS	£45

## LANGUAGES & DEVELOPMENT TOOLS

Borland C++ v4.5 CD	£215
Borland C++ v4.0 Competitive Upg	£129
Borland C++ v4.0 Upg C++ v3.1/C++ v3.1AF	£92
Borland C++ v4.0 Visual Solutions WIN v1	£62
Borland dBase for dBase DOS	£55
Borland Debugger Plus Tools	£61
Borland Delphi CD	£155
Borland Delphi Client Server CD	£635
Borland Delphi Competitive Upgrade CD	£119
Borland Visual Basic Converter for Delphi	£49
Borland RAD Pack for Delphi	£125
Borland Office Vision 2.1 WIN	£94
Borland Pascal & Objects v7.0	£150
Borland Powerpack DOS	£65
Borland Turbo Assembler DOS/WIN	£58
Borland Turbo C++ DOS v3	£48
Borland Turbo C++ WIN v4.5	£59
Borland Turbo Pascal DOS v7	£75
Borland Turbo Pascal v7 + Object upg	£149
Borland Turbo Pascal WIN v1.5	£78
Borland Visual Solutions	£49
Borland Visual Tools v1.1	£48
CA Visual Objects	£429
MS Fortran P'Station 32 for NT v1.0	£299
MS Fortran P'Station DOS v1.0	£210
MS Fortran P'Station WIN v5.1	£210
MS Fortran WIN/DOS v5.1	£119
MS Macro Assembler DOS v6.11	£89
MS Test WIN v3.0	£75
MS Visual Basic DOS v1.0 Pro Ed Dual Media	£192
MS Visual Basic DOS v1.0 Std Ed Dual Media	£79
MS Visual Basic WIN v3.0 Pro Ed (3.5 + CD)	£189
MS Visual Basic WIN v3.0 Std Ed	£72
MS Visual Basic v4 Std Ed WIN95 or NT	£62
MS Visual Basic v4 Pro Ed WIN95 or NT	£299
MS Visual Basic v4 Pro Ed Upgrade WIN95 or NT	£199
MS Visual Basic v4 Enterprise Ed WIN95 or NT	£69
MS Visual C++ WIN v1.5 Std Edition CD	£239
MS Visual C++ WIN v2.0 Pro CD	£239
MS Visual Control Pack WIN v1.0	£59
MS Visual Tools Suite WIN v1.5	£175
Symantec C++ Pro Edition v6.1	£214
Symantec C++ Std Edition v6.1	£66

## LANGUAGE TRANSLATORS

Globalink Power Translator French DOS	£55
Globalink Power Translator French WIN	£95
Globalink Power Translator German DOS	£55
Globalink Power Translator German WIN	£95
Globalink Power Translator Spanish WIN	£95
Globalink Pwr. Trans. Pro French DOS or WIN	£285
Globalink Pwr. Trans. Pro German DOS or WIN	£285
Globalink Pwr. Trans. Pro Russian DOS or WIN	£245
Globalink Pwr. Trans. Pro Spanish DOS or WIN	£285
Globalink Language Assistant German WIN	£45
Globalink Language Assistant French WIN	£45
Globalink Language Assistant Spanish WIN	£45
Globalink Language Assistant Italian WIN	£45
IMSI E-L Language	£31
Softkey Translator English/Spanish DOS	£29

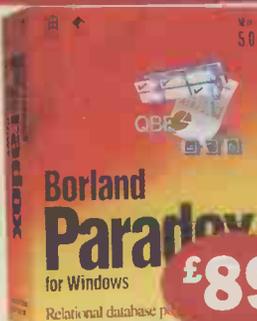
## LEISURE & ENTERTAINMENT

AdventureSoft Simon The Sorcerer	£22
Arthur's Birthday CD	£35
British Birds CD	£195
Carmen Sandiego World Deluxe CD	£36
Corel Adventures with Edison CD	£18
Corel Arcade Mania CD	£18
Corel Bernard of Hollywood's Marilyn CD	£18
Corel World's Greatest Classic Books CD	£35
Corel All-Movie Guide CD	£18
EA FIFA Interactive Soccer	£10A
EA PGA Golf for WIN	£18
EA PGA Golf+ & Courses DOS	£119
EA Privateer	£25
EA Star Trek 25th Anniversary	£19
EA Strike Commander Speech Pack	£15
Europress RAC Network-Q Rally	£24
Flight Sim DOS v5.1 (MS)	£194
Flight Simulator DOS v5.1 (MS) CD	£24
Flight Sim Scenery - New York (MS)	£12
Flight Sim Scenery - Paris (MS)	£12
Flight Sim Scenery-Caribbean (MS)	£17
Flight Sim Scenery-Japan (MS)	£17
Frontier Elite 2	£22
Full Throttle CD	£35
id Software Doom II	£25
Infograms Alone In The Dark II	£24
Infograms Alone In The Dark III	£35
Interplay Star Trek II	£27
Lucas Arts The Fighter 3.5"	£25
Mad Dog MacCre II	£25
Mediavision Quantum Gate CD	£20
Microprose F15 Strike Eagle III & Falcon III	£22
Microprose Fleet Defender/Subwar 2050	£30
Microprose StarTrek The Next Generation	£31
Microprose Subwars 2050	£35
Microprose TaskForce 1942	£24
Microprose Transport Tycoon	£35
Microprose Transport Tycoon World Editor	£21
Microprose Pacific Air War Gold	£30
Microprose UFO: Enemy Unknown	£22
Mindscape Sensible Soccer 92/3	£17
Mirage Rise of the Robots (SVGA)	£27
Mirage Rise of the Robots CD	£29
MS Arcade WIN 1.0	£12
MS Best of Windows Entertainment Pack	£15
MS Golf Add-on Courses - Banff Springs	£12
MS Golf WIN v1.0	£18
MS Golf WIN v1.0 CD	£22
MS Golf WIN v2.0	£22
MS Space Simulator DOS	£24
MS Ultimate Haunted House WIN CD	£24
Myst CD	£35
Ocean Jurassic Park	£19
Pinball Fantasies Deluxe CD	£33
Pinball Dreams Deluxe CD	£25
Pinball Illusions CD	£33
Prognosis Lemmings 3 CD	£29
Sales Curve Lawnmower Man	£25
Sierra Betrayal at Krondor	£26
Sierra Kings Quest V CD	£15
Sierra Leisure Suit Larry 6 (Adult) CD	£25
Sim City 2000 DOS	£24
Space Quest 5 - Sierra	£24
Team 17 Alien Breed	£15
Theme Park CD	£25
Tuneland (Longman) CD	£29
US Gold Comanche Maximum Overkill	£22
US Gold Indiana Jones Fate of Atlantis	£19

## Get On-line with Borland!!

## FREE Compuserve Starter Kit on purchase of Paradox 5.0 & Delphi

### Paradox 5.0 - for Windows



Paradox 5.0 for Windows is easier to use, has powerful new features, greatly increased speed, and advanced Client/Server connectivity. You will be able to store, analyse and format your data faster and more easily than ever before. No other database is as easy to use and provides as much database and Client/Server power. With OLE 2.0 client and server support, Paradox is the natural database to use with other applications and suites. Significant improvements in performance, easy to use features such as Coaches and Experts, new data filters, new Project Viewer, and over 200 new ObjectPAL commands, make Paradox for Windows the database choice for end users, power users, and developers.

£89

### DELPHI - The Next Generation Windows Development Tool

NEW Delphi, winner of BYTE's Best Technology of Comdex is here!

Delphi provides users with RADICAL performance never seen before in the industry. Delphi facilitates rapid application development (RAD), allowing programmers to smoothly progress from prototype to production. Delphi is the only Windows development tool that combines a high-performance optimising native code compiler with a visual design environment and integrated database access.



£119

WINDOWS '95 COMPATIBLE £155 Full Product

All Software supplied on 3.5" disks unless otherwise specified. For Windows Software we would recommend a minimum hardware requirement of a 386SX PC compatible with 4Mb RAM. Please check with the software publisher for suitability and system requirements before ordering. Software is not sold on trial basis. Special and bonus offer products may differ cosmetically from the standard product.

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.

**Watford Electronics Ltd**  
Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN. Tel: 01923 237774

**SALES HOTLINE**  
**01582 745555**

All Prices exclude Carriage & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

# GREAT PACKAGES FOR HOME AND BUSINESS ACCOUNTS



**NEW**  
**4**  
CD  
RUNS ON  
WINDOWS®95  
AND  
WINDOWS®3.1

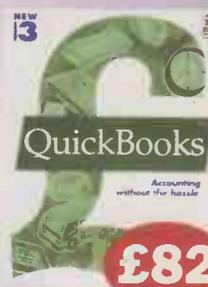
**£25**

## Quicken UK 4.0 for Windows

The fastest, easiest way to organise home and small business finances - Quicken organises all your finances in one place. It's easy to use, provides insight into your spending habits and helps you plan a better financial future.

## Quicken UK 4.0 cd

NEW Quicken 4 CD for Windows uses multimedia to make it easier than ever to have your PC organise your finances. On-screen Tutors show you Quicken's key features, talking you through the basics and making sure Quicken starts working for you in next to no time.



## QuickBooks UK 3 for Windows

Accounting without the hassle

The fastest, easiest way to manage your business. Everything you need is in one easy to use, fully integrated package. QuickBooks is the UK's best selling accounting package for small business. Designed for business people not accounting experts, QuickBooks is a robust industrial strength system - the beauty is, that you never get to see the double entry. There's no debits & credits just simple forms that you already know how to use. The new version of this revolutionary, award winning accounting package adds fully integrated stock control, modifiable invoice formats, and audit trail.

**£82**

CD  
RUNS ON  
WINDOWS®95  
AND  
WINDOWS®3.1

**New! Quicken Deluxe Home Pack for Windows £45**  
Organises more of your home finances

**New! Quicken Deluxe Business Pack for Windows £45**  
Organises more of your home finances

US Gold Rebel Assault CD	£24
US Gold Sam & Max Hit the Road	£29
US Gold Street Fighter 2	£15
US Gold Under a Killing Moon 3 CDs	£34
Virgin Beneath a Steel Sky	£22
Virgin Cannon Fodder	£24
Virgin Mortal Combat	£25
WP Wallobee Jack - Birgi Borna Stone CD	£21
WP Wallobee Jack - Thal Sun Adventure CD	£21

### MIDI & MUSIC

Goldstar Proceon WIN	£42
MS Windows Sound Sys v2.0 S/W & Mic only	£34

### MOUSE & INPUT DEVICES

MS IntelliPoint Mouse	£36
MS Home Mouse & IntelliPoint Home	£26
MS Mouse v2.0 5 Pack with Int. Serial & PS/2	£169
MS Mouse v2.0 with IntelliPoint Serial / PS/2	£36
MS Natural Keyboard	£62

### MULTIMEDIA WIN APPLICATIONS

All supplied on CD unless stated otherwise

MS 3D Movie Maker	£29
MS 500 Nations WIN CD	£30
MS Ancient Lands CD	£21
MS Art Gallery CD	£26
MS Beethoven: The 9th Symphony CD	£21
MS Bookshelf 1995 CD	£54
MS Onemania 1996 WIN CD	£31
MS Cooking CD	£21
MS Complete Baseball CD	£26
MS Dangerous Creatures WIN CD	£21
MS Dogs CD	£21
MS Dinosaurs CD	£18
MS EasyBall	£29
MS Encarta Encyclopaedia 1995 WIN CD	£49
MS Exploradia: The World of Nature CD	£39
MS Exploradia: People CD	£21
MS Flight Simulator v5.1 CD	£24
MS Fury 3 CD (32 Bit Version)	£24
MS Gaham Wilson Haunted House	£29
MS Isaac Asimov's Ultimate Robot CD	£21
MS Mozart: The Dissonant Quartet CD	£18
MS Musical Instruments CD	£18
MS Musical Instruments CO	£35
MS Schubert: The Trout Quintet WIN CD	£21
MS SideWinder 3D Sid	£29
MS SideWinder 3D Pro + Fury	£49
MS SideWinder 3D Pro	£39
MS Strauss: Three Tone Poems CD	£42
MS Stravinsky: The Rite of Spring CD	£21
MS How The Leopard Got His Spots CD	£21
MS Wine Guide CD	£21

### MULTIMEDIA TOOLS

Asymetra Multimedia Toolbook v1.5 CD	£429
Asymetra Multimedia Toolbook v3.0 CD	£499
Corel CD Power Pak	£24
Corel CD Creator	£124
Kodak Photo CD Access	£14
Macromedia Director	£599
MS Multimedia Publishing Toolkit v2.0 CD	£235

### NETWORKING

Corel SCSI v2	£59
Novell Netware v3.12 5 User 3.5"	£385
Novell Netware v3.12 10 User 3.5"	£905
Novell Netware v3.12 25 User 3.5"	£1,351
Novell Netware v3.12 50 User 3.5"	£1,940
Novell Netware v3.12 100 User 3.5"	£2,540
Novell Netware v3.12 250 User 3.5"	£4,575
Novell Netware v4.1 5-User CD	£413

Novell Netware v4.1 10-User CD	£944
Novell Netware v4.1 25-User CD	£1,436
Novell Netware v4.1 50-User CD	£2,035
Novell Netware v4.1 100-User CD	£2,865
Novell Netware v4.1 250-User CD	£5,950
Novell Netware v4.1 500-User CD	POA
Novell Netware v4.1 1000-User CD	POA
Novell Personal Expansion Kit (Extra User)	£59
Novell Personal Netware 2 User Pack	£89
Novell Personal Netware 5 User Pack	£195
Novell Personal Netware 1.0	£44
Novell Personal Netware 1D User Pack	£519
Novell Personal Netware Add Notebook Pack	£119
Novell Personal Netware Add PCMCIA Pack	£199
Sage Mainlan v4 Software Only	£49
XTree Tools for Networks	£259
XTree Tools Server Extension	£149

### OCR & SCANNING SOFTWARE

Caere DmniPage Direct WIN v2	£72
Caere OmniPage Pro WIN v5	£325
Caere OmniPage or WordScan (any ver.)	
to OmniPage Pro v5	£129
Caere OmniPage Pro Competitive Upgrade	£149
Caere Personal PageKeeper WIN	£120
Caiera WordScan Plus WIN v4	£359
Caere OmniPage or WordScan (any ver.)	
to WordScan + v4.0	£129
Caere WordScan + v4 Competitive Upgrade	£149
Globalink Scanmaster OCR	£125
Xerox TextBridge WIN v3	£65
Xerox TextBridge Professional	£269
Xerox TextBridge Professional Comp. Upg	£169

### OPERATING SYSTEMS

IBM PC DOS 7	£59
IBM PC DOS 7 Trade Upgrade	£35
Lotus NotesSuite R3.2	£665
Lotus NotesSuite R3.2 1-1LP	£453
Lotus NotesSuite R3.2 Express	£133
MS Plus! for Windows 95 CD	£27
MS Plus! for Windows 95 3.5"	£27
MS Plus! for Windows 95 MLP	£27
MS-DOS to WIN 95 Upgrade 3.5" MLP	£111
MS-DOS to WIN 95 Upgrade 3.5" MLP	£409
MS-DOS to WIN 95 Upgrade 3.5" MLP Education	£57
WIN to WIN 95 Version Upgrade CD	£59
WIN to WIN 95 Version Upgrade 3.5"	£57
WIN to WIN 95 Version Upgrade MLP	£57
MS DOS v6.22 Upgrade 1-MLP	£35
MS DOS v6.22 Upgrade 20-MLP	£569
MS DOS v6.22 Upgrade 100-MMLP	£2,899
MS DOS v6.22 Upgrade 3.5"	£36
MS WFWG v3.11	£87
MS WFWG v3.11 1-MLP	£86
MS WFWG v3.11 20-MMLP	£1,625
MS WFWG v3.11 Add-on/DOS	£41
MS WFWG v3.11 Add-on/DOS 1-MLP	£39
MS WFWG v3.11 Add-on/WIN	£41
MS WFWG v3.11 Add-on/WIN 20-MMLP	£671
MS Windows NT 1-MLP (3.5" & CD)	£366
MS Windows NT 20-MMLP (3.5" & CD)	£4,020
MS Windows NT Stand Alone (3.5" & CD)	£215
MS Windows v3.11 Upgrade CCP	£39
MS Windows v3.11 1-MLP	£52
MS Windows v3.11 20-MMLP	£1,100
MS Windows v3.11 3.5"	£64
Novell DR DOS v7	£49

### OS/2

Borland C++ OS/2	£295
IBM OS/2 Warp CD	£42
IBM OS/2 Warp 3.5"	£49
IBM Person to Person for OS/2	£139
IBM Works for OS/2	£71

S&S Dr.Solomons AV Toolkit DS/2 Monthly	£255
Stac Stacker OS/2	£119

### PROJECT MANAGEMENT

CA SuperProject DOS v2.1	£455
CA SuperProject WIN v3	£479
ComputerEstimator Plus DOS	£44
MS Project DOS v4 Dual Media	£230
MS Project WIN v4.0	£279
MS Project WIN v4.0 1-MLP	£244
MS Project WIN v4.0 CCP Upgrade	£85
MS Project v4.1 WIN95	£289
MS Project v4.1 CCP WIN 95	£84
Softkey Project Manager WIN	£39
SPC Harvard Project Manager v3.0	£399
Symantec On Target WIN v1.0	£65
Symantec Timeline DOS v6.1	£315
Symantec Timeline LITE WIN v1	£55
Symantec Timeline WIN v6.0	£319
WP PlanPerfect DOS v5.1	£249

### ROUTE PLANNERS

MS A'Route Express Europe v4 WIN 3.5"	£31
MS A'Route Express Europe v4 WIN CD	£41
MS A'Route Express WIN v4 (UK & Eire) 3.5"	£34
MS A'Route Express WIN v4 (UK & Eire) CD	£43
MS A'Route+ (UK & Ireland) DOS v7.0	£214
MS A'Route+ (UK & Ireland) CD	£269
Nextbase A'Route+ Database Editor	£92
Nextbase A'Route+ DOS v7.0 Network 5-User Pack	£348
Nextbase A'Route+ Europe DOS v6.0	£214
Nextbase MapBase DOS v5 (UK & Eire)	£287
Nextbase MapBase Postcode Boundaries	£297
Nextbase MapVision WIN London CD	£125
Nextbase MapVision WIN UK CD	£125

### SPREADSHEETS

Borland Quattro Pro v5.0 WIN Wkgrp Edition	£197
CA Supercalc v5.5 3-User LAN	£169
CA Supercalc v5.5 DOS	£67
CA Supercalc WIN	£58
Lotus 1-2-3 DOS R4	£287
Lotus 1-2-3 R3.4 1-1LP	£256
Lotus 1-2-3 WIN R5.0	£219
Lotus 1-2-3 WIN R5.0 Competitive Upgrade	£87
Lotus 1-2-3 WIN R5.1 1-1LP	£193
Lotus Improv WIN R2.1	£92
MS Excel for Windows 95	£225
MS Excel WIN 95 Competitive Upgrade	£107
MS Excel WIN 95 CCP Upgrade	£82
MS Excel Windows 95 1-MLP	£195
MS Excel WIN v5.0	£221
MS Excel v5.0 CCP Upgrade	£85
MS Excel WIN v5.0 1-MLP	£197
Novell Quattro Pro v6 WIN (3.5" & CD)	£149
Novell Quattro Pro Version upgrade to 6.0 WIN	£35
Novell Quattro Pro Trade Upgrade to 6.0 WIN	£89
Softkey Spreadsheet Plus	£35

### SPREADSHEET ADD-ONS

RMG Crystal Ball Add-on for MS Excel	£220
--------------------------------------	------

### UPGRADE VOUCHER PACKS

MS Access Competitive Upg	£119
MS Access Trade-in Pack	£119
MS Excel Competitive Upg	£119
MS PowerPoint Competitive Upg	£119
MS Project Competitive Upg	£119
MS Word Competitive Upg	£119

### UTILITIES - GENERAL

95 Companion WIN 95 CD	£19
Central Point Backup WIN v2	£59
Central Point PC Tools Pro v9 DOS	£74
Central Point PC Tools v2 WIN	£65
Central Point More PC Tools WIN	£45
Central Point XTree Gold for Windows v4	£59
Central Point XTree Gold v3 DOS	£69
Connecta Ram Doubler for Win	£49
Corel Raid	£449
Corel SCSI Network Manager	£247
HP New Wave 4.1 WIN	£15
Future Bubble Help WIN	£15
Future Lock WIN	£22
IMSI WinDelete v2	£29
IMSI EZ Internet	£26
Longman Monty Pythons Complete Waste of Time	£35
Microhelp Uninstaller v3	£33
Qualitas 386 Max v7	£29
Qualitas RAM Exam	£15
Quarterdeck Cleansweep	£27
Quarterdeck Cleansweep 95	£39
Quarterdeck Desqview 386 v2.6	£105
Quarterdeck Games PAQ	£88
Quarterdeck InternetSuite	£69
Quarterdeck Qemmi 386 v7.5	£44
Quarterdeck Qemmi 386 WIN 95	£45
Quarterdeck CRAM 286 v2.0	£29
Quarterdeck Sidebar WIN	£92
Quarterdeck WebAuthor	£92
RMG First Aid for Windows	£35
RMG First Aid for WIN 95	£36
RMG Dashboard WIN v2	£28
RMG Dashboard WIN 95	£29
RMG SoftRam WIN 95	£49
S&S Check-It Analyst	£52
S&S Check-It Pro	£59
S&S Dr. Solomons PC Security Toolkit DOS	£139
S&S PC Armour	£49
Stac Stacker v4.0 DOS/WIN	£55
Stac Strategy	£10A
Stac Stacker v4.0 Upg DOS/WIN	£36
Symantec Direct Access DOS v5.1	£49
Symantec Direct Access WIN v1.0	£69
Symantec FastTrack Plus WIN	£99
Symantec Navigator WIN 95	£79
Symantec Navigator WIN 95 CD	£72
Symantec Navigator WIN 95 CCP Upgrade	£34
Symantec Norton Backup DOS v2.2	£89
Symantec Norton Backup WIN v3.0	£89
Symantec Norton Commander v5.0	£74
Symantec Disklock for Windows v3	£52
Symantec Norton Desktop DOS v1.0	£89
Symantec Norton Desktop WIN v3.0	£89
Symantec Norton Editor DOS v2.2	£45
Symantec Norton First Aid	£19
Symantec Norton Speedrive DOS v4.0	£29
Symantec Norton Utilities v8.0	£85
Symantec Norton Utilities for WIN 95	£84
Symantec Norton Utilities for WIN 95 CD	£94
Symantec Norton Utilities for WIN 95 CCP Upg	£48
Transfer Software PCopy	£49
Xtree WIN v4	£59

### UTILITIES - SCREEN SAVERS

Berkley Systems Complete After Dark CD	£39
Berkley Systems After Dark WIN v3	£24
Berkley Systems Star Trek Poster	£35
Berkley Systems Star Trek Screen Saver	£21
Borland Screenery	£25
Claris Imaginaria WIN	£25
Delrina Opus 'N Bill On The Road Again	£23
Delrina Opus 'N Bill Screensaver	£23
Delrina The Far Side Collection	£26
Gold Disk ScreenCraze II WIN	£14
MS Scenes Brain Twister	£15
MS Scenes Flight	£15
MS Scenes Hollywood	£15
MS Scenes Impressionist Collection	£15
MS Scenes Outer Space	£15
MS Scenes Sierra Club	£15
MS Scenes Sports Extreme	£15
MS Scenes Undersea	£15
Visual The Northern Castles Scenes	£45

### UTILITIES - SCREEN SAVERS

Portcullis F-Port Professional Anti-Virus Toolkit Qty Upgrade	£90
Portcullis F-Port Professional Anti-Virus Toolkit Monthly Upgrade	£145
Portcullis Total Security	£145

### UTILITIES - SCREEN SAVERS

MS Windows Printing System (HPLI II/III only)	£83
MS Windows Sound System v2.0 In soundcard	£130
MS Windows Sound System v2.0 s'ware only	£39
Super Printer	£49

### WORD PROCESSING

Accent Pro	£189
Borland Ultimate v4.0 DOS	£270
Borland Sprint DOS	£179
CA Textor WIN v6.0	£49
IBM Displaywriter v5	£252
Lotus Word Pro 95	£84
Lotus Am! Pro R3.1 1-1LP	£92
Lotus Write WIN R2.0	£164
MS Word for DOS v6.0	£162
MS Word for DOS v6.0 1-MLP	£162
MS Word for DOS v6.0 20-MLP	£3,250
MS Word for Windows 95	£225
MS Word for WIN 95 CCP Upgrade	£82
MS Word for WIN 95 Competitive Upgrade	£107
MS Word for WIN 95 1-MLP	£195
MS Word for WIN v6.0	£224
MS Word for WIN v6.0 1-MLP	£194
MS Word for WIN v6.0 CCP Upgrade	£85
Wordstar for Windows v2	£223
Wordstar v7 DOS	£119
WP MainStreet Letter Perfect	£210
WP WordPerfect DOS 5.1+	£175
WP WordPerfect DOS v6 1-User	£179
WP WordPerfect DOS v6 5-User	£3,485
WP WordPerfect DOS v6 20-User	£3,485
WP WordPerfect DOS v6 Competitive Upg	£110
WP WordPerfect DOS v6 Upgrade	£72
WP WordPerfect DOS v6.0b	£189
WP WordPerfect WIN 5.2	£189
WP WordPerfect WIN v6.1 Trade Upg	£75
WP WordPerfect WIN v6.1 Version Upg	£62
WP WordPerfect WIN v6.1	£159
WP WordPerfect WIN v6.1 1 User	£129
WP WordPerfect WIN v6.1 5 User	£589

### UTILITIES - ANTI-VIRUS & SECURITY

S&S Dr. Solomons Audit	£299
S&S Dr. Solomons AV Toolkit DOS Monthly Upg	£135
S&S Dr. Solomons AV Toolkit DOS Quarterly Upg	£62
S&S Dr. Solomons AV Toolkit WIN Monthly Upg	£145
S&S Dr. Solomons AV Toolkit WIN Quarterly Upg	£70
Symantec Norton Anti-Virus DOS/WIN v3	£89
Symantec Norton Anti-Virus for WIN 95	£59
Symantec Norton Anti-Virus for WIN 95 CCP Upg	£28
Symantec Norton Anti-Virus for Netware	£46D

### WRITING AIDS

Future Spellwrite	£16
Which Software 120 Letters that get Results	£15
WP MainStreet Grammatik DOS v5	£22
WP MainStreet Grammatik WIN	£28

## ABC GRAPHICS SUITE from MICROGRAFX

- The complete graphics package for the Windows 95 user

Micrografx has merged ABC FlowCharter, Designer, Picture Publisher and the revolutionary new ABC Media Manager into the ABC Graphics Suite. It combines superior diagramming, flowcharting, drawing, technical illustration, image editing, painting and a huge library of useful clipart whilst using the familiar Microsoft Office for Windows 95 interface. All the components of this product have been written to take full advantage of the exciting new features of Windows 95.

**Features:**

- True 32Bit - multi threading
- 20,000+ pieces of ClipArt
- 7,500+ Photographs
- 2,000+ diagramming symbols
- 250+ fonts
- 50+ file formats, including TIFF, BMP, DXF and CorelDraw!
- Microsoft Office Compatible
- Looks and works like Microsoft Office
- On two CD-ROMs

**NEW FOR WINDOWS 95**

**£95 Upgrade**

Finally, complete graphics for every office!  
Full Product £220

## TextBridge Professional Edition

True document understanding

TextBridge Professional Edition not only delivers the highest quality accuracy but does much more. It actually re-constructs your documents in your word processor and are fully editable, just as if they had been re-typed - that goes for cell tables, columns and graphics as well as text. An exclusive from Xerox.

**TextBridge Professional Edition delivers;**

- Award winning accuracy on normal, faxed and dot matrix text.
- Exclusive DocRT™ technology re-constructs cell tables that can be edited as if you created them
- Pages layouts with columns and pictures are maintained for true text flow editing
- Instant Access OCR™ from within your windows™ application
-

## COMMUNICATE WITH THE WORLD

Language Assistant TM Series - The World's Best Selling Translation Software



£45 each

### THE FAST & EASY WAY TO UNDERSTAND FOREIGN TEXT

In today's global economy, the ability to communicate in other languages is invaluable. Just think - how many times have you wished you could understand a foreign document? Now, when you want to understand a press cutting, fax, e-mail or overseas contract you need the Language Assistant Series from Globalink.

Each Language Assistant provides a fast draft translation from English to the foreign language and vice versa. Use Language Assistant to improve your foreign language skills - for business or pleasure!

Windows 3.1 diskette or CD-ROM available.

COMPATIBLE WITH



## NEW VISIO 4.0

The Smartest Way to Create all Your Business Diagrams

### NEW FEATURES

- ◆ Smarter Smartshapes
- ◆ Improved Drawing Tools
- ◆ Smarter Database Connectivity
- ◆ New Microsoft Office Binder Support
- ◆ Enhanced OLE Automation
- ◆ Custom Properties
- ◆ New Diagram Types ◆ Wizards

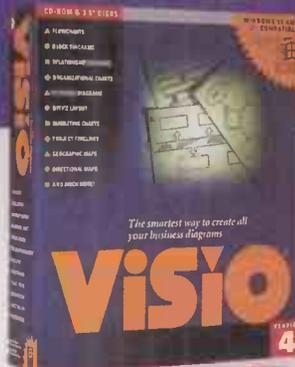
### What's New In 4.0

Now, more than ever, Visio is the smartest way to create all your business diagrams. It has been enhanced in virtually every area, and boasts several new productivity features, such as wizards that help you automatically create diagrams. And, this new-generation program is ready for the future, with full Windows 95 compatibility and support for Microsoft Office for Windows 95.

### Unrivalled Consistency With Windows 95

Visio 4.0 Includes both Windows 95 (32-bit) and Windows 3.1 (16-bit) versions. The 32-bit version fully exploits the advanced capabilities of Windows 95 and also runs on Windows NT 3.51 systems.

- ◆ Faster 32-bit performance
- ◆ Descriptive long file names
- ◆ Quick View lets you preview diagrams
- ◆ Drag work from a diagram to the desktop to create a Scrap file, then incorporate into different documents by dragging and dropping.
- ◆ Stencils float or can be docked to any side of the Visio Window
- ◆ Work more efficiently with Windows 95 right mouse button menus and actions, including a new Pop-up Help system



VISIO 4.0 £99  
Upgrade £58

### Wizards Automatically Generate Diagrams

The wizards in Visio 4.0 help you diagram more efficiently, whether you're experienced or new to Visio.

**Smarter more effective diagramming tools**  
While Visio's SmartShapes take care of most of your diagramming for you, these new tools give you more flexibility when you want to refine your diagrams.

**Smarter Integration with Microsoft Office 4.0**  
Is fully compatible with Microsoft Office for Windows 95, allowing you to take full advantage of this integrated application suite.

**Even Smarter SmartShapes**  
Visio SmartShapes have always been a more useful way to work than ordinary clip art. And now Visio includes over 26 task-specific stencils with 1,000 Smart-Shapes-smarter and better than ever.

## COREL - ALL MOVIE GUIDE

The Corel All-Movie Guide gives you Interactive access to the world's largest movie database with over 90,000 movie and video listings on CD-ROM. This multimedia movie expert can make recommendations based on a wide variety of criteria such as plot element, country of origin, awards, or even your mood. You can rate movies, view interviews with celebrities or play games based on movie trivia. It's like having your own personal movie expert.

£18



- ◆ Instant access to over 90,000 classic and contemporary titles ◆ Easy to use 3D video store interface
- ◆ Purchase various movies and videos on-line to be delivered to your home ◆ Print a list to take to the video store
- ◆ Read descriptions and ratings of major motion pictures
- ◆ Assign your own movie ratings and reviews
- ◆ Sneak a peek at the stars in numerous photographs and interviews
- ◆ Hours and hours on entertainment exploring tons of movie trivia

COMPARE THE COREL VALUE!	ALL-MOVIE GUIDE	CINEMANIA 95
Feature films	45,000	17,000
Video and TV movies	45,000	2,500
Information on cast and performers	150,000	4,100
Foreign films and videos	12,000	6,400
Makes recommendations based on your movie preferences	YES	NO
Videos available for on-line purchase	15,000	NONE

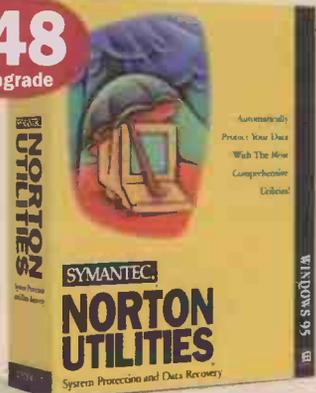
\*Numbers have been rounded to the nearest hundred. All product names are trademarks or registered trademarks of their respective companies.

## THREE GREAT UTILITIES FROM SYMANTEC

### NORTON UTILITIES

System Protection and Data Recovery

£48 Upgrade



Norton Utilities is essential protection for your Windows 95 system, running continuously in the background to ensure stability and reliability, and automatically taking corrective action when needed. In the event of a crash, a rescue disk gets you up and running quickly, automatically repairing damaged resources and restoring your data.

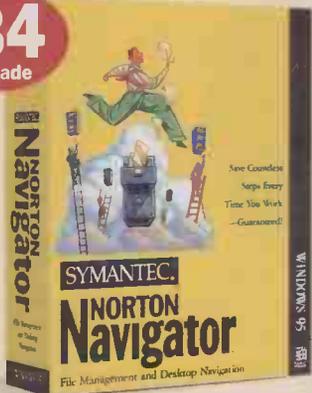
Norton Utilities is essential for any user making the transition to Windows 95. In addition to the most effective 32-bit tools available for system protection, performance optimisation and data recovery, Norton Utilities includes new features specifically designed to prepare your PC for your new operating system.

3.5" CD £84  
£95

### NORTON NAVIGATOR

File Management and Desktop Navigation

£34 Upgrade



Norton Navigator saves countless steps every time you use your computer - letting you open any folder, or work with any file, with a single click. Powerful file management tools make working in Windows 95 significantly faster and easier.

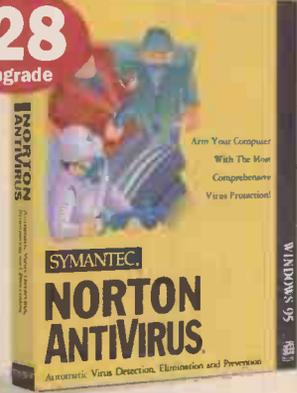
You can find, copy, move, zip or unzip any file, or launch any application, instantly. Access Norton Navigator's file management tools from the open/save dialog box of any application, or from the Windows 95 Explorer. Keep frequently used items (files, folders, applications) right on the taskbar for one-click access. You can even access Internet FTP sites directly from the Norton File Manager.

3.5" CD £69  
£72

### NORTON ANTIVIRUS

Virus Detection, Elimination and Protection

£28 Upgrade



Norton AntiVirus provides the most complete Windows 95 virus protection - one simple, easy to use package that detects, destroys and prevents virus infections. Norton's true 32-bit virus protection installs easily on your system, then works automatically in the background, watching for suspicious disk activity that could indicate a virus.

Norton AntiVirus detects and eliminates every common virus, every class of virus, every type of viral activity - even the most destructive polymorphic viruses. And Norton's exclusive, patent-pending technology used rule-based integrity checking to provide the best safeguard available against new and unknown viruses.

3.5" CD £53

All Software supplied on 3.5" disks unless otherwise specified. For Windows Software we would recommend a minimum hardware requirement of a 386SX PC compatible with 4Mb RAM. Please check with the software publisher for suitability and system requirements before ordering. Software is not sold on trial basis. Special and bonus offer products may differ cosmetically from the standard product.

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.



**Watford Electronics Ltd**

Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN. Tel: 01923 237774



**SALES HOTLINE**  
**01582 745555**

All Prices exclude Carriage & VAT @ 17.5%

Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777

# The New Kyocera FS-400

**The Advanced Personal  
Page Printer that Saves  
on Print Costs**

A compact 4ppm personal page printer that also offers full system printer capabilities and savings on print costs due to its cartridge-free design.

From the company that introduced low cost printing, the FS-400 is a low cost printer that offers unrivalled potential for small businesses or organisations needing a low volume centralised printing resource.

As standard, this printer is an advanced personal page printer that has a wealth of features, including 300dpi resolution enhanced to 300 x 1200 dpi by Kyocera resolution technology.

13 scalable in-built fonts, and for additional cost savings, Energy Star compliance and draft print mode.

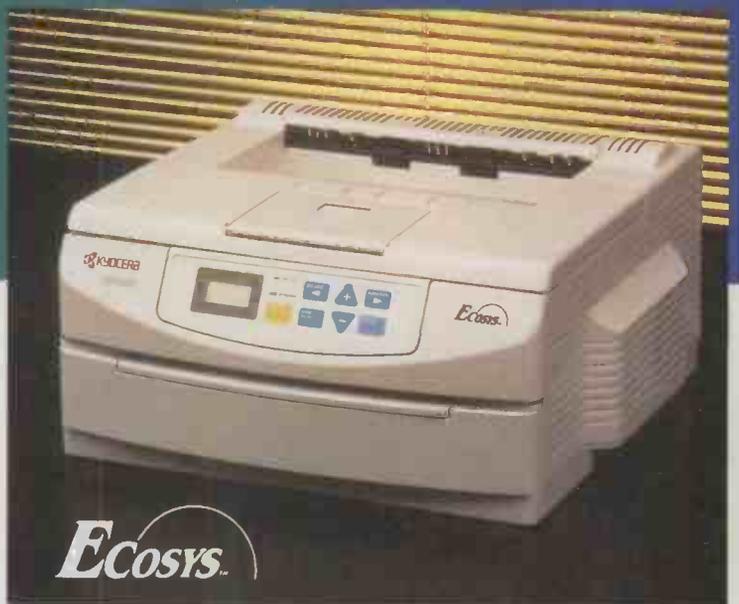
Other features include industry standard Laserjet III and optional PostScript emulations, single and multi-protocol network connectivity expansion and full compatibility with Windows applications.

- ◆ Fully expandable
- ◆ Resolution enhancement
- ◆ Sleep mode
- ◆ Soft touch control panel
- ◆ Universal paper tray
- ◆ Small footprint
- ◆ Industry-standard emulations

**FS-400 Single Bin £364 Dual Bin £489**

Also Available

**FS-1550 £874 FS-1600 £1079**



**Ecosys**

### STANDARD FEATURES:

<b>Output:</b>	4ppm
<b>Emulations:</b>	HPLIII, IBM X24E, Epson LQ-850
<b>RAM:</b>	1MB
<b>Resolution:</b>	300 x 300dpi/ 300 x virtual 1200 lrt
<b>Interfaces:</b>	Centronics Parallel plus high speed option I/O port
<b>Fonts:</b>	79 bitmapped, 13 scalable
<b>Dimensions:</b>	353W x 350D x 173Hmm
<b>Warranty:</b>	12 months (return to base)
<b>Input Trays:</b>	1 x 100 sheet Universal
<b>Output Trays:</b>	1 x 100 sheet face down



**£168**

#### Modem features:

- ◆ High speed data transfer
- ◆ Fastest standard modulation protocol
- ◆ Data error correction and data compression
- ◆ Fax error correction for clear faxes
- ◆ Motorola RISC Technology
- ◆ Automatically selects the fastest possible line speed
- ◆ Phone number directory for frequently called numbers
- ◆ Online help screen
- ◆ Robust performance over standard telephone lines
- ◆ BAPT approved product
- ◆ 2 year warranty



**MOTOROLA**

**Everything you need to connect  
to the Internet and other Online  
Services - in one box**

### Motorola 3400 Online 28.8 Internet Solution

Motorola brings you the complete online access solution using the latest technology. The Motorola 3400 Online 28.8 Internet Solution includes all the necessary hardware and software that you need to get your PC online to the Internet.

- ◆ Communication software
- ◆ Fax software
- ◆ Animated instruction disk
- ◆ Internet software
- ◆ Protocol software
- ◆ File transfer software (FTP)
- ◆ WorldWideWeb browser software
- ◆ Electronic mail software
- ◆ Newsgroup software
- ◆ Internet Phone software licence
- ◆ Internet membership option for instant access

### FREE BONUS PACK

- ◆ Animated program for visual step by step installation instructions
- ◆ One month access to a worldwide online service
- ◆ Special offer for remote LAN access Interactive online game

Motorola 3400 ProPC

**£145**



EASY INSTALL



SOFTWARE INCLUDED



CABLING INCLUDED



WORLDWIDE COMPATIBLE



MANUAL INCLUDED



TELEPHONE HELPLINE



28,800 BPS SPEED

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns subject to handling charge. Goods not sold on a trial basis. Sales subject to our Terms & Conditions available on request. E & OE.



**Watford Electronics Ltd**

Mail Order & Showroom: Jessa House, Finway, off Dallow Rd, Luton LU1 1TR  
Showroom only: 250 Lower High Street, Watford, WD1 2AN



**SALES HOTLINE  
01582 745555**

All Prices exclude Carriage & VAT @ 17.5%

**Credit Card/Sales Order Line: 01582 745555 • Technical Support: 01582 745500 • Switchboard: 01582 487777**

# PRINTERS & ACCESSORIES

## LASER PRINTERS

Brother HL630	6ppm	£315
Brother HL660	6ppm	£455
Brother HL631	6ppm	£348
Brother HL 1260*	12ppm	£895
Canon LBP430W	4ppm	£357
Canon LBP460	4ppm	£273
Canon LBP1260	12ppm	£890
Epson EPL3000*	4ppm	£359
Epson EPL9000	8ppm	£1179
Epson EPL9000PS	8ppm	£1355
HP LaserJet 4M	16ppm	£1989
HP LaserJet 4V	16ppm	£1362
HP LaserJet 4+	12ppm	£965
HP LaserJet 4M+	12ppm	£1284
HP LaserJet 4Si	16ppm	£2075
HP LaserJet 4Si MX	16ppm	£2967
HP LaserJet 5L	4ppm	£347
HP LaserJet 5P	6ppm	£575
HP LaserJet 5MP	6ppm	£715
HP LaserJet Colour	8ppm	£4199
Kyocera FS400 S/Bin	4ppm	£364
Kyocera FS400 D/Bin	4ppm	£489
NEC SuperScript 610+*	6ppm	£289
NEC SuperScript 660i*	6ppm	£555
NEC SuperScript Colour 3000*	6ppm	£647
OKI OL400ex*	4ppm	£278
OKI OL410ex*	4ppm	£380
OKI OL810ex*	8ppm	£649
OKI OL850 PS*	8ppm	£1199
OKI OL1200ex*	12ppm	£966
Panasonic KX-P4430**	5ppm	£445
Panasonic KX-P4440**	10ppm	£679
Panasonic KX-P6100	5ppm	£260
Panasonic KX-P6150	6ppm	£299
Star Win Type 4000	4ppm	£286

On-site warranty: \* = 1 Year \*\* = 2 Years

## LASER RAM UPGRADES

Type	1M	2M	4M	8M
Brother HL630	£85	-	-	-
Brother HL631	£70	-	-	-
Canon LBP4i	£109	-	£279	-
Canon LBP8 IV	£119	-	£299	-
EPL4100/4300	£69	£120	£225	-
EPL5200/5600	£49	£115	£199	-
HP III/IIIP/IIID	£65	£112	£169	-
HP II/IID	£70	£115	£175	-
HP IIISi	-	£85	£158	£229
HP 4/4M/4P/4MP	-	-	£109	£215
HP 4L/4ML	£65	-	-	-
HP 5L	£	£	£	-
KX-P4410/4430	£99	£199	-	-
KX-P4420/4450i	£65	£109	£165	-
KX-P4400/5400	£75	£110	£165	-
OKI OL400e	£99	£118	-	-
Star LP8	£138	£225	-	-
Star L55	£75	-	-	-

## LASER CONSUMABLES

Type	Toner	Drum	Dev
Brother HL600 Series	£22	£99	-
Canon/Star 4s	£51	-	-
Canon LBP-8 IV	£70	-	-
Canon LBP-III	£46	-	-
EPL4000/4100/4300	£64	£89	-
EPL5200	£82	-	-
EPL7100/7500/8100	£117	-	-
Fujitsu VM600	£85	-	-
Fujitsu VM800	£115	-	-
Fujitsu VM4	£29	£149	£89
HP II/III/IIID	£47	-	-
HP II/IIIP	£51	-	-
HP III/II/4Si/MX	£77	-	-
HP 4/4+/4M	£65	-	-
HP 4L/4ML/4P/4MP	£45	-	-
HP 4V/MV	£109	-	-
HP 5L	£39	-	-
HP 5P/5MP	£60	-	-
Kyocera FS400	£16	-	-
NEC 610	£75	-	-
NEC S60/60P/62P/90/95	£105	-	-
OKI OL400/800	£19	£189	-
OKI OL400e	£17	£129	-
KX-P4410/30	£28	£80	£90
KX-P4440	£32	£108	£115
KX-P4420	£24	£57	£55
KX-P4450/50i/51/55	£18	£75	£80
KX-P4400/5400	£14	£55	-
KX-P6100	£12	£98	-
Qume Crystalprint	£99	£189	-
Star LS-5	£83	-	-
Star WinType	£68	-	-

## LASER ACCESSORIES

JetPage Postscript Cartridge - IIP/IIIP	£169
Postscript Upgrade for LaserJet 4	£270
Postscript Upgrade for LaserJet 4P	£225
LaserJet 4 Lower Paper Cassette	£205
LaserJet 4 JetDirect Ethernet Card	£339
LaserJet IIP/Lowe Paper Cassette	£115
Ozone filter for KX-P4420	£9
Ozone filter for KX-P4450/4455	£20
LaserJet 4Si Duplex Unit	£475
Envelope Feeder for LaserJet 4	£199
LaserJet III FX/IBM Emulation Cart	£79
Lower Paper Tray for Canon LBP-4	£98
A5 Paper Feeder for LaserJet 4P	£85

## 9PIN MATRIX PRINTERS

Citizen 1200+Parallel	80col	£99
Citizen 120D+Serial	80col	£109
Epson LX300	80col	£84
Epson LX1050	132col	£178
Epson FX870	80col	£242
Epson FX1170	132col	£297
Epson DFX5000+	132col	£1145
Panasonic KX-P1150	80col	£87
Panasonic KX-P3696	80col	£259
Star LC15	132col	£194
Star LC100C	80col	£97
Star LC90	80col	£78
Star ZA200	80col	£274
Star ZA250	132col	£341

## 24PIN MATRIX PRINTERS

Citizen ABC Mono	80col	£103
Citizen ABC Colour	80col	£125
Citizen Swift 200 Mono	80col	£138
Citizen Swift 200 Colour	80col	£146
Citizen Swift 330X	132col	£309
Epson LQ300	80col	£120
Epson LQ570+	80col	£209
Epson LQ870	80col	£370
Epson LQ1070+	132col	£291
Epson LQ1170	132col	£428
Epson DLQ3000	132col	£805
NEC P2Q	80col	£98
NEC P3Q	132col	£178
NEC P62	80col	£315
NEC P72	132col	£372
Panasonic KX-P2023	80col	£108
Panasonic KX-P2124	80col	£197
Panasonic KX-P2135 Colour	80col	£124
Panasonic KX-P3626	132col	£252
Star LC24-15 II	132col	£255
Star LC240 Mono	80col	£109
Star LC240 Colour	80col	£103
Star XB24-200 Colour	80col	£349
Star XB24-250 Colour	132col	£418

## RIBBONS/INK CARTRIDGES

### Manufacturers Original Ribbons Only

Type	Black	Colour
Canon BJ10ex/BJ10sx	£14	-
Canon BJ30	£10	-
Canon BJ200/BJ230	£16	-
Canon BJ300/BJ330	£11	-
Canon BJC70	£9	£14
Canon BJC600	£9	£6.50
Canon BJC800	£6	£22
Canon BJC4000 Ink Tank	£7	£13
Citizen 120D+	£4	-
Citizen Swift 200/240/ABC	£4	£13
Citizen Swift 24X	£8	£18
Epson LX100	£4	-
Epson LX400/LX850/FX870	£4	-
Epson LX1050/FX1170	£5	-
Epson LQ100	£4	-
Epson LQ150	£4	£12
Epson LQ570/870	£5	-
Epson LQ1070/1170	£8	-
Epson LQ2550	£8	£16
Epson SQ870/SQ1170	£23	-
Epson Stylus Colour	£12	£27
Epson Stylus Colour II/IIIs	£15	£19
Epson Stylus 800/1000	£10	-
Epson Stylus 820	£15	-
Fujitsu B100/B200	£18	-
HP DeskJet 500 Series	£19	£21
HP DeskJet 600/660	£20	£23
HP DeskJet 850	£22	£20
HP DeskJet 310/320	£13	£21
HP DeskJet 1200C	£19	£23
HP DeskJet 1600	£22	£23
HP PaintJet	£16	£18
HP PaintJet XL300	£16	£18
Kaga/Taxan KP810/815	£5	-
NEC P3Q/P32Q	£8	-
NEC P62/72/90	£8	£14
Panasonic 1150/1170/1180	£7	-
Panasonic 2180/2324/35	£7	£14
Panasonic 1624/2624	£8	-
Panasonic KXP3626/3696	£11	-
Star LC10/LC20/LC100	£5	£9
Star LC100/200	£5	£11
Star LC24-20/24-100/24-200	£5	£12
Star LC24-30	£8	£12
Star XB24/ZA200/ZA250	£5	£12
Star SJ48	£15	-
Star SJ144 Thermal	£6	£8

## INKJET PRINTERS

Canon BJ200ex	80col	£158
Canon BJ30	80col	£139
Canon BJ230	132col	£235
Canon BJ300	80col	£351
Canon BJ330	132col	£388
Canon BJC70	80col	£219
Canon BJC600e	80col	£318
Canon BJC800	32col	£1045
Canon BJC820	32col	£1219
Canon BJC4000	80col	£217
Citizen Project IIC	80col	£205
HP DeskJet 600 Mono	80col	£177
HP DeskJet 660C	80col	£243
HP DeskJet 850C	80col	£331
HP DeskJet 1200C	80col	£628
HP DeskJet 1200C PS	80col	£984
HP DeskJet 1600C	80col	£810
HP OfficeJet LX	80col	£493
Lexmark ExecJet IIC	80col	£199
Lexmark WinWriter 100	80col	£269
OKi OJ300 Colour	80col	£235
Star SJ144	80col	£178
Star WinType 800C Thermal	80col	£592

## SHEET FEEDERS

Canon BJ10ex/BJ10sx	£40
Canon BJ300	£86
Canon BJ330	£96
Citizen Swift 24/200/240	£75
Epson LX400	£69
Epson LQ570/LQ870	£47
Epson LQ1070/LQ1170	£89
HP DeskJet 310/320	£48
NEC P20/P22Q	£59
NEC P3Q/P32Q	£85
Panasonic 1170/1180/1123	£59
Panasonic 1124/1124/2124	£79
Panasonic 1824/2824	£128
Panasonic KX-P2135	£30
Star LC100	£69
Star LC24-20	£69
Star LC200/LC24-200	£69

### INKJET REFILL PACKS FOR

◆ Canon BJ10ex/BJ10sx - 2 pack	£10
◆ Canon BJ10ex/BJ10sx - 5 pack	£24
◆ Canon BJ10ex/BJ10sx 1 Original Cart & 3 refills	£36
◆ Canon BJ200 2 refills	£34
◆ Epson SQ870/1170 - 2 refills	£9
◆ HP DeskJet Std capacity - 2 pack	£8
◆ HP DeskJet Std capacity - 5 pack	£20
◆ HP DeskJet Std capacity black Cart +3 Std capacity refills	£30
◆ HP DeskJet Hi-capacity - 2 pack	£17
◆ HP DeskJet Hi-capacity - 5 pack	£35
◆ HP DeskJet Colour Cart & 1 each (3) colour refills	£39

## ACCESSORIES

Citizen Swift 200/240/ABC Colour Kit	£32
Canon BJ10sx Battery Pack	£32
Epson OK Serial Interface	£29
Epson BK Serial Interface	£75
Epson 32K Serial Interface	£95
Epson LQ100 Tractor Unit	£29
Epson LX300 Colour Kit	£29
Epson Stylus 820 Colour Kit	£75
HP DeskJet FX Emulation Cartridge	£49
HP DeskJet IBM Emulation Cartridge	£57
HP DeskJet 500 256K RAMCartridge	£75
HP DeskJet 320 Battery Pack	£33
HP DeskJet 320 CarryCase	£49
HP DeskJet 320/540 Colour Kit	£28
HP DeskJet 320 Parallel Cable	£12
HP DeskJet 600 Colour Kit	£29
HP DeskJet Prestige Elite Fonts	£55
HP DeskJet Letter Gothic Fonts	£56
Panasonic Serial Interface	£49
Panasonic 32K Buffer	£16
Panasonic 2180/2123 Colour Kit	£30
Star BK Serial Interface - LC Range	£52
Star BK Serial Interface - XB Range	£39
Star 32K Buffer - LC24/XB24	£59
Dustcovers for 80col printers	£6
Dustcovers for 132col printers	£9

### SPECIAL OFFERS

◆ 80 col Pespex Printer Stand	£7
◆ 132 col Pespex Printer Stand	£10
◆ 80 col Printer Stand	£8
◆ 132 col Printer Stand	£12

## LUTON STORE

Finway, Dallow Road, Luton, Beds  
Tel: 01582 745555

## WATFORD STORE

250 Lower High Street, Watford, Herts.  
Tel: 01923 237774

## HP On-Site Warranty Packs

Model	1yr	3yr
Mono DeskJet/Deskwriter	£32	£40
Colour DeskJet/Deskwriter	£45	£65
LaserJet 4L/ML DJ1200/1600	£78	£90
LaserJet 4+/4M+	£135	£160
LaserJet 4V/4MV	-	£200
LaserJet 5P/5MP	-	£130

## PRINTER SHARER/BUFFER

### Manual Printer Sharers

Type	Serial	Parallel
2in/1out	£12	£13
2in/2out	£28	£29
3in/1out	£15	£17
4in/1out	£24	£26

### Auto Parallel Printer Sharer Buffers

Type	OK	256K	1Mb
2in/1out	£29	-	-
2in/2out	-	£105	£134
4in/1out	-	£45	-
4in/2out	£69	£124	£149
8in/1out	£79	-	-

### Auto Serial Printer Sharer Buffers

Type	OK	256K	1Mb
2in/1out	£27	-	-
2in/2out	-	£124	-
4in/1out	£44	-	-
4in/2out	£69	£147	-
8in/1out	£62	-	-

### RAM Expansion for above Auto Sharers

256K	1Mb	2Mb	
RAM Module	£59	£78	£124

### Pocket Buffers

256K	1Mb	2Mb	
Parallel Flash Buffer	£65	£98	£119
Parallel Fast Flash Buffer	£85	£125	£158
RS232 Plotter Buffer	£155	£184	£330

## COMPACT CONVERTER

Serial to Parallel & Parallel to Serial	£49
AS above with 256K buffer	£55
IEEE-488/Centrronics Converter	£49
RS232 to RS422 Converter	£37
Parallel Line Extender	£37

## PRINTER LEADS

	1.8m	5m	10m
PC Parallel - 18 wire	£4	£8	£13
PC Parallel - 25 wire	£5	£10	£15

# MULTIMEDIA ▾ SCANNERS ▾ INPUT DEVICES

## MULTIMEDIA (VIDEO)

<b>CANON</b>	
Ion RC560 Camera only	£1659
Ion RC560 Camera PC Kit	£1699
<b>CREATIVE LABS</b>	
Sharevision PC3000	£875
Video Blaster MP400	£119
Video Blaster SE100	£132
Video Blaster RT300	£215
TV Coder External	£115

## Hauppauge!



- Win TV CELEBRITY £259
- Win TV Prisma Card £146

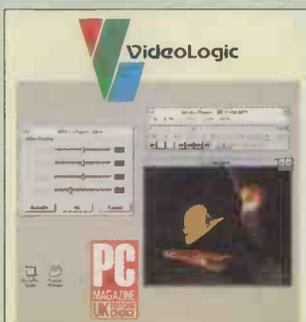
<b>ORCHID</b>	
Kelvin MPEG Playback card	£POA
<b>STB</b>	
ActionCD MPEG Playback Card	£189

## FAST

The Art of Digital Video.

- Movie Machine II £469
- Movie Machine Pro £279
- MPEG Extension for Movie Machine £229
- MJPEG Extension for Movie Machine £279
- Aviator £182
- Screen Machine II - ISA £659

## MULTIMEDIA (VIDEO)



- Captivator Pro £168
- Captivator Pro TV £209
- 2Mb PCI Movie £239
- MPEG Player £218
- 1Mb 928 Movie £129
- 1Mb 928 Movie with Sound £159

**1Mb 928 movie & MPEG Offer**  
For a limited period we can offer the 928 Movie with MPEG and optional sound for an incredible price. No Sound: £189 With Sound: £199 **Saving Over £150**

## SPEAKERS & ACCESSORIES



- Ideal for Multimedia PC's**
- Aries Stereo Speakers £6
  - Aries HiFi Speakers 10W £19
  - Aries HiFi Pro Speakers 25W £25
  - Aries Digital Speakers 25W £29
  - Aries Digital Plus Speakers 80W £48
  - Aries Ultra Power Speakers 160W £59
  - Aries Screen Microphone £4.50
  - Aries Stereo Headphones £4.50
  - Aries Internal Speakers (fits 5.25" bay) £12

## SCANNERS

<b>Aries Reylis Flatbed Scanners</b>			
All supplied complete with SCSI Interface, Micrografix Picture Publisher LE and Calera Wordscan OCR software.			
VM3420	1200dpi	256 Grey scale	£199
VM3520	1200dpi	24-bit Colour	£299
RELI 2412	2400dpi	24-bit Colour	£475
RELI 4816	4800dpi	24-bit Colour	£599
RELI 9624	9600dpi	24-bit Colour	£1225

**Canon**  
Canon IX-4015 Colour Scanner with AT-SCSI Interface & OFOTO Software £529

<b>Epson</b>	
Epson A4, 24 bit colour Flatbed Scanner: Supplied complete with Pic. Publisher LE, Omni Direct OCR, Interface Card & Cables	
GTX8500 Parallel	£485
GTX8500 SCSI	£564
GTX9000 Parallel	£670
GTX9000 SCSI	£663
LapCat	£292

<b>Genius</b>	
ScanMate 32 - mono	£55
ScanMate 256 - 256 greyscale	£93
ScanMate Colour SE 24-bit 800dpi	£93
ScanMate Colour Pro 1600dpi	£119

**Hewlett-Packard**  
A4 Flatbed Scanner supplied with Adobe Photoshop software, interfaces & cables.

ScanJet 4S mono	£229
ScanJet 4C colour	£615
<b>Logitech</b>	
ScanMan Colour	£139
ScanMan EasyTouch - Parallel	£98
Scanman PowerPage	£295
Scanman 256 for Windows	£75

## TRACKERBALLS

<b>Genius</b>	
HiPointTrackerball - Serial & PS/2	£19
HiTrak Trackerball - Serial & PS/2	£22
<b>Logitech</b>	
Pilot TrackMan	£25
Trackman Voyager	£43
TrackMan II Combo - Serial & PS/2	£42
Trackman Portable - Serial & PS/2	£32

## DIGITISING TABLETS

<b>Genius</b>	
Easy Painter	£65
New Sketch 1212 - 12"x12"	£119
New Sketch 1812 - 18"x12"	£185
New Sketch 1812D - 18"x12"	£209

## MICE

<b>Aries</b>	
Excel MK3 2 Button Serial Mouse	£8
<b>Creative</b>	
Aero Mouse	£65
Aero Pen	£65
Aero Duet	£83
<b>Genius</b>	
MouseOne 2B - PS/2	£11
Mouse 3	£12
Mouse 3+	£20
Includes powerful imaging software: PC Paintbrush for Windows, Media Mate Presentation Software, MouseMate Driver and Pad.	
HiMouse - Serial	£19
HiMouse - Serial & PS/2	£21
<b>Logitech</b>	
Chroma Mouse - Serial & PS/2	£24
MouseMan Sensa - Serial & PS/2	£38
MouseMan - Bus	£38
MouseMan Cordless - Serial & PS/2	£49
Pilot Mouse - Serial & PS/2	£17
<b>Microsoft</b>	
MS Mouse v2 - Serial or PS/2	£35
MS Mouse v2 - Bus	£48
MS Home Mouse	£27

## JOYSTICKS

<b>CH Products</b>	
Flightstick	£27
Flightstick Pro	£48
Virtual Pilot Yoke	£59
Virtual Pilot Pro Yoke	£64
<b>Gravis</b>	
Analog	£24
Analog Professional	£32
Advanced Game Pad	£17
<b>Suncom</b>	
Wingman	£24
Wingman Extreme	£30
Suncom FX3000	£26
Command Control Pad	£16
G-Force Flight Yoke	£37

**Excel CS200 PC Joystick**  
A high quality analogue PC Joystick with Turbo Switch  
**Special Offer Price £12**

## KEYBOARDS

EntryLevel (ELV) Keyboard	£12
Aries Click-Action Alps Keys Professional	£29
KeyPro a Programmable Keyboard with LCD Calculator, Diagonal Cursor keys and Keypad, Professional	£35
KeyTrack Keyboard with built-in Trackerball, Alps Keys	£39
Cherry G83-6000 Membrane	£18
Cherry G83-3210 Membrane	£20
Cherry G80-3000 Click-Action	£36
Cherry G81-3000 Soft-Touch	£22
MS Natural Keyboard	£59
All Keyboards have 102 Keys	

# ▼ SPECIAL OFFERS ON CD SOFTWARE ▼

Animals Encyclopedia £12	Cute & Cuddles £15	Rally £15	Interactive Story Time 3 £11	National Parks Family Guide £15	Sound Sensations £8
Animation Tour £12	Deathstar Arcade Battles £8	Europress Multimedia £29	Internet Tools £15	New View of Space £13	Sounds for Windows £8
Apogee Games £12	Desktop Imager £9	Klik & Create £39	Island Designs £6	Newsweek Interactive Vol. I £12	Space & Astronomy £12
Audubon's Birds £6	Dictionaries & Language £8	Klik & Create £39	Jokes & Pranks £6	Newsweek Interactive Vol. II £12	Space Series - Apollo £15
Audubon's Mammals £6	Dinosaur Safari £6	Europress Bookshelf £12	Jones in the Fast Lane £12	Night Owl Publisher £12	Space Shuttle £9
Author's Teacher Trouble £19	Dinosaurst Encyclopedia £12	Alice's Adventures in Wonderland £15	Just Games £9	North American Indians £15	Sports Best - Paragliding, Tennis & Kick Boxing £6
Barney Bear Goes To School £11	Dr Business £6	Treasure Island £15	Just Grand And Me £13	Ocean Life volume 2 £20	Star Trek Next Generation Demo Disc £2
Barney Bear Goes To Space £9	Dr Clipart II £6	Journey to the Centre of the Earth £15	Karaoke Macbeth £15	Oceans Below £9	Star Wars - Chess £15
Berlitz Think & Talk French Hyperglot £85	Dr Communication £6	Peter Pan £15	KBG World Fact Book £14	Operation Desert Storm £9	Star Wars - Clix (shareware) £15
Berlitz Think & Talk German Hyperglot £85	Dr Fonts 1 £6	Europress Productivity £6	Kids Collection £14	Our Solar System £8	Super CD II (shareware) £15
Berlitz Think & Talk Spanish Hyperglot £85	Dr Games 1 (Windows) £6	Mini Office £25	Kids Farm £9	Parenting: Prenatal to Preschool £8	Super Games Vol II for Windows £10
Bugs Bunny £6	Dr Games 2 (Windows) £6	Pyling Fingers £15	Kids Games £9	PC Games 2 - The Maxx £11	Tales of Mystery £9
Business Assistant £15	Dr Games II (DOS) £6	Family Doctor v3 £15	Kids Rhymes £9	PC Games Room £6	Tales of Peter Rabbit £16
Business Background £6	Dr Graphics £6	Font Elegance £12	Kings Quest V £9	Pentoniemo £10	Team Yankee £9
C Users Group CD-ROM £10	Dr Music Lab 1 £6	Font Heaven £15	Kings Quest VI £15	Peter & The Wolf £15	The Holy Bible £14
Canon The Climberian £12	Dr OS/2 Gold £6	Forever Growing Garden £15	Kodak Photo CD Access £12	Pirates Gold (Microprose) £12	Thumbelina £16
Casino Collection £9	Dr Reference £6	Four Days of Gemini 4 £15	Lawnmower Man £15	Pixel Gardens £15	Time Table of Arts Letter & Entertainment £15
CIA World Fact Book £6	Dr Shareware Gold II £6	Four Footed Friends £15	Learning Adventure £6	Plant Doctor (Urban Phytanarian Handbook) £15	Time Table:Bus, Politics & Media £11
Classic Cartoons £6	Dr Shareware Gold III £6	Full Bloom £6	Learning Language through Games - French £16	Putt Putt Joins The PARDE Q & A £12	Time Table:Science & Innovation £14
Classic Cartoons £6	Dr Windows II £6	Fun & Learn £15	Learning Language through Games - German £16	Quantum Gate £12	Tornado & Falcon 3 £15
Coates Impressionism £15	Dream Vacations In Hawaii £15	Game Arena £6	Learning Language through Games - Spanish £16	Railroad Tycoon (Microprose) £9	Total Baseball 1994 £6
Complete Bookshop £15	Earth & Universe £15	Game Jamboree £6	Learning Windows 3.1 £12	Rainbow Childrens Pack £12	Transport Tycoon (Microprose) £15
Compton's Golf Guide - California & Hawaii including Links £12	Education Platinum £8	Games '94 £15	Legend of Kyrandia (Virgin) £12	Rebel Assault £12	Tropical Rainforest £9
Computer Reference Library £8	Electronic Home Library £12	Games Pack I (Challenge Pack) £9	Lifestyle of Rich & Famous Cookk £15	Return to Zork £15	Twain's World £20
Corel Photo CD Air Shows £18	Elite Plus £15	Games Pack II £12	MacMillan Children's Dictionary £15	Roger Eberts Movie Guide £15	US Air Power £9
Corel Photo CD Auto Racing £18	Encyclopedia of Sound £6	Gardening £12	Mad Dog McCree 2 £8	Russian Air Power £9	US Fighter Jets £15
Corel Photo CD Aviation Images £18	Encyclopedia of Sound 2 £12	GIGA Games (1K + Games) £6	Magic Death 2 £8	Secret Weapons of the Luftwaffe £15	USA Wars - Civil War £9
Corel Photo CD Beautiful Women £18	European Monarchs £12	Godzilla vs Megalon £6	MacMillan Children's Dictionary £15	Selectware System £9	USA Wars - Operation Desert Storm £9
Corel Photo CD Beneath the Caribbean £18	Europress Education: £19	Grand Prix (Microprose) £12	Mad Dog McCree 2 £8	Shareware Overload Trip (3 CDs) £10	USA Wars - World War II £11
Corel Photo CD Benny Scotland £18	Fun School in Dreamland (4-7's) £19	Great Cities of the World II £12	Mammals - National Geographic £15	Sherlock Holmes, Consigt Det I £9	War in the Gulf £9
Corel Photo CD Brides I £18	Fun School in Space (6-9's) £19	Great Cities of the World I £11	Mario Teaches Sums £18	Sherlock Holmes, Consigt Det II £15	Windows 1993: Corel Draw Util, BMP & CADs, Games, Clip Art & more £15
Corel Photo CD Christmas £18	Fun School in Time (8-11's) £19	Grolier's Encyclopedia v6 £15	Mario's PlaySchool £15	SimTEL Archives £9	World of Flight (Plane Pictures) £10
Corel Photo CD English Countryside £18	Fun School 4 (Under 5s) £19	Guinness Disk of Records 1993 £9	MacMillan Teaches Typing II £15	Simulation Software: 6 top games incl. Soccer, Gunship & Midwinter (Microprose) £12	World of Games £8
Corel Photo CD Exotic Cars £18	Fun School 4 (5-7's) £19	Herald & Tribune Guide to Business Travel (Europe) £15	Me, Myself & I £15	Sing N Storytime £14	World of Trains (Train Pictures) £8
Corel Photo CD Fighters Jets £18	Fun School 4 (7-11's) £19	High Command £12	Medical Dictionary & Family Health Guide £9	Sleeping Beauty £10	World of Windows £9
Corel Photo CD Fireworks £18	Fun School Spelling (7-11's) £19	Hilarious Sports Bloopers £9	Mega Race £9	So Much Screenware £8	World Wars of Empire (Mindscape) £9
Corel Photo CD Interior Design £18	Fun School Maths (7-11's) £19	HIV AIDS Resource Guide £6	Middle East Diary £15	Software Vault Collection 1 £15	Wrath of the Demon £8
Corel Photo CD Ireland £18	Fun School Paint & Create (5-11's) £19	Hobbies OS/2 Collections £9	Middle East Diary £15	Software Vault Collection 2 £6	Zoo Guides: Mammals of Africa v3 £12
Corel Photo CD Military Aircraft £18	Fun School Young Scientist (5-9's) £19	Home Sweet Home £15	Money Magazine £15	Software Vault Collection WIN £8	
Corel Photo CD Oil Paintings £18	Europress Lifestyle £15	House Of Games £9	Money, Money, Money! £6	Software Vault Games Collect £6	
Corel Photo CD On the Beach of the World £18	BBC Gardeners World 3D Designer £15	Hugo's House of Horrors £6	Multimedia Magic - Gold Disk £15	Software Vault Gold Collect £6	
Corel Photo CD Ski Scenes £18	BBC Gardeners World 3D Designer 2 £25	I Can Spell £6	Musical Instruments MS £15	Software Vault Platinum Collect £6	
Corel Photo CD Steam Trains £18	Granada House Style 3D £19	IBM OS/2 showcase £5	My Animated Word Book £9		
Corel Photo CD Underwater Life £18	Interior Designer £15	Illustrated Shakespeare £10	My Talking Dictionary £9		
Corel Photo CD Underwater Reefs £18	Gone Fishin' £19	Impressionism £12			
Corel Photo CD World War II £18	Driving Instructor £15				

Some of the above titles are OEM products and may be marked accordingly  
All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns are subject to a handling charge. Goods not sold on a trial basis. Sales subject to our terms and conditions available on request. Prices exclude VAT @ 17.5%. E & OE.

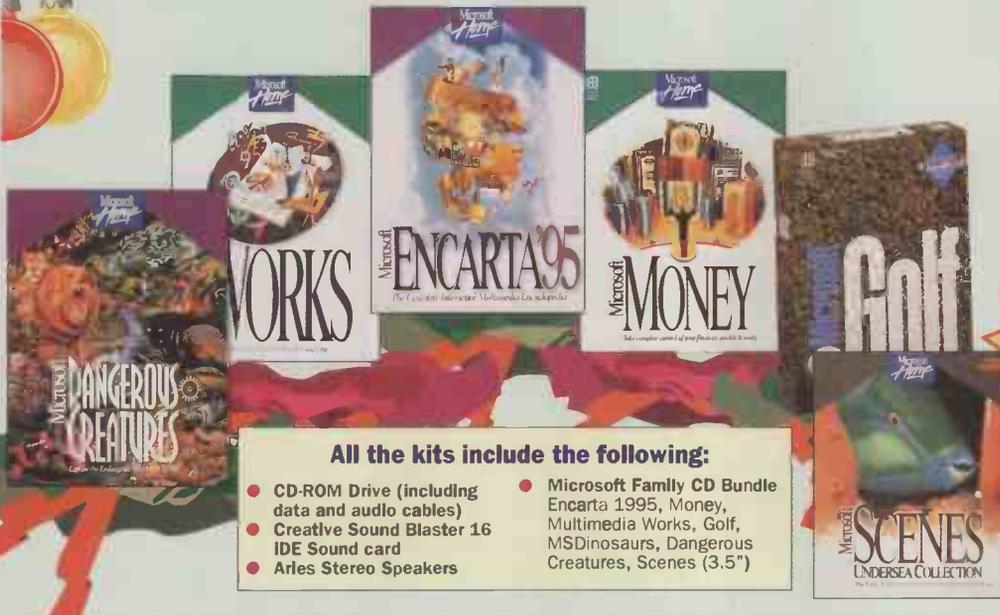
# Christmas Multimedia Offers

CREATIVE



Watford

Microsoft



### All the kits include the following:

- CD-ROM Drive (including data and audio cables)
- Creative Sound Blaster 16 IDE Sound card
- Aries Stereo Speakers
- Microsoft Family CD Bundle Encarta 1995, Money, Multimedia Works, Golf, MSDinosaurs, Dangerous Creatures, Scenes (3.5")

### Xmas Creative Kits Limited Offer



- ♦ Creative Dual Speed or Quad Speed Drive
- ♦ Creative Sound Blaster 16 Sound Card
- ♦ Stereo Speakers (upgrade to Hi-Fi **£15**)
- ♦ **FREE** Bundled software while stocks last
  - ♦ Groller's Encyclopedia
  - ♦ MegaRace
  - ♦ Space adventure
  - ♦ Speed
  - ♦ Knowledge Adventure
  - ♦ Undersea

Dual Speed..... **£98**

Quad Speed ..... **£158**

### Creative Dual Speed kit

CD220A 2x IDE CD-ROM Drive  
300ms access, 300kb/s transfer  
**OFFER PRICE £139**

### Creative Quad Speed kit

CR581 4x IDE CD-ROM Drive  
250ms access, 600kb/s transfer  
**OFFER PRICE £185**

### Aztec Quad Speed kit

CDA486 4x IDE CD-ROM Drive  
210ms access, 600kb/s transfer  
**OFFER PRICE £192**

### Mitsumi Quad Speed kit

FX400 4x IDE CD-ROM Drive  
230ms access, 600kb/s transfer  
**OFFER PRICE £196**

### Toshiba Quad Speed Kit

XM5302B 4x IDE CD-ROM Drive  
195ms access, 600kb/s transfer  
**OFFER PRICE £198**

### Aztec Six Speed kit

CDR1411 6x IDE CD-ROM Drive  
190ms access, 900kb/s transfer  
**OFFER PRICE £239**

### Teac Six Speed kit

CD56e 6x IDE CD-ROM Drive  
190ms access, 900kb/s transfer  
**OFFER PRICE £275**

**Limited Offer While stocks last ONLY £19.95**

**MegaPAK 2 - The Ultimate CD Bundle with 11 CDs**

- ♦ Jurassic Park
- ♦ Compuserve Starter CD
- ♦ Bodyworks Voyager
- ♦ Sleepwalker
- ♦ Return to Ringworld
- ♦ Shadowlands
- ♦ Spectre VR
- ♦ The Psychotron
- ♦ Jutland
- ♦ The Cyberplasm Formula
- ♦ Microcosm

**Limited Offer While stocks last ONLY £23.95**

**Legend Pack CD Bundle**

- ♦ Robocop 3D
- ♦ Pushover
- ♦ D/Generation
- ♦ Life & Death II - The Brain
- ♦ Kids Can Read - Cinderella, Mud Puddle, Thomas Snowsuit
- ♦ F29
- ♦ Might & Magic II
- ♦ Contraption Jack
- ♦ Megarace
- ♦ Epic
- ♦ Chessmaster 2100
- ♦ National Geographic Spiders

## CD Rom Drives

Read Only CD Drives	Speed	Access ms	Transfer Kb/s	Loading Mech.	Interface	Internal	External
Aries ATAPI Dual Speed	Dual	320	300	Tray	IDE	£49	-
Aztech CDA468-011	Quad	210	600	Tray	IDE	£94	-
Aztech CDR1411	Six	190	900	Tray	IDE	£139	-
BackPack 4S	Quad	250	600	Tray	Parallel	-	£249
Creative CD220E	Dual	300	300	Tray	IDE	£49	-
Creative CR581	Quad	250	600	Tray	IDE	£98	-
Goldstar GCDR540B	Quad	250	600	Tray	IDE	£99	-
Mitsumi FX400	Quad	230	600	Tray	IDE	£104	-
Nakamichi MBR-7 7CD Juke Box	Dual	380	330	Cart	SCSI	-	£249
NEC 4X-IDE	Quad	190	600	Tray	IDE	£115	-
NEC 6Xi	Six	150	900	Tray	SCSI 2	£264	-
NEC 6Xe	Six	150	900	Tray	SCSI 2	-	£356
Panasonic Travelspin	Dual	350	300	n/a	PCMCIA	-	£269
Panasonic Quad Pro	Quad	200	600	Tray	IDE	£	-
Pioneer DRUA124X	Quad	150	600	Tray	SCSI	£128	-
Plextor 6Plex	Six	150	900	Caddy	SCSI	£399	-
Teac CD56e	Six	190	900	Tray	IDE	£179	-
Toshiba XM3701B	Six	150	900	Tray	SCSI	£279	-
Toshiba XM5302B	Quad	195	600	Tray	IDE	£114	-
Toshiba XM3601B	Quad	150	600	Tray	SCSI	£218	-
<b>CD Recorders/Writable CD's</b>							
JVC XRW2001 CD Recorder	Dual	300	300	Caddy	SCSI	£1345	-
HP SureStore 40201	Quad	400	800	Tray	SCSI	£899	-
Panasonic LF1004 PD Optical	Quad	220	600	Caddy	SCSI	£499	-
Philips CDD522 CD Recorder	Dual	1000	350	Tray	SCSI 2	£1345	£1519
Yamaha CDR100 CD Recorder	Quad	500	600	Caddy	SCSI 2	£1789	£1979

## Sound Cards

<b>CREATIVE</b>	
Creative Blasterkeys	£105
Creative Blasterkeys Kit	£275
Creative MIDI Blaster	£89
Creative Wave Blaster II	£85
Sound Blaster 16 IDE Value	£59
Sound Blaster 16 Pro IDE	£83
Sound Blaster 16 Value	£60
Sound Blaster 16 Pro IDE ASP	£69
Sound Blaster 32 IDE	£106
Sound Blaster AWE 32 IDE Value	£99
Sound Blaster AWE 32 IDE PnP	£158
Sound Blaster AWE 32 IDE	£149
ASP Upgrade	£39
<b>DIGISPEECH</b>	
Portable Sound Plus	£105
<b>GRAVIS</b>	
UltraSound	£89
UltraSound Max	£125
UltraSound MIDI Kit	£29
<b>MIRO</b>	
SoundPCM1 Pro	£125
<b>ORCHID</b>	
SoundDrive 16 EZ	£61
SoundDrive 16 EZ SCSI	£76
GameWave 32	£69
SoundWave 32	£132
SoundWave 32 Pro	£118
SoundWave 32 Pro SCSI	£148
SoundWave 32 SCSI	£139
NuSound Plug & Play Soundcard with IDE & Panasonic interfaces	£129

## CREATIVE Multimedia Kits

<b>Blaster CD 6X</b>	<b>£179</b>
<b>Performance 32 6X</b>	<b>£279</b>
<b>4X MULTIMEDIA HOME CD</b>	
♦ Kit includes - Sound Blaster 16 Quad speed CD ROM Drive, Speakers, MS Encarta, MS Works, MS Money, MS Dangerous Creatures & MS Scenes	<b>£275</b>
<b>DISCOVERY 2X</b>	
♦ Kit includes - Sound Blaster 16, Dual Speed CD ROM drive, Speakers, Groller's Encyclopedia, How to Computers CD, Ultima 7 and more.	<b>£139</b>
<b>DISCOVERY 4X</b>	
♦ As above with Quad Speed drive	<b>£265</b>
<b>GAME BLASTER AWE32 KIT</b>	
♦ Kit includes - Sound Blaster AWE32 Quad speed CD ROM Drive, Speakers, High performance joystick - ideal for the game player	<b>£287</b>

# MONITORS • VIDEO CARDS • DATA STORAGE • HARD DRIVES

## GRAPHICS CARDS

<b>Generic</b>		
256K VGA Card	ISA	£18
512K SVGA Card	ISA	£28
1Mb Super VGA	ISA	£43
1Mb SuperVGA	VLB	£59

<b>Diamond</b>		
1Mb Stealth SE		£65
1Mb Stealth 64 DRAM-PCI only		£79
1Mb Stealth 64 Video DRAM		£88
2Mb Stealth 64 Video DRAM		£129
2Mb Stealth 64 Video VRAM		£199
4Mb Stealth 64 Video VRAM		£299

Please specify PCI or VL Bus when ordering

## matrox



### MGA Millennium features include:

- ◆ Real-time rendering of 3D graphics
  - ◆ 32-bit BGA core for fast D0S performance
  - ◆ 1600 x 1200 @ 24-bit resolution
  - ◆ Memory upgradable to 8Mb
- |                |     |      |
|----------------|-----|------|
| 2Mb Millennium | PCI | £209 |
| 4Mb Millennium | PCI | £309 |

<b>Mtro</b>		
Video DC1 & VideoStudio	ISA	£325
Video DC1 & Premier	ISA	£396
1Mb Video 12PD	VL/PCI	£86
2Mb Video 12PD	VL/PCI	£126
Video 20TD Live	VL/PCI	£296

<b>Number Nine</b>		
1Mb 9FX Vision 330 DRAM		£83
2Mb 9FX Vision 330 DRAM		£124
1Mb 9FX Motion 531 DRAM		£118
2Mb 9FX Motion 531 DRAM		£156
2Mb 9FX Motion 771 VRAM		£224
4Mb 9FX Motion 771 VRAM		£323
4Mb Imagine 128 1280 VRAM		£495
4Mb Imagine 128 1600 VRAM		£699

Please specify PCI or VL Bus when ordering

<b>Orchid</b>		
1Mb Kelvin EZ	VLB	£65
1Mb Kelvin 64	PCI	£82
2Mb Kelvin 64	ISA	£119
2Mb Kelvin 64	PCI	£113
1Mb Fahrenheit 64	PCI or VLB	£94
2Mb Fahrenheit 64	PCI	£130
2Mb Fahrenheit Pro 64	PCI or VLB	£210
4Mb Fahrenheit Pro 64	PCI	£289

Please specify PCI or VL Bus when ordering



WINDOWS '95  
COMPATIBLE



Lifetime Warranty

2Mb Velocity 64V S3 968		£219
4Mb Velocity 64V S3 968		£319
2Mb Powergraph 64V S3 Trio		£135

Please specify VL or PCI bus when ordering

<b>Taxan</b>		
2Mb WinTurbo		£193
4Mb WinTurbo Plus		£338

Please specify ISA, VL or PCI bus when ordering

## Videologic



WINDOWS '95  
COMPATIBLE

1Mb GrafixStar 300		£97
2Mb GrafixStar 300		£135
1Mb GrafixStar 500		£132
2Mb GrafixStar 500		£185
2Mb GrafixStar 700		£235
4Mb GrafixStar 700		£379
VMC Controller		£38

Please specify PCI or VL Bus when ordering

## MONITORS

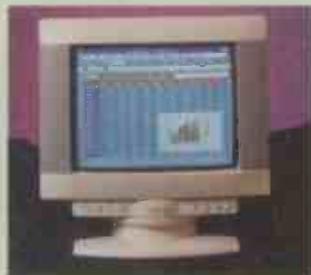


### Aries VGA Monitors

14" Mono VGA - Paper White	£85
----------------------------	-----

**EnergyPro 14" LR SuperVGA**  
0.28mm dot pitch, EnergyStar compliant, supports up to 1024x768 resolution £159

### Aries Multiscan Monitors



The NEW Aries Multiscan monitors with Horizontal Frequency ranging from 29KHz to 75KHz providing rock solid images at resolutions of upto 1280 x 1024. Non-Interlaced, coupled with the 0.28mm dot pitch Picture Tube provides the Ultra High Image that is expected from the Aries range of Low Radiation Swedish MPRII Standard Monitors. Supplied complete with tilt and swivel base.

<b>Aries Alphascan Pro LR</b> 1024 x 768/72Hz (NI) H-Sync 70KHz, Front Mounted user controls.	£179
---	------

<b>Aries EnergyPro 6000 LR</b> 15" Colour Display, 0.28mm dot pitch, 1280 x 1024/60Hz NI, Microprocessor Control with digital display, Inc. Pincushion, Trapezoid, Rotation settings. EPA EnergyStar Compliant.	£239
--	------

<b>CTX Multiscan Monitors</b>		
1451LR	14"	£169
1565GN	15"	£235
1765GM	17"	£449
1785GM	17"	£495

<b>Hitachi Multiscan Monitors</b>		
17MXV	17"	£469
20CM2096	20"	£895

<b>NEC Multiscan Monitors</b>		
XV15	15"	£279
XV17	17"	£557
XE17	17"	£676
XE21	21"	£1315

<b>Panasonic Monitors - 2yr On-site warranty</b>		
TX-D1562	15"	£260
TX-D1733	17"	£449
TX-D1733F	17"	£499
TX-D1751	17"	£589
TX-D2051	20"	£939
TX-D2151	21"	£1149

<b>Philips Multiscan Monitors</b>		
14C	14"	£163
15B	15"	£272
17C	17"	£423

<b>Sony Multiscan Monitors</b>		
CPD-15SF1	15"	£302
GDM-17SE1	17"	£808
GDM-20SE1VT	20"	£1295
GDM-20SE1	20"	£1395

<b>Taxan Ergovision Monitors</b>		
EV 410LR	14"	£189
EV 580LR	15"	£255
EV 895LR	17"	£795
EV 1080LR	20"	£875
EV 2100LR	21"	£1489

All prices, specifications and offers subject to change without notice. Please ensure suitability with manufacturer before ordering. All returns are subject to a handling charge. Goods not sold on a trial basis. Sales subject to our terms and conditions available on request. Prices exclude VAT @ 17.5%. E & OE.

## TAPE STREAMERS

<b>HP Colorado Tape Drives</b>	
DJ-35 350Mb Internal	£78
DJ-25 680Mb Internal	£115
DJ-50 1.4Gb Internal	£178
T1000 800Mb Internal	£118
JT-35 350Mb External	£149
JT-25 680Mb External	£193

<b>Accessories</b>	
KE-10 ISA External Kit	£59
KE-15 PC/2 External Kit	£77
FC-20 Fast Tape Controller	£49
TC-15 Fast Cont. with H'Ware Comp	£99
SK7 Windows Backup Software	£39
SK1 OS/2 Backup Software	£59

<b>Iomega Storage Solutions</b>	
Tape700 680Mb Internal	£114
Tape700 680Mb External	£185
Ditto800 800Mb Internal	£125
Ditto800 800Mb External	£207
Ditto800 800Mb Parallel Port	£207
Ditto3200 3.2Gb Internal	£225
Ditto3200 3.2Gb External	£225
ZIP 100Mb Internal SCSI	£153
ZIP 100Mb Parallel Port	£153

<b>Backpack Tape Drives</b>	
350Mb External	£189
800Mb Travan External	£255

<b>HP SureStore Tape Drives</b>	
SureStore 2000 2Gb Internal	£599
SureStore 2000 2Gb External	£699
SureStore 5000 4Gb Internal	£679
SureStore 5000 4Gb External	£779

<b>Data Cartridges</b>	
DC2000	£12
DC6250	£16
MC3000 XL	£15
4mm 1.3Gb 5pk	£39
4mm 2Gb 5pk	£47
DC2120	£8
DC2120XL	£14
Travan TR1	£23
Travan TR3	£26
100Mb ZIP	£14

## CABLES & ACCESSORIES

Single 40w Internal IDE cable	£6
Dual 40w Internal IDE cable	£8
Single 50w Internal SCSI cable	£8
Dual 50w Internal SCSI cable	£9
50w - 50w Amphenol SCSI cable	£16
25w - 50w Amphenol SCSI cable	£16
SCSI-2 cable	£25
Removable SCSI Drive Rack	£29
5.25" Power Splitter cable	£5

## REMOVABLE DRIVES

<b>Syquest</b>		
EZ135	135Mb IDE Internal	£POA
EZ135	135Mb SCSI Internal	£POA
	Cartridge for EZ135	£POA
SQ3270A	270Mb IDE Internal	£258
SQ3270S	270Mb SCSI Internal	£290
SQ327	270Mb Cartridge	£51

## PARALLEL PORT DRIVES

<b>BackPack Hard Disk Drives</b>	
420Mb	£326 850Mb £495 1Gb £615

## FLOPPY DISK DRIVES

<b>Standard Internal Bare Drives</b>	
UC600 5.25" 1.2Mb Drive	£35
UC35/6 3.5" 1.44Mb Drive	£21
5 Head Floppy Cable	£5
5.25" Fixing Kit for 3.5" Drives.	£5

<b>BackPack External Parallel Port Drives</b>	
3.5" 1.44Mb	£115
5.25" 1.2Mb	£131

## 3.5" EXCEL DISKS

<b>Pre-formatted Lifetime Warranty High Quality (65 Cl/p Rate Disks)</b>	
10 x DSHD Black	£4
10 x DSHD Multicolour	£5
50 x DSHD	£18

## IDE HARD DRIVES



### NEW LOW PRICES

<b>Conner</b>				
CFS635A	635Mb	12ms	3.5"	£119
CFS850A	850Mb	12ms	3.5"	£128
CFS1275A	1.27Gb	11ms	3.5"	£176
<b>Fujitsu</b>				
M1603T	544Mb	12ms	3.5"	£109
M1606T	1.08Gb	12ms	3.5"	£179
<b>Maxtor</b>				
7850AV	850Mb	12ms	3.5"	£132
71260AT	1.26Gb	12ms	3.5"	£179



### Maxtor/Watford Upgrade Kits

Supplied complete with: Drive, mounting kit, installation Software and user friendly installation guide. Supported directly by the manufacturer with No Quibble Guarantee and FREE Technical support Hotline

MxWE540	540Mb	12ms	3.5"	£129
MxWE850	850Mb	12ms	3.5"	£159
MxWE1260	1.26Gb	12ms	3.5"	£229
MxWE1600	1.6Gb	11ms	3.5"	£POA

<b>Quantum</b>				
Trailblazer	850Mb	12ms	3.5"	£136
Fireball	1.08Gb	12ms	3.5"	£174

<b>Seagate</b>				
ST3660A	545Mb	12ms	3.5"	£108
ST5850A	850Mb	12ms	3.5"	£138
ST31220A	1.2Gb	12ms	3.5"	£165

<b>Western Digital</b>				
AC2635	635Mb	10ms	3.5"	£115
AC2850	850Mb	10ms	3.5"	£132
AC31200	1.2Gb	10ms	3.5"	£185
AC31600	1.62Gb	10ms	3.5"	£279

## 2.5" HARD DISK DRIVES

<b>IBM</b>				
DPRA20810	810Mb	11ms	2.5"	£329
DPRA21215	1.2Gb	11ms	2.5"	£409

<b>Hitachi</b>				
DK221A-34	340Mb	11ms	2.5"	£139
DK211A-51	510Mb	11ms	2.5"	£199
DK212A-81	810Mb	11ms	2.5"	£329
DK212A-10	1.0Gb	10ms	2.5"	£399

<b>Toshiba</b>				
MK1924FC	540Mb	12ms	2.5"	£205
MK2628FC	810Mb	12ms	2.5"	£379

## SCSI HARD DRIVES

<b>Conner</b>				
CFP1080S	1.0Gb	10ms	3.5"	£199
CFP2105S	2.15Gb	9ms	3.5"	£499
CFP4207S	4.22Gb	9ms	3.5"	£785

<b>Fujitsu (2 year Warranty - 2Gb+ - 5 year Warranty)</b>				
M2684S	532Mb	12ms	3.5"	£125
M1603SA	545Mb	11ms	3.5"	£129
M1606SA	1.1Gb	10ms	3.5"	£255
M2903SA	2.0Gb	12ms	3.5"	£549

<b>IBM (5 year warranty)</b>				
84G9001	1.0Gb	10ms	3.5"	£249
74G7044	2.0Gb	8ms	3.5"	£699
74G7045	4.0Gb	8ms	3.5"	£1099
74G7073	5.25Gb	8ms	3.5"	£1249

<b>Quantum</b>				
Maverick	540Mb	12ms	3.5"	£139
Fireball	1.08Gb	9ms	3.5"	£249
Atlas	2.1Gb	9ms	3.5"	£585

<b>Seagate</b>				
ST31230N	1.05Gb	9ms	3.5"	£289
ST32430N	2.1Gb	9ms	3.5"	£609
ST15230N	4.2Gb	11ms	3.5"	£999

## TRAFFICMATE Masters the Art of Missing the Traffic

If you have ever been stuck in a motorway traffic jam for hours, and wish you could have known about it beforehand, then Trafficmate is the answer.

Trafficmate is a compact battery operated unit, which will give you advanced warning of impending hold-ups and delays on motorways throughout the UK. It will tell you where you are, if there are any delays ahead and how long you can expect to have to wait.

Also Available - Trafficmaster YQ, call for details.



£42.50

# FAX/MODEM · MEMORY · CPU · PSION · CARDS · SPARES

## MODEMS

Surf the Net with any of the following Fax/Modems. You can connect globally using the Information Super Highway. Our prices include FREE 28 Day Access to the InterNET. All Fax/Modems are BABT approved.

### Aries

X-Link Fax/Modems



- XL-144i Internal 14400bps V.Fast, V32bis, V42bis, MNP5 **£69**
  - XL-144E External 14400bps V.Fast V32 bis V42bis MNP5 **£72**
  - XL-V34i Internal 28800 bps V34, V32bis V42bis, MNP5 **£145**
  - XL-V34E External 28800bps V34 V32 bis V42bis MNP5 **£142**
- X-Link Fax/Modem carry 3 years warranty & are supplied complete with cables, WinFax DosFax Lite & Commit Ltd.

Fax-Modem/Voice Mail Card  
Phone Blaster v34 with software **£259**

### PAGE

Fax/Modems



- Netlink V.32 **£79**
  - Netlink Gold V.34 **£164**
- Please state internal or external when ordering
- GOA0900 Mobilfax 14.4 Pocket **£90**
  - GOA1010 Linnet Message Desk **£170**
  - GOA0780 Linnet 34 FX **£175**
  - GOA0420 Microlin FX32+ Pocket **£148**
  - GOA290 Microlin FX32+ Internal **£133**
  - GOA1020 Microlin FX34 Pocket **£176**
  - GOA1070 Microlin FX34 Internal **£176**
  - GOA1030 Microlin NB34 PCMCIA **£259**
  - GOA0260 Ultralink 32 **£329**
- All Pace Fax/Modems (except Linnet & Microlin FX34) come supplied with DosFax, WinFax & Commit softwares and cable and carry manufacturer's 5 years warranty.

### US Robotics Modems

- |  | Ext         | Int         |
|--|-------------|-------------|
| Sportster 14.4 Fax/Modem                   | <b>£105</b> | <b>£105</b> |
| Sportster 28.8 V34 Fax/Modem               | <b>£157</b> | <b>£157</b> |
| Worldport Dual Cellular                    | <b>£193</b> | -           |
| Courier v34 Fax/Modem                      | <b>£238</b> | <b>£238</b> |
| Worldport PCMCIA 2496 Fx/Md                | -           | <b>£129</b> |
| Worldport Dual standard cellular PCMCIA    | -           | <b>£165</b> |
| Worldport v34 PCMCIA Connecting Cable 9/25 | -           | <b>£8</b>   |
| <b>Motorola Fax/Modems</b>                 |             |             |
| 3400 On-Line Internet Solution             |             | <b>£168</b> |
| 3400 PRO Desk Top                          |             | <b>£156</b> |

## MOTHERBOARDS

- CEA1800: 486 VL Bus, 256K Cache, ZIF Socket, 3 VESA, 4 ISA - 2 x 72 & 4 x 30 pin SIMM **£62**
- CEA5040: 486 VL Bus, 128K Cache, ZIF Socket, 3 VESA, 4 ISA - 4 x 72 pin SIMM **£59**
- CEA5030: 486 VL Bus, 256K Cache, ZIF Socket, 3 VESA, 4 ISA - 4 x 72 pin SIMM **£66**
- CEA5110: 486 PCI, 256K Cache, ZIF, Enh. IDE, Enh. Parallel/Hi-Speed 16550 Serial **£96**
- CEA5080: Pentium P75/90/100, 256K Cache, Enh. IDE/Enh. Parallel/Hi-Speed 16550 Serial **£129**
- CEA5070: Pentium P75/90/100/120/133, 256K Intel Triton, EDO RAM & Pipeline Cache opt. **£149**
- CEA5075: Pentium P75/90/100/120/133, 256K Intel Triton, EDO RAM with 256K Pipeline Cache fitted **£189**

## PROCESSORS (CPU)

- INTEL**
- 486DX2-66 5V **£73** 486DX4-75 3V **£99**
  - 486DX4-100 **£139**
  - Pentium P75 **£125** Pentium P90 **£199**
  - Pentium P100 **£268** Pentium P120 **£389**
  - Pentium P133 **£478**
- OTHERS**
- SGS 486DX2 66 5V **£38**
  - Texas 486DX2-66 3V3 **£39**
  - AMD 486DX4-100 3V3 **£67**
  - AMD 486DX4-120 3V3 **£89**
  - Cyrix 5 x 86™-100 3V3 **£119**

### DX4 Adaptor Card

Plug any 486DX4 processor into a standard motherboard with this adaptor.  
**Special Offer Price £33**

## TOP QUALITY SIMMS AT LOW PRICES



## MEMORY (RAM) SIMMS

- |          |             |             |
|----------|-------------|-------------|
| 256K     | 3 chip      | <b>£10</b>  |
| 1Mb x 8  | 3 chip      | <b>£25</b>  |
| 1Mb x 9  | 3 chip      | <b>£27</b>  |
| 1Mb x 9  | 9 chip      | <b>£29</b>  |
| 4Mb x 9  | 3 chip      | <b>£98</b>  |
| 1Mb x 32 | 4MB         | <b>£86</b>  |
| 2Mb x 32 | 8MB         | <b>£185</b> |
| 4Mb x 32 | 16MB        | <b>£315</b> |
| 8Mb x 32 | 32MB        | <b>£649</b> |
| 1Mb x 36 | 4Mb         | <b>£105</b> |
| 2Mb x 36 | 8Mb         | <b>£209</b> |
| 4Mb x 36 | 16Mb        | <b>£349</b> |
| 8Mb x 36 | 32Mb        | <b>£689</b> |
| 1Mb x 32 | 4Mb EDO 5v  | <b>£112</b> |
| 2Mb x 32 | 8Mb EDO 5v  | <b>£220</b> |
| 4Mb x 32 | 16Mb EDO 5v | <b>£399</b> |

### SIMM Converter

Converts 4 x 30pin SIMMS to 1 x 72pin SIMM. Can use 3 or 9 chip to give 32 or 36bits.  
**Special Offer Price £29**

## INTEL OVERDRIVES

- 486DX2-50 **£50** 486DX2-66 **£92**
  - 486DX4-75 **£99** 486DX4-100 **£125**
  - Pentium 63 **£169** Pentium 83 **£185**
- P.S. When ordering, please specify type required, replacement or upgrade socket type

## MATHS CO-PROCESSORS

- 80387SX-16/20MHz **£44**
- 80387SX-25/33/40MHz **£44**
- 80387DX-33MHz **£42**
- 80387DX-40MHz **£45**

## CONTROLLER CARDS

- ISA**
- CEA0110 Multi I/O - 2S/1P/G **£9**
  - CEA 0290 Multi I/O -IDE/FDD/2S/1P/G **£11**
  - CEA2400 Multi I/O - 2S (16550) /1P **£18**
  - CEA0230 2 x IDE/2x FDD Controller **£9**
  - CEA0100 Dual RS232 Serial Port Card **£8**
  - CEA2410 Enhanced 16550 Serial Card **£26**
  - CEA0110 Parallel Port Card **£8**
  - CEA0300 Game Port Card **£11**

### ISA IDE Caching Controllers

- Promise DC-100 OK **£49**
- Promise DC-100 1Mb **£95**
- Promise DC-200 OK **£59**

### VESA Local Bus

- CEA1610 Multi I/O-IDE/FDD/2S/1P/IG with Enhanced IDE Controller **£19**
- CEA1900 Multi I/O IDE/FDD/2x Enhanced Serial 16550/1 parallel **£32**
- CEA2060 Multi I/O-IDE/FDD/2S/1P **£14**

### SCSI Controllers

- Adaptec 1542 Controller Kit ISA **£159**
- Adaptec 1542 Controller ISA **£119**
- Adaptec 2842 Controller Kit VLB **£159**
- Adaptec 2940 Controller Kit PCI **£185**
- Adaptec 2742 Controller Kit EISA **£239**
- Adaptec 1460 PCMCIA SCSI Kit **£142**
- Promise DC2040 ISA **£79**
- Future Domain TMC1610 ISA - 16 bit **£52**
- Future Domain TMC850 ISA - 8 bit **£35**
- Future Domain PCMCIA SCSI Controller **£169**

## COMPUTER CASES-CHIC

- Mini Tower Case with PSU **£33**
- Midi Tower case with PSU **£58**
- Full Tower Case with PSU **£74**
- Slim Line (Desk) Case with PSU **£44**
- Desk Top Std Case with PSU **£33**
- 200W PSU Unit (Desk/MiniTower) **£25**
- 230W PSU Unit (Full Tower) **£39**
- Workstation Case **£39**

## FAX MACHINES

- HP Fax 900 **£449** HP Fax 950 **£609**
- HP OfficeJet LX **£493** Pana UFV40 **£259**
- Pana UFV60 **£329** Pana UF315 **£549**
- Pana UF322E **£675** Fax PaperRoll **£5**

## PCMCIA GAME CARDS II

Play PC games on portable computers  
One or two joysticks as standard  
No software modification needed  
Simple installation and configuration  
100% British designed & manufactured **£45**

## PSION COMPUTERS

- Ser 3A 256K **£175** Ser 3A 512K **£205**
- Ser 3A 1Mb **£249** Ser 3A 2Mb **£299**

### RAM Solid State Disks (SSD)

- 128K **£37** 512K **£89**
- 1Mb **£188**

### Flash Solid State Disks (SSD)

- 128K **£26** 256K **£39**
- 512K **£64** 1Mb **£88**
- 2Mb **£138** 4Mb **£255**
- Parallel Interface Link **£23**
- Psi Win RS232 Serial Link **£62**
- RS 232 Serial Link for Mac **£55**
- Winlink 2 for PC Serial Link **£24**
- Fax Modem for Series 3A **£158**
- Mains Adapter 9V AC **£11**
- Professional Finance **£38**
- Spelling Checker/Thesaurus **£29**
- Spreadsheet **£24** Finance Pack **£49**
- Chess **£24** Games Pack 3 **£32**
- Desk Stand **£14** Leather Case **£18**
- VT 100 Emulator **£49**
- Comcard Compute-a-diet **£59**



Leasing finance at very attractive rates now available to Businesses (subject to status), Schools, Colleges, Universities, Government Depts, and Local Councils. Minimum order **£1,000**. Please telephone for details.

- Official orders accepted from government educational establishments and PLCs.
- Watford & Luton Showrooms & shop hours: 9am to 6pm, Monday to Saturday. Late night Thursday until 8pm. Free Customer Car Park
- Mail Order inquiries: 9am - 6pm Monday to Friday only
- Technical enquiries: 9.30am to 5.00pm, Monday to Friday only
- VAT: EC Customers please add 17.5% VAT to value of order including carriage.

### Carriage (incl. Insurance) Charges

	1st Item	2nd & sub-seq item
Software	<b>£6.00</b>	<b>£2.00</b>
Hardware	<b>£8.00</b>	<b>£5.00</b>
Lasers	<b>£9.00</b>	<b>£7.00</b>
Accessories	<b>£6.00</b>	<b>£2.00</b>
Small Items	<b>£6.00</b>	<b>£2.00</b>

Please note that **£6.00** is our minimum carriage charge.

**Standard Delivery Charges** shown above for delivery within 2-4 working days after despatch for Express Delivery (next working day) double the total carriage. All delivery charges subject to VAT. Please allow 7 working days for delivery of orders and 28 days for non-stock orders. Above carriage charges apply to most of the UK mainland except for certain outlying areas. Please confirm when placing your order. On export orders, carriage is charged at cost.

Offers and all items are subject to availability. Prices may have to change for reasons beyond our control. Specifications on products are correct at time of going to press and given in good faith, but may have to change without notice. Please check suitability of products with your systems and/or manufacturers, before ordering. All trademarks are acknowledged. Goods are sold subject to our standard terms and conditions of sale and are available on request. Goods are not sold on trial basis. E&OE



Retail Showroom & Sales

## Watford Electronics

Jessa Group of Companies - Established 1972

### Mall Order & Showroom: ▶

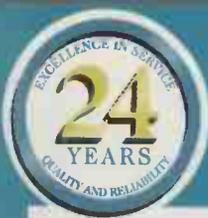
Finway, off Dallow Rd., LUTON, LU1 1TR.  
Tel: 01582 487777; Fax: 01582 488588  
Mail Order only, Tel: 01582 745555

### ◀ Showroom Only:

250 Lower High Street, WATFORD, WD1 2AN.  
Tel: 01923 237774; Fax: 01923 233642



Headquarters, Mail Order, Retail Showroom & Sales



# TECHNOMATIC

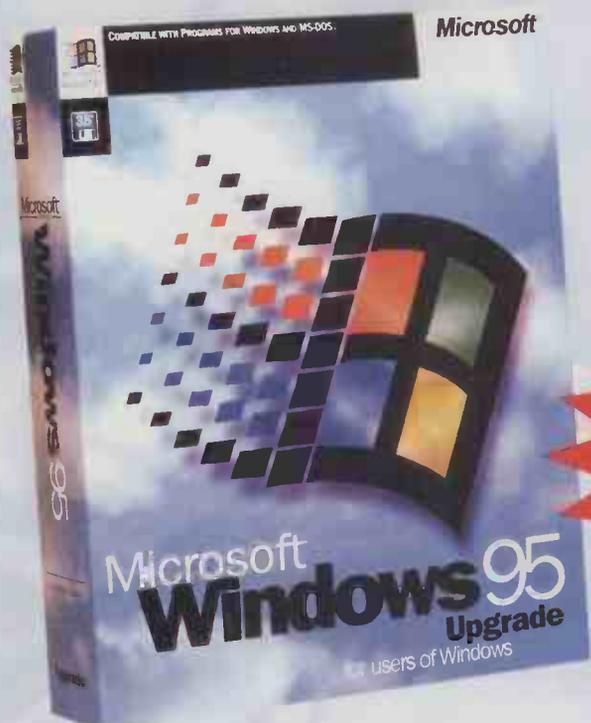
Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Microsoft Windows 95 Hotline 0181 358 8095



# Microsoft Windows 95

UNLOCK THE POTENTIAL OF YOUR PC FOR ONLY

# £55

When you purchase any other product. (Value must be greater than £25) Price applies to upgrade version Only one upgrade at special price per order

SEE OUR MICROSOFT PAGE FOR SPECIAL OFFERS WITH WINDOWS 95

ORDER NOW 0181 358 8095

The new standard in DeskTop Operating Systems redefines PC performance and ease-of-use and opens a whole new world of possibilities. It's a great leap forward.

## Windows 95 Delivers!

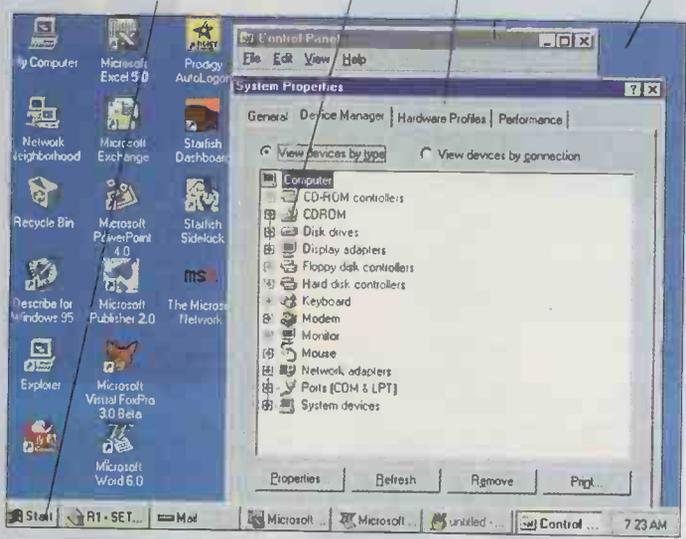
- ✓ **New, Intuitive Interface!**
- ✓ **Long Filename Support!**
- ✓ **Novell NetWare Support!**
- ✓ **Microsoft Network!**
- ✓ **32-bit Operating System!**
- ✓ **Plug-and-Play Hardware Detection!**
- ✓ **Multitasking/Multithreading!**

The single point of access to the system is the start button. Start button and taskbar are always visible - even when applications are opened full screen.

Easily check the status of each device in your PC.

Dialog boxes have a consistent look and feel.

New intuitive desktop makes Windows 95 the easiest Windows yet!



### System Requirements

- Personal Computer with a 386DX or higher processor
- 4MB of memory (8MB recommended)
- Typical available hard disk space required: 50-55MB (actual requirement will vary based on features you choose to install)
- 3.5" high-density disk drive or CD-ROM disk drive.
- VGA or higher resolution graphics card

### Options

- Microsoft Mouse or compatible pointing device
- Modem/Fax modem
- Audio card/speakers for sound



## FREE! 10-Pack Software Bundle (CD-ROM)

with every Windows 95 you purchase from Technomatic Includes:

1. THE HIVE, a 32-bit game for Windows 95 (episodes 1&2) from Trimark Interactive
2. Micrografx Picture Publisher Preview for Windows 95
3. Micrografx Crayola Art (Kids Drawing program for Windows 95)
4. Quick Start Tutorial for Windows 95 (PTS)
5. Royalty Free Images & Screen Savers Engine from Hammerhead Interactive
6. Kodak Photo CD Player
7. Kodak Photo CD Access
8. Kodak Photo CD Shoebox Browser
9. Kodak Picture Placer
10. Adobe Photoshop, PageMaker, Premier (Tryout Editions)

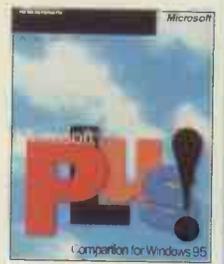
CONDITIONS 1. Free 10 pack CD bundle must be requested with order 2. Only one free 10 pack software bundle per order 3. Offer valid while stocks last 4. Promotional packaging

### Microsoft PLUS!

Add even more space & Style to Windows 95

Microsoft Plus! makes your computer self-maintaining & customisable. Choose from 11 colourful themes (Science, The 60's, Leonardo Da Vinci, Windows 95, Dangerous Creatures, Sports, Modern, Inside your Computer, Mystery, Nature, & Travel, each with new fonts, photo realistic icons, backgrounds, cursors, sounds & screen savers. A new enhanced version of DriveSpace gives you outstanding data compression whether you have a 486 or a Pentium computer. As an added bonus, you get fast easy access to browse, e-mail & fax in the Internet.

£29 (3.5") £29 (CD-ROM)



## Microsoft Windows 95 Upgrade (Requires WINDOWS 3.1) 3.5"..... £59 CD-ROM.....£59

£55 when purchased with any other Package (minimum value £25).

## Microsoft Windows 95 Full Version (Requires DOS) 3.5".... £112

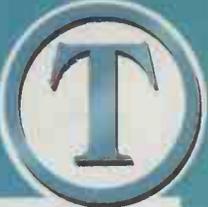
You may receive direct mail promotions from other companies unless you advise us by writing to the address above or by phoning 0181-358 8100. Our standard terms and conditions of sale apply (available on request).



**EXCLUSIVE OFFER!**  
**FREE 10 PACK BUNDLE CD**  
**WITH EVERY WINDOWS 95**



**SALES 0181-205 9558**  
**FAX 0181-205 0190**  
**ADMIN 0181-358 8100**  
**PRICES EXCLUDE VAT @ 17.5%**



# Microsoft Office for Windows 95

## NEW! 32-bit Windows 95 Technology

**YOU GET ALL THIS WITH THE STANDARD VERSION**

**UPGRADE AS LOW AS £139**



Microsoft

### MICROSOFT WORD FOR WINDOWS 95

Everyday tasks are automatic and complex tasks are made easier by use of Windows 95's exclusive 32-bit technology. Word offers IntelliSense Innovations, such as AutoCorrect, which automatically corrects misspelled words and typos. Also write and send formatted e-mail within Word using the WordMail editor.

Full Version £225 Competitive Upgrade £107  
 Upgrade £82 1-Licence £195



No matter which version of Microsoft Office for Windows 95 you select - Microsoft Office Standard or Professional - you get full-featured programs that work together like one. With long file names of up to 250 characters, more intuitive control buttons, and time- and drudgery-saving desktop shortcuts, Microsoft Office takes full advantage of the new Windows 95 32-bit technology.

#### Computing for the Next Generation!

Microsoft Office gives you next generation integrated tools, easy access to their full power, and freedom to focus on your job. Use OfficeLinks to make the most of your data by just dragging text, numbers, and graphics from program to program. The New Office Binder features groups files automatically, so you can use them as one single file with one file name. This technology has established Microsoft Office as the leader in its category for years. And, with Windows 95, this excellence can only continue ... for years to come!

### MICROSOFT EXCEL FOR WINDOWS 95

The pinnacle of data access and analysis is Microsoft Excel for Windows 95. Format and use spreadsheets easily with AutoFormat subtotal, and more. Recalculates up to 50 percent faster than before, using 32-bit power. Automatically exchanges data with Microsoft Access using the PivotTable Wizard.

Full Version £225 Competitive Upgrade £107  
 Upgrade £82 1-Licence £195



## 8 GREAT REASONS TO UPGRADE

- New Interface Consistent with Windows 95**  
Take full advantage of drag-and-drop capability, even between applications, documents, and files! Seamless networking between users and all the Microsoft Office 95 components.
- Long Filenames!**  
Break free of the Dos filenames restrictions! Now use file names up to 250 characters to quickly recall a file's contents.
- Now includes Microsoft Schedule+!**  
Perform scheduling and appointment functions by using simple drag-and-drop methods. Attach documents to meeting requests with a click! Manage group meetings easier.
- Completely 32-bit!**  
All of the programs in Office take full advantage of Windows 95 32-bit technology. You'll work faster and easier!
- Enhanced IntelliSense Technology!**  
IntelliSense completes routine tasks for you and make complex jobs simple. It learns your style as you work!
- Full OLE 2.0 Support Throughout Office!**  
Object Linking and Embedding (OLE 2.0) automatically updates all related files which are affected by your change.
- New Office Binder Organises Files From Different Applications!**  
Make the most of your data by filing it automatically in one single file name. Office Binder keeps track and does all the work for you!
- Improved OfficeLinks Speeds You Through Your Project!**  
Make the most of your data by just dragging text, numbers and graphics from program to program. OfficeLinks makes all of the Microsoft Office for Windows 95 components work as one file.

### MICROSOFT POWERPOINT FOR WINDOWS 95

Whether you're presenting to a small team or to a large audience, Microsoft PowerPoint makes it easy to communicate your ideas easily to get the results you want in any situation. You can create great-looking output for any situation, from 35mm slides and colour overheads to black-and-white paper outputs. AutoClip Art automatically adds great visuals to your presentations, and Presentation Conferencing lets you review presentations with your team via your network.

Full Version £225 Competitive Upgrade £107  
 Upgrade £82 1-Licence £195



### MICROSOFT OFFICE FOR WINDOWS 95

	INTRODUCTORY LOW PRICES ON UPGRADES	UPGRADE	COMPETITIVE UPGRADE	FULL VERSION
STANDARD 3.5" OR CD-ROM		£139	£163	£332
PROFESSIONAL 3.5" OR CD-ROM		£204	£245	£429

CALL FOR GREAT VALUE LICENCE OPTIONS

### MICROSOFT SCHEDULE+ FOR WINDOWS 95

Microsoft Schedule+ for Windows 95 is the easy, flexible way for individuals and networked groups to manage and share calendars, tasks, and contacts for better personal and team productivity. Schedule and view appointments quickly, stay current with associates, and keep on top of tasks all the time. Attach documents to meeting requests, and reschedule appointments easily by dragging and dropping them to other slots. Schedule+ provides all of the above and so much more!

Full Version £79  
 1-Licence £69



### MICROSOFT ACCESS FOR WINDOWS 95

Choose or create one relational database for all levels of users. Wizards guide beginners through complex tasks, and enhanced OLE allows more advanced users to easily integrate and share information. Access provides the user with the luxury of pulling data from any of the Microsoft Office products. A resourceful and wonderful tool in business situations.

Full Version £225 Competitive Upgrade £107  
 Upgrade £82 1-Licence £195



To run Office 95 (Standard or Professional) you need: MS Windows 95 or Windows NT 3.51, 386DX or Higher PC, 8MB memory for Windows 95, 16MB memory for Windows NT. Call us for memory upgrades.



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Hewlett-Packard

## HEWLETT-PACKARD - THE FINEST PRINTERS

### HP DESKJET 600

**NEW**



#### FANTASTIC PRICE

- 600 dpi<sup>2</sup> plus HP REt
- NEW Colour Option
- 3 year RT-HP warranty
- NEW INKS - Sharper, denser print

**£185**

**TAKE COVER**  
Buy HP Support Pack  
**£40**

### HP LASERJET 5L

**NEW**



#### BETTER SPEC, LOWER PRICE

- 600x600 dpi<sup>2</sup> plus HP REt
- 4ppm, fast first page (20 sec)
- 1MB RAM with HP MEt
- NEW space saving design

**£352**

**TAKE COVER**  
Buy HP Support Pack  
**£105**

### HP DESKJET 850c



**PC MAGAZINE EDITORS CHOICE**

- Excellent Quality Colour
- 6ppm Black & 2ppm (Colour)
- HP REt & HP C-REt
- 600 dpi<sup>2</sup> Black & 300 dpi<sup>2</sup> Colour
- PC & Mac i/f std
- New inks - sharper, denser print

**£331**

**TAKE COVER**  
Buy HP Support Pack  
**£65**

### HP LASERJET 5Si

**NEW**



- 24ppm, A4, A3, Legal and Letter
- 600 dpi<sup>2</sup> plus HP REt, 4MB RAM
- Copier-like paper handling options
- High capacity & connectivity options
- MX model available
- 1 year OSM warranty
- Duplex option
- 2000 sheet feeder
- Output Mailbox

**£375**  
**£735**  
**£1078**

**A3**

**HP LaserJet 5SiMX (PC,NW) £2965**

### HP LASERJET 4Plus



**£979**  
PERFECT OFFICE PRINTER

**A4**

12ppm, 600 dpi<sup>2</sup> plus HP REt, 2MB RAM, two trays, PCL5e, M version has PostScript, N/W and Mac capability  
**HP LaserJet 4MPlus (PC,NW,Mac) £1295**

### HP DESKJET 660C



**£243**

**GREAT PRICES**

Looking Good, DJ!

### HP LASERJET 5MP



**£725**

**GREAT POSTSCRIPT PRINTER**

6ppm, 600dpi plus HP Ret, 3MB RAM plus Adobe Memory Booster, Adobe PostScript Level 2, PC, Mac & IrDA i/f.  
**HP LaserJet 5P (PC only) £579**

### HP DESKJET 340

**NEW**



**£172**

PROFESSIONAL PORTABLE PRINTER

**ColorSmart**

600x300 dpi<sup>2</sup> plus HP REt, 300x300 dpi colour (opt), Very portable shape, 2kg, Battery, case & Recharger options. Integrated 30 sheet feeder. Colour Kit £31

Infrared Adapter (IrDA) £32 Mac Adapter cable £19

### HP DESKJET 1600C



**£829**

FAST COLOUR NETWORK CAPABLE

**ColorSmart**

Black (8ppm) & Colour (4ppm), high capacity

**HP DeskJet 1600CM (PC,NW,Mac) £1219**

### HP LASERJET 4V



**£1365**

16ppm, 600dpi<sup>2</sup> plus HP REt, 2 trays, PCL5e

**A3**

**HP LaserJet 4MV (PC,Mac,NW) £1975**

### HP SUPPORTPACK

**3 yr On-site Maintenance with next day response**

**HP ENGINEERS NO FUSS, NO FURTHER EXPENSE PLEASE ASK ABOUT BUNDLE OFFERS**

**TAKE COVER**  
Buy HP Support Pack

### HP ACCESSORIES AND MEDIA

#### Network Connectivity

HP JetDirect MIO Internal J2552A - Combo Ethernet & LocalTalk **£289**

HP JetDirect EX external J2382B **£249**

HP JetDirect EX Plus 3 J2593A (3 ports) **£299**

#### Adobe PostScript Level 2

PostScript Level 2 for HP LJ4P **£190**

PostScript Level 2 for HP LJ4Plus **£229**

PostScript Level 2 for HP LJ4V **£325**

PostScript Level 2 for HP LJ4Si **£425**

PostScript Level 2 + 1MB RAM for HP LJ5P **£225**

PostScript Upgrade kit for HP DJ1600C **£399**

#### High Quality Media

HP Premium InkJet Paper - A4, 200 shts 51634Z **£16**

HP Premium Glossy Paper - A4, 50 shts C3837A **£43**

HP Premium Transparency - A4, 50 shts C3835A **£40**

HP JetSeries CX coated - A4, 200 shts 51630Z **£16**

HP LaserJet Labels - various from **£13**

HP DeskJet Labels - various from **£23**

#### Paper Handling

Duplex unit HP LJ4Plus **£289**

Duplex unit HP LJ4SiMX **£249**

A5 Paper Feeder - HP LJ4L **£299**

A5 Paper Feeder - HP LJ4Si **£75**

1000 sht output stacker - HP LJ4Plus **£219**

2000 sht output stacker - HP LJ4Si **£845**

500 sht Lower Paper Cassette - HP LJ4Plus **£190**

1500 sht Hi Capacity Feeder - HP LJ4Si **£319**

#### Flash SIMM Kit

1MB for HP LJ4/LJ4Plus/LJ4Si **£250**

2MB for HP LJ4/LJ4Plus/LJ4Si **£325**

**DUPLEX NEEDS EXTRA RAM**

**£345**

**£375**

**£59**

**£75**

**£219**

**£845**

**£190**

**£319**

**POSTSCRIPT REQUIRES EXTRA MEMORY**

**SEE PAGE 14 FOR COMPREHENSIVE LIST OF ORIGINAL HP MEMORIES**

# No 1 for HP



**SALES** 0181-205 9558  
**FAX** 0181-205 0190  
**ADMIN** 0181-358 8100  
**PRICES EXCLUDE VAT @ 17.5%**



Hewlett-Packard

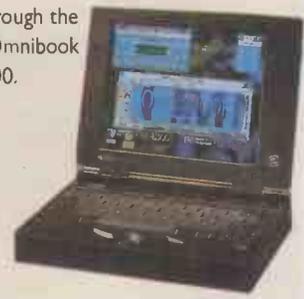
## MOBILE PCs



- ★ Lightest - 3.3-3.8lbs
- ★ Full size keyboard
- ★ 8.5" DSTN or 9.5" TFT screen
- ★ 486DX2-50 or 486DX4-75 CPU

HP have a mobile PC to suit every need; through the world's lightest colour notebook, the HP Omnibook 600, to the class leading HP Omnibook 5000.

- ★ Intel Pentium™-90, 2.9v
- ★ PCI architecture with 256kb cache
- ★ 10.4" VGA or SVGA-TFT
- ★ Instant ON, Lithium ION Battery, up to 3hr life



<b>Model</b>	<b>Price</b>
HP Omnibook 600	range starts from just <b>£1299(a)</b>
HP Omnibook 4000	range starts from just <b>£1425(a)</b>
HP Omnibook 5000	range starts from just <b>£3685(a)</b>

**PRICES CUT**

## PERFORMANCE PCs



- ★ Intel Pentium™ Processor : 75, 90, 100 or 120MHz
- ★ PCI architecture with local bus IDE & video, min. 8MB RAM
- ★ MS Windows for WorkGroups 3.11

**VE**: 270MB or 540MB HD, **VL**: 420MB or 840MB HD, ISA slots, fast IDE on LB **VL** PCI/ISA slots, Enh. IDE on LB

<b>Model</b>	<b>Price</b>
HP Vectra VE P/75 from just	<b>£975(a)</b>
HP Vectra VL P/75 from just	<b>£1075(a)</b>
HP Vectra VL P/90 from just	<b>£1150(a)</b>
HP Vectra VL P/120 from just	<b>£1475(a)</b>

**PRICES CUT**

**TAKE COVER**  
Buy HP Support Pack  
**£125**

## FLATBED SCANNERS

### HP ScanJet 4s

- ★ Easy to move around/uses serial port
- ★ Very compact yet A4 capable
- ★ Excellent software capabilities



**£245** **NEW**

### HP ScanJet 4C

- ★ Hi-performance colour A4 flat-bed
- ★ Improved integration with office apps
- ★ Strong software suite



**£629**

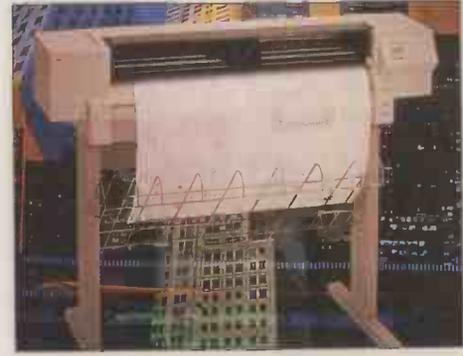
### HP ScanJet 4Si

- ★ Fast 15ppm, 300dpi, 256 gray-scales
- ★ Auto OCR & file compression
- ★ High reliability 20 sheet ADF built-in
- ★ Network i/f & 20 user licence for software
- ★ Easy to use - NetWare 3.1 and 4.0 support



**£1695**

## PERFORMANCE PLOTTERS



- No Pens
- No Mess
- No Fuss

**FANTASTIC NEW MODELS AT LOWER PRICES**

**Sharper, faster every time**

<b>Model</b>	<b>AI</b>	<b>A0</b>
HP DesignJet 230	Mono - Single feed	<b>£1485(a) £1999(a)</b>
HP DesignJet 250c	Colour - Single feed	<b>£1845(a) £2489(a)</b>
HP DesignJet 750c	Colour - Roll feed	<b>£3669(a) £4395(a)</b>
HP DesignJet 755cm	Colour - Roll feed - Printer	<b>£6650(a)</b>

Brilliant, near photographic large format printer. In-house production made easy. Less £10/print on coated media. Postscript Level 2, 68MB RAM, sample roll, light-fast inks.

## HP OFFICEJET LX

Best selling all-in-one solution for the small business and the home.

- ◆ High quality printer
- ◆ Group 3, Paper + PC Fax
- ◆ Complete with Fax s/w
- ◆ Convenience copier

**1 YR EXPRESS WARRANTY**

**FAX COPY SCAN PRINT**



**£475**

## PERSONAL BACKUP



	Jumbo	Trakker	Travan
	350	1400	350 700 T1000
Form Factor	5.25"	5.25" Ext	Ext 3.5"
Software	✓	✓	✓ ✓
QIC-40	R/O	R/O	R/O
QIC-80/XL	R/W	R/O	R/O R/W
QIC-3010			R/W
QIC-3020		R/W	
QIC-Travan			R/W
Max.Cap (Comp)	340	1.3GB 340	680 800
Warranty	1yr	2yr 1yr	2yr 2yr
Price	<b>£72</b>	<b>£179</b>	<b>£142 £195 £108</b>

### The Tapes(b)

Colorado 3-pk	<b>BEST SELLING</b>	<b>NEW MODEL CALL</b>
DT-350 fme'd £52		
DT-740 fme'd £66	3M	each 5-pk
DT-1000fme'd £85	DC2120XL	unfme'd £14 £66
DT-1400fme'd £70	MC3000XL	unfme'd £21 £100

**The Software** - Colorado Backup for Windows  
 Every current HP Colorado & HP Surestore drive ships with this easy to use yet powerful back up application. It supports QIC and DDS formats and most popular PC networks.

- Automation capability
- Runs in background
- Data Compression
- Library facility

**TRAVAN** The next generation QIC format, retaining backward compatibility and providing forward path up to 4GB. Developed by 3M, Travan offers 3.5" low profile form.



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Hewlett-Packard

## PERFORMANCE WITH RELIABILITY - HP OFFERS IT ALL

### FILESERVERS



Fileserver computers are the heart of today's networks. As with any critical equipment, they should be very reliable, from a strong company with expertise in design and manufacturing and, perhaps most crucially, be supported by outstanding warranty and repair terms.

#### HP NetServer LF

Intel 486DX2 & Pentium Processors (Single). PCI/EISA and SCSI-2 interface. High internal storage capacity. Drive array (RAID) options with HOT-SWAP.

#### HP NetServer LH

Intel Pentium Processors (Single). PCI architecture and Fast-SCSI-2 interface. ECC memory expandable to 192MB RAM. HOT-SWAP READY - 6 bays (up to 24GB)

#### HP NetServer LS

Intel Pentium Multi-processor (Scaleable). PCI architecture and Fast + Wide - SCSI-2 interface. 32MB ECC RAM exp to 768MB. HOT-SWAP Bays for Fast-Wide SCSI-2 drives.

	CPU	RAM	HD	Price
HP Netserver LF	4-66	8	1GB,CD	£2049(2a)
HP Netserver LH	5-75	16	1GB,CD	£4095(2a)
HP Netserver LH	5-100	32	Chassis,CD	£5995(2a)
HP Netserver LS	5-100	32	2GB,CD	£6825(2a)
HP Netserver LS	5-100*2	64MB	Chassis,CD	£11,000(3a)

### HIGH CAPACITY BACKUP WORLD LEADER IN DAT BACKUP



PROTECT YOUR



HEWLETT PACKARD

### INFORMATION

#### IT'S YOUR BUSINESS

DAT technology offers one of the fastest means of safely backing up large amounts of data. Native capacities up to 8GB, autoloader mechanisms and scheduling software makes it fuss-free  
★2GB up to 48GB  
★Stand-alone or networked

### - WHY TAKE A CHANCE??

### BACK IT UP

Model	Ext	Int
HP SureStore 2000 2GB (DDS)	£670	£587
HP SureStore 5000 4GB (DDS)	£773	£679
HP SureStore 6000 8GB (DDS-2)	£899	£799
HP SureStore 12000e LABS for NetWare	£2965	
External, 6 tape autoloader solution for unattended Back-up		

HEWLETT PACKARD  
**TAKE COVER**  
Buy HP Support Pack  
**£285**

HP SNMP Ethernet (TP) Interface £345(a)  
**TRUE ON-LINE BEST VALUE**

### SHAPE DATA SECURE DATA SHARE DATA - SUCCEED with HP

Storage & Packing for 48GB mainframe (a) £8 (b) £6 (c) £4 (d) £3 (e) £2 (f) £1. All prices exclude carriage & VAT. All prices & specifications subject to change without notice. Our standard terms and conditions of sale apply to all sales (available on request). Returned goods may be liable to a restocking charge.

### NETWORKING

#### HP Networking - Affordable Pricing

Instrumental in establishing the 10Base-T ethernet standard, HP has now paved the way for the next standard, using 100VG-AnyLAN - offering a 10-fold increase in bandwidth using existing 10Base-T twisted pair cabling.



In the field of management, HP has strong integration in products such as the AdvanceStack

range, HP OpenView management application with SNMP protocol support and the Desktop Management Initiative.

From connecting PCs and printers using Infra-red to connecting remote sites,

**HP has it all - at affordable pricing.**

#### PC Adapter Cards

PC LAN Adapter NC/16 TP (ISA)	£59
PC LAN Adapter/16 TP Plus (ISA)	£67
HP 10/100VG Adapter (ISA)	£97
HP 10/100VG Adapter (EISA)	£147
HP 10/100VG Adapter (PCI)	£130

#### Intelligent Hubs

HP AdvanceStack 100VG Hub15	£1750
HP AdvanceStack 100VG SNMP - Bridge Module	£825
HP AdvanceStack Hub 8U (RJ45)	£129
HP AdvanceStack Hub 16U (RJ45)	£249
HP AdvanceStack Hub 24	£780
HP AdvanceStack SNMP module	£370
HP AdvanceStack Dial-A-Lan 4A module	£1,330

Technomatic is a Premier Hewlett-Packard partner & able to supply all PC products. Please call with your requirements.

HEWLETT PACKARD  
Premier Reseller  
Personal Computer  
Products

### HP POWERWISE UPS



- High Quality UPS
- Excellent Comms Capability
- Outstanding Monitoring Management s/w
- 2 year Exchange warranty

### INTELLIGENT, TRUE ON-LINE UNINTERRUPTIBLE POWER SUPPLIES

#### RELIABILITY

The UPS constantly monitors the power supply, its own components and the batteries. Batteries can be swapped without system shutdown. Uptime can be extended simply by adding up to 5 extra battery packs.

#### COMMUNICATION

The UPS has a direct serial link to the server and an optional SNMP ethernet interface for continuous network connectivity. Power Management s/w allows complete monitoring, logging and alerting.

HP Powerwise 1000VA UPS	£495(a)
Additional Battery Pack	£199(a)
HP Powerwise 2100VA UPS	£899(2a)
Additional Battery Pack	£285(a)

**TECHNOMATIC IS AN  
AUTHORISED DEALER FOR  
COMPAQ, IBM & TOSHIBA**



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



**PROLINEA**



The Prolinea is Compaq's best-selling desktop computer. It offers value for money and a broad range of specifications:- Intel processors, PCI architecture with LB for Video and dual IDE disk interface, 8MB or 16MB

RAM as standard, a choice of case sizes to allow for future expansion capacity and a three year warranty with first year on-site cover.

**NEW LOWER PRICES**

CPU-HDD	RAM	Case	Price	CPU-HDD	RAM	Case	Price
4/66-270	8	3x3	<b>£815(a)</b>	5/75-420	8	4x4	<b>£1123(a)</b>
4/100-270	8	3x3	<b>£890(a)</b>	5/90-630	8	3x3	<b>£1215(a)</b>
4/100-420	8	3x3	<b>£930(a)</b>	5/90-720	16	4x4	<b>£1499(a)</b>
5/75-270	8	3x3	<b>£1040(a)</b>	5/120-1GB	16	4x4	<b>£1915(a)</b>

**PROSIGNIA SERVERS**



**FROM £2083**



**MONITORS**

14" SVGA	£209(a)	17" 171FS	£569(a)
14" 1024	£250(a)	17" QV172	£850(a)
15" 151FS	£349(a)	20" QV200	£1570(2a)

**ON-SITE WARRANTY**

3yr OSM	486 Desktops	£200
3yr OSM	Pentium Desktops	£300
3yr OSM	Mono Notebooks	£200
3yr OSM	Colour Notebooks	£300

**MONITORS ARE SOLD SEPARATELY**

**COMPAQ**

**CONTURA NOTEBOOKS**

The Compaq Contura range of notebooks offer excellent pricing, high level of specification (inc. DOS, Windows & Lotus Organizer) and 3 year warranty. Contura Aero offers sub-notebook portability, ext. 3.5" FDD and PCMCIA slot; Contura 420/430 offer 486DX4 power; larger colour screens, comfortable ergonomics with built-in trackerball and PCMCIA slots.



Model	CPU	RAM	HD	Screen	Price	Model	CPU	RAM	HD	Screen	Price
Aero	4/25	4	250	8" Mono	<b>£745(a)</b>	420CX	4/75	8	420	10.4" TFTcol	<b>£1999(a)</b>
Aero	4/33	4	250	7.8" STNcol	<b>£1050(a)</b>	430C	4/100	8	720	10.4" DScol	<b>£1999(a)</b>
420C	4/75	4	350	10.4" DScol	<b>£1480(a)</b>	430CX	4/100	8	720	10.4" TFTcol	<b>£2445(a)</b>
420C	4/75	8	420	10.4" DScol	<b>£1655(a)</b>						

**NO 1 IN NOTEBOOKS**

**T2110**

- 486DX4-75 CPU
- 4MB RAM, 350MB HD
- 9.5" Mono Screen



**ONLY £839(a)**

**Portégé 610CT**

- Intel Pentium CPU
- 8MB EDO RAM, 700MB HD
- 9.5" TFTcol Screen



**ONLY £2999(a)**

**THE SMARTEST NOTEBOOKS**



**ThinkPAD**

**NEW MODELS**

TP345  
BUDGET QUALITY  
TP760C  
SIMPLY THE BEST

All IBM Notebooks have PCMCIA slots to allow convenient connection of peripherals



Model	CPU	RAM	Screen	HD	Price
TP345Cs	4/75	4	10.4" Dsc	540	<b>£1385(a)</b>
TP345C	4/75	4	10.4" TFT	540	<b>£1750(a)</b>
TP755CX	5/75	8	10.4" TFT	540	<b>£2999(2a)</b>
TP755CX	5/75	8	10.4" SVGA	1.2GB	<b>£4600(2a)</b>
TP755CD	5/75	8	10.4" TFT	810,CD	<b>£4085(2a)</b>
TP755CD	5/75	8	10.4" TFT	1.2GB,CD	<b>£4365(2a)</b>
TP755CDV	5/75	8	10.4" OHP	810,CD	<b>£4999(2a)</b>
TP760-COI	5/90	8	10.4" SVGA	720	<b>£3999(2a)</b>
TP760-CDI	5/90	8	12.1" SVGA	1.2GB,CD	<b>£5240(2a)</b>



**IT'S HOT TECHNOLOGY**

IT SINGS

**IT'S WHATEVER YOU WANT**

IT SHOUTS

**IT'S CRYSTAL CLEAR**

**VALUE**

**APTIVA**



Complete system computer, monitor, software, keyboard, mouse and support



The all new Aptiva range offers even better value for money:- great hardware specifications, excellent bundled software and the award winning support service, HelpWare. A great buy for the office and the home.

- PC-DOS, Windows 3.11, MS Works 3.0
- Lotus SmartSuite 4 on 914 & higher models
- Multi-media models:- Quad CD-ROM, 16-bit Sound card, Speakers, 8 s/w titles
- Rapid Resume and Scheduler functions



APTIVA 910	APTIVA 911	APTIVA 914	APTIVA 921	APTIVA 930	APTIVA 931	APTIVA 941
4/66,4,540,14" STANDARD	4/66,4,540,14" MULTI-MEDIA	4/66,8,540,14" MULTI-MEDIA	4/100,8,540,14" MULTI-MEDIA	P/75,8,540,14" STANOARD	P/75,8,540,14" MULTI-MEDIA	P/100,8,850,15" MULTI-MEDIA
<b>£775(ab)</b>	<b>£849(ab)</b>	<b>£929(ab)</b>	<b>£999(ab)</b>	<b>£1059(ab)</b>	<b>£1299(ab)</b>	<b>£1629(ab)</b>
DESKTOP	DESKTOP	DESKTOP	DESKTOP	DESKTOP	TOWER	DESKTOP

Compaq • Toshiba • IBM



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Taxan

## TAXAN PERFECTING THE IMAGE

### ERGOVISION 580+LR



£285

- ◆ 15" FST Multiscanning Monitor
- ◆ Up to 1280 x 1024 Non-interlaced
- ◆ Horizontal Freq 30-65KHz
- ◆ 0.28mm Dot Pitch

### ERGOVISION 880LR



£515

- ◆ 17" FST Multiscanning Monitor
- ◆ Up to 1280 x 1024 Non-interlaced
- ◆ Horizontal Freq 30-64KHz
- ◆ 0.28mm Dot Pitch

### ERGOVISION 885LR



£589

- ◆ 17" FST Multiscanning Monitor
- ◆ Up to 1600 x 1200 Non-interlaced
- ◆ Horizontal Freq 30-82KHz
- ◆ 0.28mm Dot Pitch

### ERGOVISION 1080LR



£879

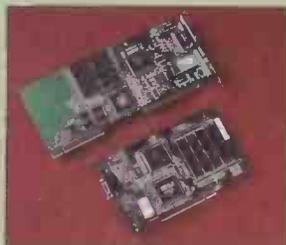
- ◆ 20" Auto-scanning, low radiation, ultra high resolution
- ◆ Up to 1600 x 1200 Non-interlaced
- ◆ Horizontal Freq 30-82KHz
- ◆ 0.26mm Dot Pitch

### COMMON FEATURES FOR ABOVE MONITORS

- ◆ Microprocessor Control
- ◆ Low Radiation & Anti-Static CRT (MPR2)
- ◆ Flicker Free Operation
- ◆ 2 year RTB warranty
- ◆ Windows 95 compatible
- ◆ EPA ENERGY STAR Compliant
- ◆ VESA DPMS Compatible

### GTS WINTURBO (a)

GTS WINTURBO  
POWERED BY



- ◆ Super Fast 64 Bit Windows Accelerator
- ◆ Powered by ATi Mach 64 Processor
- ◆ VESA DPMS Compatible
- ◆ 2MB & 4MB VRAM Versions Available
- ◆ Up to 1280 x 1024 Resolution
- ◆ Up to 100Hz Refresh Rate
- ◆ On-Screen Colour Calibration

2MB ISA	£194	VLB	£195	PCI	£196
GTS WinTurbo Plus					
4MB ISA	£338	VLB	£339	PCI	£340

A  
CULTURE  
OF  
SERVICE



PCMCIA  
ME3000II-2  
BNC/TP  
ETHERNET  
ADAPTER £79(a)

### ETHERNET POCKET LAN ADAPTER E3000II

- ◆ Superior performance using EPP mode
- ◆ Allows printing and networking together
- ◆ Dual media with AutoDirect

£59(a)



BNC & TP  
CONNECTORS

### ETHERNET COMBO ADAPTER GE2000D

PRICES  
REDUCED

- ◆ Power from mains or PS/2 mouse port
- ◆ Supports switchless hardware configuration
- ◆ Drivers for: ODI for Netware, NDIS 2.0 & 3.0 for Lan Manager & WFWG, Packet for TCP/IP
- ◆ Diagnostic using s/w & LED
- ◆ Power cable & mains PSU included



- ◆ Fully Novell NE2000 compatible
- ◆ Drivers for: IPX & ODI for Netware Windows for Workgroups NDIS for Lan Manager Packet for TCP/IP
- ◆ BNC & RJ45 connectors
- ◆ Jumper & Jumperless
- ◆ Auto-Setup hardware using software
- ◆ Auto-Detect media type
- ◆ Auto-Detect 8 bit or 16 bit Bus
- ◆ Includes diagnostic software
- ◆ Up to 35% performance improvement

£28(b)  
5 PACK £125(a)

**UNRIVALLED 24 YEARS  
OF EXPERIENCE**  
Part of MicroWarehouse Group



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



**Us Robotics: Number 1 FOR HIGH SPEED MODEMS (Dataquest 94)**

**Sportster**



**28.8 SPORTSTER  
NOW INTERNET  
READY + INCLUDES  
MODEM CABLE**

- Sportster Range (a)
- 28.8 + Fax Desktop (Ext) £155
- 28.8 + Fax PC Card (Int) £156
- 14.4 + Fax Desktop (Ext) £105
- 14.4 + Fax PC Card (Int) £106
- 28.8 + Fax Mac & Fax £165
- 14.4 + Fax Mac & Fax £109
- PC/AT Modem Cable 9/25 £8

**14.4 + FAX DESKTOP**

**£105** **LOW PRICE**

**28.8 + FAX DESKTOP**

**£155** **INTERNET SPECIAL**

**Us Robotics**  
AUTHORISED RESELLER

**5 year  
WARRANTY**

MODEL	SPEED					ERROR CORR.	DATA COMP.	FAX	ASYNCHRONOUS	SYNCHRONOUS	DIAL UP	LEASE LINE	FORMAT					
	28800 (V34)	19200 (V32 terbo)	14400 (V32bis)	9600 (V32)	2400 (V22bis)								1200 (V22)	300 (V21)	V42	MNP 2-4	V42bis	MNP 5
SPORTSTER 28.8 + FAX	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SPORTSTER 14.4 + FAX			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
COURIER V34	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WORLDPORT 28.8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WORLDPORT HST DUAL STD CELLULAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**AMAZING VALUE BUNDLE**

Sportster 14.4 Fax Modem + Panasonic CD-ROM Drive + IBM OS/2 32 bit operating system (CD) + Internet s/w + Internet Connection + IBM 32bit wordprocessor + IBM 32 bit spreadsheet + IBM Faxworks + CompuServe Information Manager + Modem Cable + CD-ROM Interface + Cable **£199** Carr £12

**WORLDPORT**



**WORLDPORT MOBILE RANGE(a)**

PCMCIA Dual Standard (28.8 + HST + Fax) £161

Pocket Dual Standard (14.4 + HST + Fax) £129

**USR HIGH SPEED DUAL SERIAL PORT**  
Essential for all windows users faster than 9,600. 2 yr warranty **£49 (a)\***

\*While stocks last, free S/W must be requested at time of purchase

**Courier**



**LIMITED  
OFFER SPECIAL  
COMMS  
BUNDLE**

**FROM  
£238**

**COURIER PROFESSIONAL RANGE(a)**

V34 + Fax Desktop Bundle (USR/MD/E250) £279\*

inc FREE USR High speed Dual Serial Port

FREE 25/9 Modem Cable

FREE Datatalk 4 DOS (Full Version) DS Fax (Win)

FREE Quilink II Fax & Coms s/w

V34 + Fax Desktop Modem only **£238**

V34 + Fax PC Card modem **£239**

**Us Robotics**

The Intelligent Choice  
in Data Communications

**FREE  
DIRECT  
TECHNICAL  
SUPPORT  
5 YEAR  
WARRANTY**

APPROVED for Connection to telecommunication systems specified in the instruction for use subject to the Conditions set out in them.

**Seagate Hard Drives**

**CALL FOR NEW 2.5" MODELS**

**FROM  
£115**

High Performance Drivers for Servers



**Hawk™ Family**

- Fast SCSI-2 Interface
- 5,400 RPM Spindle Speed Performance
- Average Seek Time of 9.75MS
- External Transfer Rate of 10MB/Sec.

**5  
Year  
Warranty**

Fast ATA Interface

**Medalist™ Family**



- Transfer rates up to 16.6MB/sec
- Master/Slave Capability
- Backward compatible with standard IDE

**3  
Year  
Warranty**



Item #	Capacity (MB)	Form	Cables	MTBF	Price
ST31230N	1,050	LP	512	800K	295
ST32430N	2,147	LP	512	800K	475
ST15230N	4,294	HH	512	800K	765

Item #	Capacity (MB)	Cables/Drives (MB)	Avg. Seek Time (ms)	MTBF (hrs)	Price
ST3660A	545	120	14	300K	115
ST5180A	1080	256	10.5	300K	169
ST31270A	1282	256	12	300K	199

**Seagate**

Government, Colleges, Schools, Hospitals, Local Councils, Large PLC etc, official orders welcome. Minimum credit card order value £20 (ex P&P & VAT). Goods are not sold on a trial basis. Please ensure the suitability of products with the manufacturer before ordering. All trademarks are acknowledged. Errors & omissions excepted.

Us Robotics

Seagate



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Hayes • Epson • NEC

Twice the speed of other 28.8 modems!

## Hayes Optima 288 Business Modem Voice/Data/FAX



Now you can support data throughput rates of up to 230,400 bit/s! Hayes AutoSync facilitates micro to mainframe communications, without the need for any additional hardware. Send and receive faxes plus FAX-On Demand, communicates by voice, and have tighter security support with Caller ID and password encryption. Configure your modem or access your quality message system's voice mail remotely. And Flash ROM upgrades make adding future enhancements to your modem fast, flexible and inexpensive. The Optima 288 Business Modem is the most practical modem for your business.

<b>Hayes Optima 288 Business Modem Voice/Data/FAX NEW</b> .....	£369
<b>Hayes Optima 288 V.34 + Fax EXT Fax/Modem DMD1367</b> .....	£324
<b>Hayes Optima 288 + ESPII 2-Modem Bundle EURMM0470</b> .....	£645
<b>Hayes Optima 288 PCMCIA Fax/Modem EURMM0644</b> .....	£199

Faster than you think!

## Hayes Optima 144 Business Modem Voice/Data/FAX



Get data throughput up to 115,200 bit/s and 8:1 data compression! Sending and receiving a fax is so quick and easy! You get three types of communication on a single phone line with Optima's voice, data, and fax capabilities. And there's no need for additional hardware adaptors - thanks to Asynchronous, Synchronous, and Hayes AutoSync data transfer modes. Fax back to client quickly with the new FAX-On-Demand feature. Use Caller ID to identify callers before you answer the phone. Now Hayes makes business communications even safer and easier!

<b>Hayes Optima 144 Business Modem Voice/Data/FAX NEW</b> .....	£275
<b>Hayes Optima 144 + Fax EXT Fax/Modem MM2190</b> .....	£240

Compatible with PCs, Macintosh and UNIX systems!

## Hayes Accura 288 Business Modem Voice/Data/FAX



Send and receive faxes at a 4:1 compression data throughput rate - up to 115,200 bit/s! Asynchronous data transfer support provides compatibility with PC, Macintosh, or UNIX systems. New features allow you to create and change multiple voice mailboxes, and communicate by voice, data, or fax. In conjunction with modem tone (DTMF) recognition, Hayes Smartcom Voice/Data/FAX software provides fast and automatic FAXes-On-Demand. And you can identify the number of an incoming call with Caller ID support. The Accura 288 Business Modem also comes with a serial cable.

<b>Hayes Accura 288 Business Modem Voice/Data/FAX NEW</b> .....	£199
<b>Hayes Accura 144 + Fax EXT Fax/Modem MM2840</b> .....	£99
<b>Hayes Accura 288 + Fax EXT Fax/Modem MM4783</b> .....	£173

Hayes ESP II at Single Port Serial I/F

EUREX0212 ..... £59

Hayes ESP II at Dual Port Serial I/F

EUREX0213 ..... £89

**Hayes**  
Authorised Dealer

## PHOTO-REAL PRINTING FROM EPSON



- ◆ Photo-Real 720dpi!
- ◆ 100 sheet feeder
- ◆ Small footprint
- ◆ 3 year warranty

INCREDIBLE IMAGES

£207

**Stylus Color IIs** - Dense black for high quality plain paper word-processing and photo-real colour for professional image reproduction. ◆ Interchangeable three colour/black print heads  
◆ 1ppm colour, 2.5ppm black ◆ Windows driver

£261

**Stylus Color II** - Four colour (CMYK) printer for those requiring frequent use of professional photo-real output.  
◆ Fixed colour and black print heads ◆ 2ppm colour, 4ppm black ◆ Windows & Mac drivers

£182

**Stylus 820** - Professional, dense black for high quality plain paper word processing. ◆ 2.5ppm black ◆ High density, low dispersal black ink ◆ Windows driver ◆ Optional colour kit

## NEC VALUE SERIES



AS LOW AS £279

- 15" and 17" diagonal flat square technology
- 13.8" and 15.6" viewable image size
- 0.28 dot pitch
- Max Res: 1280 x 1024 @ 60Hz
- Frequency: Horizontal: 31-65Khz  
Vertical: 55-100Khz
- Intelligent Power management system
- Ideal for entry level business, windows applications office, home education and entertainment

## IMAGES OF QUALITY

XV15 £279 XV17 £559

## DON'T FORGET SPARE CARTRIDGES

Canon	BJ-30	BJC-70	BJ-200ex	BJC-600c	BJC-4000
Black	£10	£9	£16	£10	£7
Colour	-	£14	-	£7*	£14

\*specify C/M/Y Cartridges

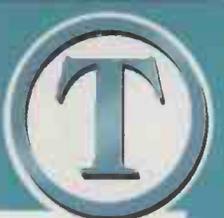


**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



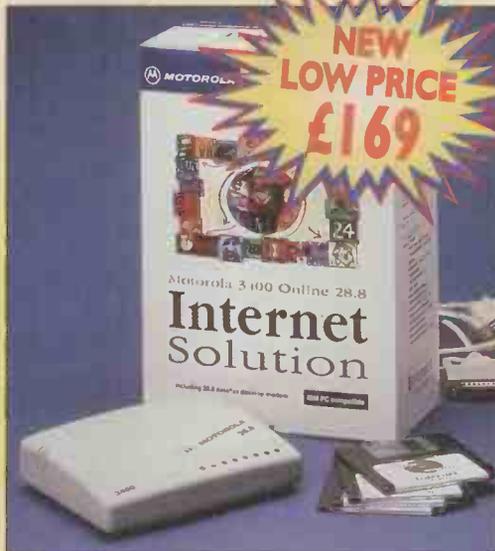
# THE 28.8 INTERNET SOLUTION

## 3400 PRO DESKTOP MODEM

- ◆ Data: V34 (28.8Kb/s) to V21 (300bps)
- ◆ Fax: 14.4Kb/s to 2.4Kb/s
- ◆ Compression: V42bis & MNP5
- ◆ Correction: V42 & MNP2-4
- ◆ Command Set: Hayes AT compatible

### Package includes:

- ◆ Modem
- ◆ Telephone & power cables
- ◆ IBM PC/AT compatible modem cable
- ◆ Windows fax and comms software
- ◆ Easy install disk & user software
- ◆ Motorola telephone support
- ◆ 2 Year Motorola warranty



**NEW LOW PRICE £169**

## 3400 ONLINE INTERNET SOLUTION

- ◆ 3400 PRO desktop modem (see left)
- ◆ Internet Software
  - Protocol software
  - File transfer software (FTP)
  - Worldwide web browser s/w
  - E-Mail s/w
  - Newsgroup s/w
- ◆ Internet phone software (Vocaltec)
  - Make cheaper international calls to other Vocaltec users
- ◆ Internet membership option for instant access

**3400 PRO DESKTOP MODEM £157**

**EVERYTHING YOU NEED TO CONNECT TO THE INTERNET**

**3400 ONLINE INTERNET SOLUTION £169**



APPROVED for Connection to telecommunication systems specified in the instruction for use subject to the Conditions set out in them.

**EASY INSTALL**  
INCLUDES ANIMATED INSTRUCTION DISK

# Canon INCREDIBLE BUBBLE-JET PRINTERS!

**BJC-4000 COLOUR**

**BJ-200EX MONO**

**ONLY £217!**

**£158! + FREE Avery Label Pro RRP £56**

**PRICES SLASHED**

### The brilliant choice for full-colour printing

- 720 x 360 dpi B&W on plain paper
- Colour text output at 360 x 360 dpi
- Five pages per minute
- 70 scaleable TrueType fonts - 7 resident bitmapped fonts

### Canon: The Complete Collection

BJ-30 portable monochrome printer	£139
BJC-70 portable colour printer	£219
BJC-600e colour printer	£321
BJC-800 A3 colour printer	£975
BJ-230 A3 Monochrome Bubble Jet Printer	£239
BJ-330 A3 Monochrome Bubble Jet Printer	£395

### The professional monochrome printer

- 720 x 360 dpi resolution
- 20 Truetype fonts included
- Laser-quality text and graphics
- Auto feeds 100 sheets, 50 transparencies or 13 envelopes
- Four pages per minute
- One year warranty
- Compact design



**DON'T FORGET SPARE CARTRIDGES**

MOTOROLA

Canon



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Conner • Psion • Avro • Kensington



**V34 + FAX  
£195**

"If you want a top of the line portable data communications solution, this product is the best you can get" - PC Magazine (January 1995)

Benefits of Psion Dacom Gold Card:

- ◆ Add fax to your notebook
- ◆ High-Speed file transfer
- ◆ Real remote LAN access
- ◆ Flash Upgrades available
- ◆ UK Market Leader
- ◆ Guaranteed compatibility
- ◆ Free lifetime technical support

**Gold Card V34 + Fax £195(a)**

- ◆ Ratified 28.8Kbps - The ultimate tool for intensive data transfer and remote LAN connectivity applications. Twice the speed of V32bis, up to 115.2Kbps.  
eg 200Kbyte file-15.6 second transfer time

**Gold Card V32bis + Fax £157(a)**

- ◆ 14.4Kbps - Europe's leading PCMCIA Data + Fax modem, ideal for medium usage communications, BBS access and fax applications



## CONNER TAPE•STORE

The Storage Answer DATA PROTECTION SYSTEMS

### TAPE•STOR 800 TRAVAN

- Simple & fast way to protect your data
- Up to 800MB (with compression)
- Up to 9.5Mb/minute backup rate
- Full QIC-80, Accutrak, Travan TR-1 QIC wide compatible
- Includes one Travan tape

Tape•Store 800 Internal £129  
Tape•Store 800 Parallel £209



### TAPE•STOR 4000 Up to 4Gb on one tape

- 2Gb native capacity, up to 4Gb with compression
- Up to 54Mb/minute backup rate with compression
- Transfer rate optimised with fast sense
- IDE & SCSI options
- QIC 3080 compatible
- Optional backup s/w for Netware available

4000 Internal IDE £379 4000 Internal SCSI £399 4000 External SCSI £469

### TAPE•STOR 420 Price Performance solution

- QIC-wide, QIC-80 & Irwin Acctrac 250 compatible
- One-inch high design
- Up to 420MB capacity with compression
- Up to 9.5MB/minute effective backup rate
- Floppy interface or parallel port

Tape•Stor 420 Internal £95  
Tape•Stor 420 Parallel £225

**CONNER**  
The Storage Answer

### Thinking Mouse (a)

Four programmable buttons!  
Spend less time clicking and more time working. With just one click you can double-click, drag, scroll, or highlight large blocks of text, add your signature, and save or print files. Other features include custom acceleration, pop-up menus for your favorite applications, "HotSpots" in each application. It looks better, it feels better, and — best of all — it works better! All Kensington Input devices come with a manufacturer's five-year warranty, toll-free technical support, and a no-risk, 90-day trial.

EURIN0900 Serial £49<sup>95</sup>  
EURIN0101 Bus £59<sup>95</sup>

### Expert Mouse 4.0 (b)

Next generation trackball  
Kensington's award-winning Expert Mouse® trackball brings you advances in trackball technology — Introducing the Brilliant Cursor™ and Slow Cursor commands — that give you smoother, superior cursor control. Windows-compatible software offers advanced acceleration, programmable mouse button commands, application sets, plus other user-programmable features. Includes the manufacturer's five-year warranty, a no-risk 90-day trial, and toll-free technical support. Microsoft compatible.

Serial, PS/2 IN3770 £69<sup>95</sup>  
Serial, PS/2 IN3780 £79<sup>95</sup>



**QUALITY MICE**

### The new standard! Kensington Mouse

The Kensington Mouse was designed to fit the hands of all shapes and sizes! It has oversized, easy-to-use buttons that help to make sure that smaller fingers don't have to reach when clicking, and large fingers never

have to curl their fingers to use it. Its symmetrical design makes the Kensington Mouse comfortable for both right and left handed users. It even comes with easy-to-use software that makes it simple for you to execute multi-step commands with a single click.

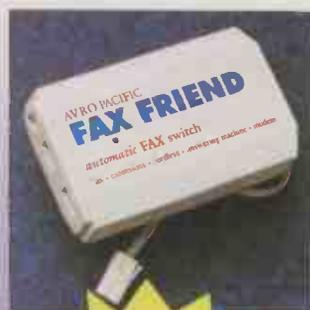
EURIN1330 Serial Mouse £34<sup>95</sup>  
EURIN1329 PS/2 Mouse £34<sup>95</sup>

### Automatic fax and data switch

### Fax Friend

Fax Friend is a user friendly device which allows you to connect a fax/modem, telephones (even cordless), and answering machines to a single telephone line. Plus, it provides remote control of your faxes or data from any telephone extension. Fax Friend, the UK's top selling fax switch, installs in minutes with no rewiring required — just plug into any existing telephone socket — and saving you the cost of installing a dedicated line for your fax or modem. Can be fitted into a single line or multi-line PBX system, with or without direct dial interface.

**£45**



**LOW LOW COST SOLUTIONS!**



### Turn your fax machine into a scanner

### Scanafax

Turn your fax machine into a scanner with Scanafax! This low-cost alternative to buying a scanner lets you use your fax machine's scanning mechanism as an input device for your Mac. It provides

quality 200 x 200 dpi resolution, full-page A4 scanning of multiple documents. Plus, it's simple to install — just plug your fax machine into one port and your modem into the other. If your communication software can handle a fax, it can handle Scanafax!

Scanafax + Winfax Lite

**£39**

## ESSENTIAL FOR MODEM USERS

High speed serial card 2 x 16550 serial ports, 1 x enhanced parallel port, 1 x game port **£29 (b)**

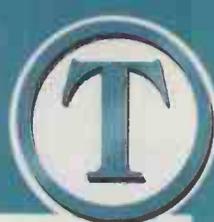


**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



# At Last .. A Multi-Tech Modem For The Home Office And Small Business

## Announcing the amazing value packed Multimodem 2834ZDX from Multi-Tech Systems.

**Superior Performance.** With blazing V34 data rates up to 28,800bps and fax speeds of 14,400bps, and with V42bis data compression data transfer rates of up to 115,200bps are achievable. Multi-Tech also gives you full backward compatibility to all ITU standards including V32bis (14,400bps) and the V32 terbo (19,200bps) standard.

**Fully Featured.** 10 LED indicators to monitor every aspect of your connection. Plus help screens, non-volatile memory and windows communications and fax software you need.

**Unmatched Warranty.** A 10-year warranty direct from Multi-Tech eliminates worry and makes the MultiModemZDX ideal for the home or small business.

**BABT Approved - And it's a Multi-Tech!**



APPROVED for Connection to telecommunication systems specified in the instruction for use subject to the Conditions set out in them.

**28,800bps (V34) £149**

**19,200bps (V32terbo) £105**



## PRICES REDUCED



**MULTI-TECH HIGH SPEED SERIAL PORT £49(b)**  
**PC/AT MODEM CABLE 9/25 £8**  
**FOR THE PROFESSIONAL COMMS USERS**

**MT2834 BLK DESKTOP NEW £345(a)**  
**FREE HIGH SPEED SERIAL PORT**

**MT1432 BLK DESKTOP £269(a)**

**MT1432 MK POCKET £345(a)**

**MT1432 LTI PCMCIA £175(a)**

Multi-Tech

## MicroSolutions backpack® PORTABLE SOLUTIONS

**PARALLEL PORT DEVICES:** Ideal for mobile user, convenient for desktop PCs, simple installation, just connect Backpack to your printer port and your printer to the Backpack. You don't lose print capability.

### backpack® TAPE DRIVES

- Industry Standard Formats
- Supports EPP & IEEE 1284 ports
- DOS & Windows Backup s/w included free
- Unattended backups • 2 yr manuf warranty
- Compact design and easily portable

Backpack TD 800MB Travan **£189(a)**

### backpack® CD-ROM DRIVES

- 250ms access time (4x) • Photo CD comp
- Quad speed (4x), up to 600KB/S transfer rate
- Audio sockets for headphones & line out
- MPC II compliant with EPP
- CD-S Models available with 16bit built-in sound

Backpack CD-S 4X inc sound **£319(a)**

Backpack CD 4X **£255(a)**

Backpack CD 2X **£225(a)**



**PRICE REDUCTIONS**

**NO FREE SLOT? NO PROBLEM**

## MicroSolutions

### backpack® HARD DRIVES

- Compatible with DOS v3.1 and above
- Supplied device driver uses 5K
- Supports EPP & IEEE 1284 parallel ports
- Full drive single partition under all DOS versions
- Transfer speeds up to 600KB/S
- Can be daisy chained with other Backpacks

Backpack HD 420MB **£259(a)**

Backpack HD 850MB **£319(a)**

Backpack HD 1200MB **£375(a)**

### backpack® FLOPPY DRIVES

- Windows and Dos support
- Software drives supplied

Backpack FD 35 1.44MB **£115(a)**

Backpack FD 525 1.2MB **£125(a)**

MicroSolutions



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Intel

## UPGRADE YOUR 486 TO A PENTIUM® PROCESSOR

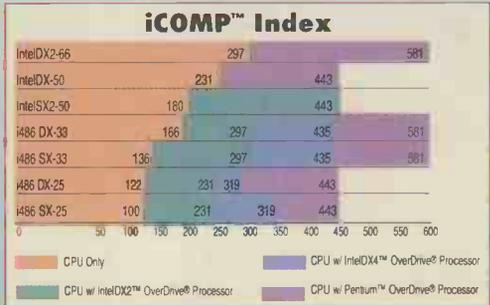


### Intel Pentium® OverDrive Processor

The Intel Pentium® OverDrive processor, with advanced microprocessor technologies, will make your software run faster than ever before. It's our most powerful CPU upgrade for boosting the performance of your existing Intel 486SX or DX and IntelSX2 or IntelDX2 processor-based PCs. With superior upgrade option features, you'll experience a significant performance gain across a wide variety of software applications. Just install an OverDrive processor in place of your current i486 CPU, or plug it into an upgrade socket, depending upon your system design.

ITEM NO	DESCRIPTION	SOCKET NEEDED	PRICE
EUREX2474	INTEL PENTIUM® OVERDRIVE 83MHZ	N/A	£199
EUREX1248	INTEL PENTIUM® OVERDRIVE 63 MHZ	N/A	£175
EUREX0003	INTEL DX2 OVERDRIVE 25-50 MHZ	Yes	£79
EUREX0004	INTEL DX2 OVERDRIVE 25-50 MHZ	No	£79
EUREX0006	INTEL DX2 OVERDRIVE 33-66 MHZ	Yes	£99
EUREX0005	INTEL DX2 OVERDRIVE 33-66 MHZ	No	£99
EX6330	INTEL DX4 OVERDRIVE 25-75 MHZ	Yes	£105
EX6332	INTEL DX4 OVERDRIVE 25-75 MHZ	No	£105
EX6339	INTEL DX4 OVERDRIVE 33-100 MHZ	Yes	£135
EX6331	INTEL DX4 OVERDRIVE 33-100 MHZ	No	£135

Pentium is trademark of Intel Corporation



Performance for a 33-MHz Intel486 DV CPU-based system before and after installing a Pentium OverDrive processor.



Improve

## UPGRADE YOUR OLD 386 - MAKE-IT 486!

### Quick and Easy 386 to 486 upgrade!

Now it's easier and more affordable than ever to convert your 386 to a full-powered 486. Gain faster speed, dramatically enhance memory management increases Windows performance, and more. Just replace the old chip with the new Make-it-486, it could not be easier. Your system is instantly recognised as a 486 by all the latest software you have been wanting to try. The Make-it 486 will clock double the current CPU speed for 16, 20 & 25MHz and increase performance for 33 & 40MHz (non-doubling) adding a full 8K internal cache instead of the limited 1K offered by other upgrade chips and will support a 387 math coprocessor.



Make-it 386 SX 16/20/25 MHz to 486 32/40/50 MHz:

EUREX0901 **£99**

Make-it 386 DX 16/20/25 MHz to 486 32/40/50 MHz:

EUREX0900 **£99**

### 286 UPGRADES ALSO AVAILABLE

Upgrade your 286 to a 486 for a new lease of life for the increased performance of your 286 that currently runs too slow or not at all with some software packages. Clock doubling technology with optional math coprocessor. This easy to install chip may require an additional adapter if your current CPU has a retaining clip\*.

286 to 486 clock doubling with math coproc: EX6197 **£145**

286 to 486 clock doubling: EX6196 **£99**

\*286 LCC adapter EX6223 **£45**



**SAVE £££ ON 72PIN SIMMS**  
**WIN95 U/G + 4MB 32BIT £158 SAVE £10**  
**WIN95 U/G + 4MB 36BIT £168 SAVE £10**  
**WIN95 U/G + 8MB 32BIT £263 SAVE £15**  
**WIN95 U/G + 8MB 36BIT £273 SAVE £15**



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



**Memories**

1MB 2MB 3MB 4MB 8MB

HEWLETT PACKARD Original Memory	1MB	2MB	3MB	4MB	8MB
LASERJET 4L	£73				
LASERJET 5L NEW	£45	£149		£215	
LJ/JET 4/4M/4SI/4SIMX,IIISI, D/JET 1200C	£139		£225	£415	
LJ/JET 4P/4MP/4+4M+4V/4MV/ 5P/5MP/COLOR,DJ1600C/CM	£139		£205	£385	

**HEWLETT PACKARD 3rd party memory**

LASERJET IIP/IIIP+,IIIIID/IIIP	£59	£89	£155		
LASERJET II/IIID	£65	£95	£159		
DESIGNJET 200/600/650C			£129	£259	
PAINTJET XL300 (NEED EXPBOARD 069.00)	£49	£85	£129	£259	
LJ/JET 4/4M/4SI/4SIMX,IIISI,D/JET 1200C	£49	£85	£129	£259	
LASERJET 4L	£59				
LJ/JET 4P/4MP/4+4M+4V/4MV/ 5P/5MP/COLOR,DJ1600C/CM	£45	£85	£129	£255	

**BROTHER 3rd party memory**

HL4/PS/V/E	£79	£125	£185		
HL6 SERIES		£119	£195		
HLB-D/E/V	£79	£115			
HL10-V/DV/PS/DPS		£102	£179		
HL10-H	£49	£89	£129	£259	

**CANON 3rd party memory**

LBP-4, LBP-4+, LBP-4Lite	£89	£125			
LBP-BII, BIII, BIII	£65	£95	£159		
LBP-BIIII/III+/IIIR	£99	£129	£169		
LBP-BIV/LBP-4U/LBP-4i	£49		£119		

**EPSON 3rd party memory**

EPL-4000/4100/4300/ACTION					
LASER II	£62	£109	£159	£229	
EPL-5000/S200	£55	£89	£210		
EPL5200+		£85			
EPL 5600 (2 SOCKETS),1600	£45	£85	£119	£249	
EPL7500			£249		
EPL8000/EPL8100	£70	£111	£155	£205	

**KYOCERA 3rd party memory**

F-800/A/T	£75	£109	£179		
F820/B50/1800/A/5000/1500	£65				
F1000A	£79				
F1200S/2000S/2200S/3000A/3300	£79	£115			
FS1500A (ECOSYS)	£79				

**PANASONIC 3rd party memory**

KXP-4410/4430	£89	£129	£199		
KXP-4420/4450/4451	£69	£109	£179		
KXP-4455		£119			
KXP-4450	£69				
KXP-4440/5410 EXP+MEMORY	£72	£109	£193		
KXP-4440/5410 ADD ON					
KXP-4400	£39*	£84			
MEMORY (KXP-5400 2MB ONLY)	£65	£95	£175		

**STAR 3rd party memory**

LP4	£79	£119	£199		
LP8	£79	£115	£195		
LS-5/5EX/STT EXPBOARD+ MEMORY	£76	£131			
LS-5/5EX/STT ADD ON MEMORY	£55	£69*			

**SHARP 3rd party memory**

JX-9500PS	£49*				
JX-9500/E/H/9700			£195		
JX-9400,9460,9600,9600PS, JX-9660,9700E	£65	£79*	£179		

**OKI 3rd party memory**

OL400	£69	£99			
OL400E/EX,410E/EX	£69	£109	£179		
OL410,OL810	£75	£115	£185		
OL800,OL820	£69	£109	£179		
OL830,OL840		£89			

**Performance accelerator for CAD, spreadsheets, graphics & DTP**

80287-8 to 20MHz	£59
80387SX-16/20/25MHz	£58
80387SL-16/20/25MHz	£58
80387SX-33MHz	£65
80387-DX-16 to 33MHz	£58

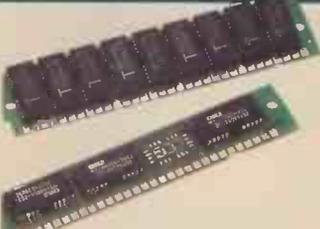
**72 PIN 70NS**

Type	Size	Price
1x32	4Mb	£109
1x32 (EDO)	4Mb	£129
1x36	4Mb	£119
2x32	8Mb	£219
2x32 (EDO)	8Mb	£249
2x36	8Mb	£229
4x32	16Mb	£369
4x36	16Mb	£399

Call for 60 & 80NS

**DRAMs**

44256-70NS (256K x 4)	£5.40
1Mb x 1-80/70NS	£4.90
1Mb x 4-80/70NS	£25
256K x 16-70 SOJ	£22



All generic memory supplied is made by reputable manufacturers such as **Toshiba, Samsung, Goldstar, Fujitsu, TI, NEC, OKI** etc.

**30 PIN**

1Mb x 9-70N (9 chip)	£30
1Mb x 9-70 (3 chip)	£30
4Mb x 9-70NS	£115
4Mb x 9-80NS	£114
4Mb x 9-60NS	£119

**CACHE RAM & TAG RAM (SRAMS)**

8K x 8 20NS cache	£4.50
32K x 8 20NS cache	£7.00
32K x 8 15NS cache	£7.50
128K x 8-20 cache	£25

**FREE** Anti-Static wrist strap for each order on memories except DRAM and Cache RAM

Just give us a call with your system details and we do the rest

**LOOK ★ FOR LIMITED SPECIAL OFFER**

**IBM Original memory**

	2MB	4MB	8MB	16MB
THINKPAD 360/700/20/50/55	£130	£225	£450	
THINKPAD 755 DIMM		£225	£655	£1145
PS1/VP/2		£190	£375	
PS/2 95/X/PIAMFIAMT		£295		
THINKPAD 750/755 DRAM			£1145	
THINKPAD 340/360		£199	£399	£999
PS/NOTE	£95	£380		
APTIVA PC300		£180	£360	£720
Perfi/PC700		£190	£375	£750
PS/2 SERVERS ONLY (ECC MEMORY)		£205	£415	£835

**IBM 3rd party memory**

T/PAD 700,720,750,755,CL57SX	£169	£299		
T/PAD 330/340/355/360/730C/370	£159	£259*	£489	
T/PAD 701 SERIES	£149	£275	£479	
PS/2 140SX,PS/NOTE 182,T/PAD 350	£89	£149	£285	£459
PS/2 N51 SLCSX	£89	£159	£299	
PS/2 N33 SX	£89	£149		
PS/2 90/95,95XP 486 OMFOMT (ECC)	£85	£129	£259	
PS/2 56,857SLC,56,857SX,M57SLC	£85	£129	£259	
PS/VP 6381-FY1/FY/E/KYO/IMO/YMY/NYO	£119	£429		
PS/VP 6382, (C/K/F/W)	£129	£259	£429	
PS/VP 6384 F/M/W (EXCEPT F00/F20/F23/F40/ F43/M00/M20/M40/M43/M50/M53/W40/VV53)	£129	£259	£429	
PS/VP 6384 F00/F20/F23/F40/F43/ M00/M20/M40/M43/M50/M53/W40/VV53	£136	£499		
PS/VP C00/C2A/C2C/C4A/C40	£85	£139	£259	
PS/1 2133-G,S,W43/174/154,2155-G,S,W44	£136	£499		
PS/1 2133-G,S,W11/G,S,W13/81/11/11/45/1/ 46/147/1/483/551,2168-452/473/493/573, 2155-G,S,W14	£85	£129	£259	
PS/1 2133-571/642/652,2155-582/592/593				
PS/1 2168-574/584/594/653/873				
PS/1 PRO 386SX 2123 (EXCEPT E31/E81)	£85	£129	£259	
PS/1 PRO 386SX,2123 E31/E81	£85	£139	£259	
APTIVA TREKA	£87	£119	£249	
HURDLA 486,SPRINTA 486DX/DX2/SX	£136	£476		

**COMPAQ 3rd party memory**

CONTURA 31/20,31/25,31/25C	£75	£155	£259	
CONTURA 400/410 SERIES		£149	£275	
CONTURA 41/25, CX, EX		£155	£250	£549
CONTURA AERO		£125	£329	
CONCERTO, LTE ELITE		£159	£309	£579
LTE ELITE 41/25,41/25C,41/25E,41/33C	£159	£299	£499	
LTE 386 LITE/20,25,25C,25E	£89	£185	£299	
SPLIT/M & V PROSIGNIA PC (NEED EXP. BOARD)	£85	£129	£259	
DP 31/25, 31/33,41/25,41/33,41/66i	£85	£129	£259	
DP 386/20E,25E,20,25		£145		
DP 386/33L,486/25/33L/50L,SP 486/E SERIES	£95	£295		
DI/PRO M83P/LT (NOT LT486/33) EXPBD	£215	£449	£375	
PROLINEA 31/25S,32S,25Z	£68	£238		
PROLINEA 41/25S,41/33,41/50,41/66,CDS				
PRESARIO,PROLIANT 1000 486DX2-66	£85	£129	£259	
PROLINEA MT 41/33S,MT 41/50,MT 466	£85	£129	£259	
NEW PROLINEA FAMILY (PENTIUM X 2)	£119	£249	£399	
PROSIGNIA PC SERVERS	£129	£259	£439	
SYSTEM PRO XL 486/50				
P486,P486/66,P486C,P486C	£85	£129	£259	
DESKPRO XE 4335,450,466	£85	£129	£259	
DESKPRO XE 560,566M,560M				£495
PROLINEA MT	£85	£129	£259	£439
PROLINEA NET	£85	£129	£259	
PROLINEA NT 1-25S/E/TR	£85	£129	£259	£439
PRESARIO CDS 633,CDS 860,660				
DESKPRO XL 450,466			£258	

**COMPAQ Original memory**

Contura 386	£80	£155	£255	
Contura 486		£155	£265	£995
Contura Aero		£130	£259	
Contura 400		£190	£370	£880
LTE Lite 386	£140	£275	£515	£1575
LTE Lite 486		£220	£440	£1575
LTE Elite/CONCETO		£220	£440	£880
PROLINEA 486	£110	£190	£309	
PROSIGNIA/DESKPRO	£120	£195	£309	£765
DESKPRO XL 486		£360	£685	
NEW PROLINEA/DESKPRO	£185	£355	£655	

**TOSHIBA 3rd party memory**

T2000/SX/SXE,T2200SX,T1800,T1850/C, T1000LE	£85	£159	£295	
T2100 SERIES,T2150		£149	£295	
T3100SX	£85	£159		
T3200SX	£85	£159		
T3200SX-C	£85	£119*		
T2400/T2450/T3600		£169	£299	£559
T3400		£169	£299	£569
T4400/C/SX/SXC,T6400,T6600	£85	£159	£289	£539
1900,1910,1950/C,1960,4500,4600, 4700,4800,4850,4900,DYNAPAD T200		£169	£299	£599
DYNAPAD T100X		£159		
T5200/T5200C/T8500	£59*		£345	
Satellite Pro 400		£399	£799	

Memories for AST, Olivetti, Canon, NEC, Gateway are available, please call if the upgrade you require is not listed.

**DELL 3rd party memory**

320N/N+,212N LAPTOP	£95			
325N/NC NOTEBOOK	£99			
NL25,NL20 NOTEBOOK	£110			
316SX/LT,325SX,320LX/LT	£68			
LATITUDE 433M/MC,450M/MCX	£149	£279		



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hour

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Multimedia Feature

## SOUND BLASTER MULTIMEDIA HOME CD



This high quality kit was designed specifically for your home and office, and allows you to work, learn and play. The kit includes a quad speed drive, 16 bit sound card with Advanced Signal Processing, stereo speakers and a complete range of Microsoft titles that makes this kit both versatile and invaluable. It is perfect for the home as well as an excellent choice for games and educational applications for all the family.

**£268** (a)

## NEW SOUND BLASTER SOUND CARDS



### IDE SOUNDBLASTER 16 VALUE



**TECHNO VALUE**  
**£60** (b) (ex VAT)

SoundBlaster is the industry standard for PC audio and this cost effective, true 16 bit sound card will fit effortlessly into your PC and give you CD quality audio at a price you can afford. The card features 16 bit stereo sampling and playback, and enhanced FM stereo music synthesiser, MIDI/joystick interface and 4W per channel amplifier. It has the new IDE interface system that allows simple connection to any compatible CD-ROM drive and like all the SoundBlaster range it includes a whole host of audio software. Software included: Creative Ensemble, Wavestudio, Mosaic, Talking Scheduler, Sound LE.

### SOUNDBLASTER AWE32 VALUE



**TECHNO VALUE**  
**£121** (b) (ex VAT)  
Price subject to change

Designed as a low cost sampled wave synthesis sound card, the AWE32 Value features the Advanced WavEffects system allows you to play sampled instruments stored on the card that sound just like the real thing. This means that MIDI music files sound like an orchestra and it makes games sound like you are actually there. It supports General MIDI, QSound, Reverb and Chorus and the E-mu Sound Font library. The card includes an upgrade socket for the Advanced Signal Processing chip and a CD-ROM interface.



**SB AWE32 IDE**  
**£162** (b) (ex VAT)

- SB 16 PRO IDE **£83** (b)
  - SB 16 PRO ADSP IDE **£104** (b)
  - WAVEBLASTER II **£89** (b)
  - ADSP UPGRADE **£39** (b)
  - Blasterkeys Midi Keyboard **£109** (b)
  - Aero Duet **£83** (b)
  - Midi Cable for Creative Soundcards **£21** (b)
- Sound Blaster Audio Cables only available when ordering devices  
Mitsumi, NEC 2xi/3xi, NEC Quadx/4xi or Toshiba £9.95 each

## NEW CREATIVE LABS PHONEBLASTERS



This is a complete PC based communications product, that will save you time and improve your productivity. The built in answering machine is able to receive voice messages that can be accessed remotely. With a built in fax machine, modem and sound card. Phoneblaster brings big business capabilities to your small office.

Features include a Data/Fax Modem, with a Modem Transfer rate of 28.8K/14.4K/9600/4800/2400bps. Fax features Fax-on-demand, fax broadcasting and fax forwarding. Signature and logo support for quick faxes. Automated cover sheet generation. Rotating, scaling, zooming, half-toning and edge-smoothing with PCX, TIFF and BMP support. A Full-featured, full duplex speakerphone with noise cancellation provides uninterrupted, clear communication between parties. Voicemail sending broadcasting and forwarding. Microphone/handset switching for recording and a Speaker/Handset switching for playback.

Data communication includes a mini Bulletin Board Service facility and simple file transfer capability. Bundled software includes Supervoice™. This assists you in making your home or office telecommunications more efficient and convenient. It answers your telephone, takes messages, forwards calls, alerts your pager, sends and receives faxes and provides fax-on-demand services. All of this while you're busy in another application or away from home or office.

Creative TextAssist™ us a Windows-based text-to-speech system that provides high quality, realistic voices as well as tools for adjusting pitch, phoneme length, volume and speed. Ideal for reading back e-mail, spreadsheet data and text on the desktop.



**ONLY**  
**£259** (a)

Software included: Supervoice™ and Creative TextAssist™.

## ESSENTIAL FOR MODEM USERS

High speed serial card 2 x 16550 serial ports, 1 x enhanced parallel port, 1 x game port **£29<sup>(b)</sup>**



**SALES 0181-205 9558**

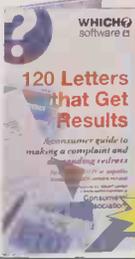
**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



## 120 Letters that get Results WHICH? software



**A consumer guide to making a complaint and demanding redress**

Ever been frustrated by a garage over-charging? A shop selling faulty goods? A misleading holiday brochure? Inexplicable debits from your bank account? Noisy neighbours?

For these and many other kinds of problems **120 Letters that get Results** contains a carefully worded letter template - written by Which? lawyers - for you to adapt. A full WPP package is included as is the text of the Which? book

**350 Legal Problems Solved** in an easily accessible Question & Answer format. All letters can be exported to your own WPP. Just insert your details print and post your professionally written letter and see the difference it makes to the results you obtain.

**£25**

The fastest way to make your ideas take shape...



## Visio 4

for Windows 95 & Windows 3.1

ONLY **£99** 3.5" & CD EUROGRAPH

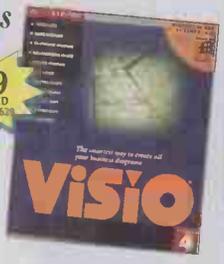
Visio is the business diagramming tool for Windows users. The dramatic ease of use of Visio 4 and its advanced new Windows technology make it one of the very best Windows 95 applications available and a great solution to your diagramming needs.

- ▲ Visio 4 is a Win 95 (32bit) & Win 3.1 product
  - ▲ Smarter, more effective drawing tools
  - ▲ Smarter integration with Microsoft Office 95
  - ▲ Smarter database connectivity
  - ▲ Enhanced OLE automation for developers
- (WINDOWS 95 & WINDOWS 3.1 VERSIONS IN ONE BOX)

UPGRADE EURUP1623 (3.5" & CD) ..... **£59**

### 8 TOP USES FOR VISIO 4

- ▲ Flowcharts
- ▲ Block Diagrams
- ▲ Organizational Charts
- ▲ Network Diagrams
- ▲ Office Layout
- ▲ Marketing Charts
- ▲ Project Timelines
- ▲ Directional Maps
- ▲ And Much More!



**Visio Stencils -**

- Adv Flowcharts
- Adv Network Diagrams
- Adv Software Diagrams
- Marketing • Chemistry
- Chemical Engineering
- Mechanical Engineering

**STENCILS £39 EACH**

## NOKIA quality from only £475<sup>(a)</sup>



- ◆ 17" flat, square tube
- ◆ 0.28mm dot pitch
- ◆ 1024 x 768 at 80HZ
- ◆ Integral 2 watt speakers
- ◆ Digital controls
- ◆ Power saving
- ◆ MPR II

MULTIMEDIA READY



## VALUEGRAPH 447V MONITOR

## CybermanCD - 'The Portable CD ROM drive for Windows 95'

Innovative Communications

**CYBERMAN CD 2X PCMCIA CD ROM DRIVE** **£265**

The Cyberman CD (CM2-SX) is designed for the newest generation of 'sound ready' computers. Can play Audio CD's, comes complete with headphones and is fully Windows 95 compatible



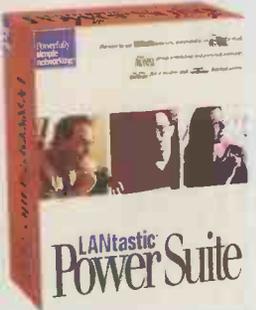
## MICROSOFT AUTOROUTE EXPRESS/CYBERMAN CD PROMOTION

Plan all your trips while on the move using the Cyberman CD and Microsoft Autoroute Express. This special price when buying the Cyberman CD with Microsoft Autoroute Express.

**QUAD SPEED (4X) DRIVE** **£399**

## Network your Office & Talk to the World! with Lantastic PowerSuite

- Share Applications, Data, Drives, CDs, Printers with Lantastic v6.1
- Send/Receive E-mail with Lotus CC:Mail
- Network faxing with Cheyenne Bitware
- Group scheduling with Lotus Organiser
- Internet with Compuserve
- Telephone line sharing with Cheyenne Bitshare
- Hardware (Noderunner 16bit ethernet)



**POWERFULLY SIMPLE NETWORKING**

Get two PCs connected with a 2 node starter kit including 2 licences for all of the above, plus 2 network cards, cable and connectors - For only ..... **£215**

## The Advanced Multi-Lingual Word Processor for Windows ACCENT V2.0

- Accent is the only multilingual solution for Windows
- Its a complete word processor, not just an add on module
- Wide variety of import & export tools so that you can make your existing documents multilingual
- Free technical support from Accent
- Bundled with Truetype fonts, copy of Berlitz Interpreter for Windows, Keymap Utility



EURWP0572 (3.5")  
**Accent Express ..... £37**

EURWP0570 (3.5")  
**Accent Pro ..... £189**

EURWP0571 (3.5")  
**Accent Special Edtn £90**

## Panasonic QUALITY SOLUTIONS

### QuadPro 4X Speed IDE upgrade kit

- New quad speed CD-ROM drive
- PowerIDE software to eliminate conflict with hard disk drive
- Complies with MPC level 3
- 32-bit disk access
- Video-CD and CD-i movie
- Includes all accessory parts for quick, trouble free installation
- Optional IDE interface card available (Part No IDE16003)

**QuadPro IDE kit £139.00**  
**Optional interface card £10.00**

### QuadPro 4X Speed SCSI upgrade kit

- New quad speed CD-ROM drive
- Corel SCSI software supports most SCSI host adapters
- Complies with MPC level 3
- 256K cache memory
- Video-CD and CD-i movie
- Includes all accessory parts for quick, trouble free installation

**QuadPro SCSI kit without I/F card £159.00**  
**QuadPro SCSI kit with I/F card £209.00**



### Panasonic PD System 2 in 1 CD-ROM and Optical Disk drive

- New combined quad speed CD-ROM drive and 650MB rewritable Optical disk drive
- Removable 650MB Optical Media for archiving or re-distribution
- SCSI-2 interface for Mac or PC
- Corel SCSI supports most SCSI host adapters
- CD-ROM function supports Video-CD and CD-i movie
- Includes all accessory parts for quick, trouble free installation

**PD System kit without I/F card £499.00**  
**PD System kit with I/F card £589.00**  
**PD 650MB media £39.00**

Quality Software



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm

Sat: 9am to 5pm

Callers welcome - check

availability for collection

Prices valid from 21/1/95

## NOW YOU CAN REALLY TAKE OFF WITH CLIENT/SERVER DEVELOPMENT

### 3 Powerful tools seamlessly integrated to boost your client/server development.

#### StarDesigner Data Construction made easy

Take off with the new Powersoft Portfolio from the acknowledged leader in client/server development tools. For the first time, everything you need to start defining, building, and deploying serious workgroup applications has been brought together in one powerful, affordable suite.

Each full-featured component is a best-in class tool in its own right. Together, they deliver a potent client/server solution with the broadest range of functionality, so you can approach each critical development phase with confidence.

#### Data Construction Made Easy.

Effective client/server applications start with a good data model. Using StarDesigner you simply draw your database and let it construct your physical tables. You have the power and flexibility to get your client/server project off to a great start - whether you need to design a new database in Watcom SQL or any of 40 other DBMSs, generate stored procedures, triggers and other advanced functions, or even reverse engineer existing databases.

#### PowerBuilder Desktop Powerful intuitive development

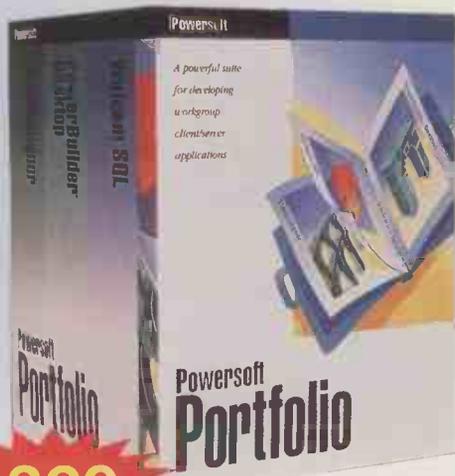
#### Powerful, intuitive Development.

PowerBuilder Desktop's true object orientation and unique point-and-click Data Window technology will energize your Windows development. And its openness means you can connect to Watcom SQL Server and all the leading desktop databases. With all this advanced functionality, PowerBuilder Desktop remains extremely easy to use.

#### SQL Database Power Right Out of the Box.

With Watcom's multiplatform SQL database server, you deliver high-performance solutions that embody advanced features like stored procedures and triggers, powerful cost-based query optimization, and dynamic multiple-database support. Plus, Watcom SQL minimizes the use of disk and memory, making it as efficient as it is powerful. Use the 3-user license for your initial mobile, desktop or workgroup applications. Then take advantage of Watcom SQL's low price and experience significant savings as you move to widespread deployment of your client/server applications.

#### Watcom SQL 3-User SQL Database power right out of the box



£329

EURLN0092 (CD)

**FREE Training Video on Registration**

**Powersoft Portfolio** for Windows on CD-ROM

## The Worldwide Number 1\* in Virus Protection

If you're migrating from Windows 3.1, or just upgrading to Windows for the first time, VirusScan for Windows 95 provides quick, easy, and reliable virus protection.

#### Superior Virus Detection

VirusScan incorporates award-winning, world-proven virus scanning and removal technology. This technology, called Code Matrix Scanning and Code Trace Scanning, enables Virus Scan to accurately detect over 5,100 viruses. VirusScan detects known and unknown new viruses, including boot viruses; file viruses; multi-partite viruses; stealth viruses; encrypted viruses; and polymorphic viruses.

#### Unmatched Flexibility

Users have the choice of performing virus scans at start-up, on -demand or on-access. With the new VxD technology, the memory is scanned during initial operation, while on-access scanning technology captures viruses during the launch of any executable files.

**MCA FEE**

Network Security & Management

# VIRUSSCAN™

AntiVirus Protection for Windows 95, Windows and DOS

VirusScan includes a pre-configured list of recommended scanning options which users can customise.

#### Full Windows 95 Support

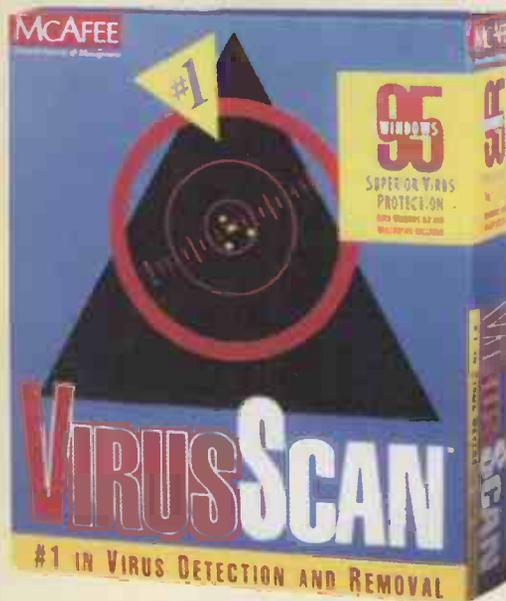
VirusScan for Windows 95 has been approved by Microsoft to carry the 95 logo and is certified by the NCSA. Windows 95 is susceptible to Viruses as it does not include any Virus protection. Virus scan's new 32 bit architecture offers superior detection, while its exceptional Windows 95 Explorer interface makes it appear as an extension of the operating system and encourages regular use, the key to effective virus prevention. VirusScan also supports Windows 95 32bit protected operation, context menus, property pages, browsers, and long file names.

\*IDC

SPECIAL INTRODUCTORY OFFER

£49.99

UNTIL 31.12.95



**A native 32-bit antivirus solution designed for Windows 95**

**NOVELL  
AUTHORISED**



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



# There's never been a better time to buy PerfectOffice!



**AS LOW AS  
£119**

**FREE!**

**Upgrade to  
PerfectOffice  
v7 for  
Windows 95  
licence\***

**1**

WordPerfect

**WordPerfect®  
6.1**

The Perfect Way to Create Better Documents

**2**

Quattro Pro

**Quattro® Pro  
6.0**

The Perfect Way to Make Your Numbers Count

## 15 Good reasons to buy PerfectOffice v3.0 for Windows NOW!

1. **Eight Applications** - leaders in their respective categories.
2. **The first network suite.**
3. **The only suite with electronic publishing & viewing product (Envoy).**
4. **PerfectFit** - share consistent tool bars, pull down menus.
5. **QuickTask** - performs tasks directly from the desktop without opening individual files.
6. **PerfectSense** - intelligent spell checker & grammer checker.
7. **PerfectScript** - records automated process & plays them back.
8. **QuickCorrect** - corrects errors & improves document as you type.
9. **DAD (Desktop Application Director)** - allows you to switch easily among all suite applications.
10. **OLE 2** - supported in 4 applications.
11. **Network navigator support** - manages your software across entire network.
12. **Integrated E-mail, scheduling, calendaring & task management (GroupWise).** (One user client software only)
13. **180 days FREE technical support.**
14. **Coaches & Experts** bring you up to speed quickly/QuickHelp for on-line help.
15. **QuickTools** includes QuickList, QuickFinder, QuickOpen, QuickRun, and QuickMenus.

**3**

Presentations

**Presentations™  
3.0**

The Perfect Way to Sell Your Ideas

**4**

Envoy

**Envoy™  
1.0a**

The Perfect Way to View any Document

**5**

InfoCentral

**InfoCentral™  
1.1**

The Perfect Way to Organize People, Places and Things

**6**

GroupWise

**GroupWise™  
4.1**

The Perfect Way to Share Information (One user client software only)

**7**

Paradox

**Paradox 5.0**

A Perfect Way to Organize Your Data

Only included in Professional Suite

**8**

Visual AppWare

**Visual AppWare 1.0**

A Perfect Way to Build Your Applications

Only included in Professional Suite

PerfectOffice 3.0	New User	Upgrade	Trade-in	
Standard (3.5")	£264*	£119*	£154	Standard Version Includes WordPerfect 6.1 Quattro Pro 6.0 Presentation 3.0 Envoy 1.0a InfoCentral 1.1 GroupWise 4.1
Standard (CD-ROM)	£264	£119	-	
Professional (3.5")	£348	£179	£205	Professional Version Includes WordPerfect 6.1 Quattro Pro 6.0 Presentation 3.0 Envoy 1.0a InfoCentral 1.1 GroupWise 4.1 Paradox 5.0 Visual AppWare 1.0
Professional (CD-ROM)	£348	£175	-	

The CD-ROM versions offer full electronic documentation and SpeechAware software from Novell and Dragon Systems. SpeechAware allows users to talk directly to WordPerfect and other Perfect Office applications with the appropriate hardware set-up.

\*While stocks last

\*Disks and manuals at extra charge

Novell - PerfectOffice



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

IBM - software

**Upgrade as low as £30**

**New! STACKER 4.0**  
FOR IBM PC DOS  
FILE SIZE REDUCTION  
PLUS MORE OPTIONS AND SUPPORT  
FOR HARDWARE, NETWORKS, AND PCMCIA

**PC DOS 7**  
Version 7 3.5" Disks Upgrade Edition

The best DOS and your best value!

CHECK IT OUT!

The latest operating systems from IBM!

The really cool way to run and network your computer

**New! Plus**

**OS/2 WARP Connect**

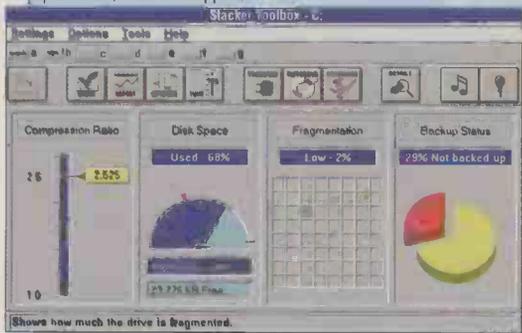
Version 3 CD-ROM  
Includes OS2 and Windows application support

**As low as £95**

## It's the Latest! Hot, New PC DOS 7!

### MORE MEMORY AND SPACE — POWERFUL, NEW UTILITIES!

Get more of what you need from DOS — more memory, better disk compression, and award-winning performance tools all in one package. IBM PC DOS 7 provides a host of award-winning DOS and Windows utilities that you need for superior system security and productivity — tape backup, file updating to synchronize files on different computers, virus protection, PCMCIA support, and more.



Integrated StackIt 4 technology gives you the highest compression ratio and the most free disk space, ideal for today's applications' vast storage needs.

#### Features:

- Online Help System - Get help and access to the documentation when you need it.
- RAMBOOST - automatically optimizes conventional memory, giving your games and applications maximum memory.
- REXX - write powerful and portable programs for DOS, OS/2®, and other operating systems.
- Docking Support - Mobile users with Plug-and-Play supported hardware get leading-edge "hot and warm" docking support.
- Scheduler - lets you schedule any DOS program or batch file for unattended use. Run DEFRAG, VIRUS check, or other commands after hours when your PC is normally idle.
- Undelete - Recover previously deleted files.
- PCMCIA 3.01 Support - for additional and newer adaptors and is PCMCIA 2.1 compliant.
- Dynaload - dynamically load supported drivers from the command line.
- Enhanced E-Editor - is now easier to use with pull-down menus and support for your mouse. Edit multiple files simultaneously.

#### Upgrade from any manufacturers DOS version 3.3 or higher

UP3255 (3.5")	£30
EURUP1554 (CD-ROM)	
Full Version	£59
OP0543 (3.5")	

## OS/2 Warp! Get Connected!

### 32-BIT NETWORKED DESKTOP!

The new 32-bit, multitasking, multimedia, Internet Access, crash-protected, Windows friendly, totally cool way to run and network your computer! It's the Windows user's "out-of-the-box" connectivity solution that is easy to install and easy to administer. Whether you're looking to share files or printers with other users in your small workgroup or wide area network, IBM's OS/2 Warp Connect has what you need.

#### Features:

- Share local resources — such as files, applications, and printers — with co-workers using the new IBM Peer for OS/2.
- Combine industrial-strength LAN-based TCP/IP functions along with the ease-of-use features in the Internet Connection for OS/2.
- Install locally or remotely from your CD-ROM on the LAN.
- Run DOS, Windows, and OS/2 applications simultaneously on your desktop.
- True multitasking! Make computing and communicating easier with OS/2 Warp Connect, allowing you to run several tasks at the same time. And your applications can reside on your system, on your server, or on your peer's computer.
- Work smarter with BonusPak — an integrated set of important new applications.
- Communicate and collaborate with your co-workers; track and share information with Lotus Notes Express.

#### NOW IT'S EASIER TO DO EVEN MORE!

The separate BonusPak that comes with OS/2 Warp Connect is a set of full-function applications called IBM Works that includes word processing, spreadsheet, data filing, report writing, communications, PIM, and more. Communicate with the world from the fast lane with IBM OS/2 Warp Connect.



OS/2 Warp Connect Version 3 EUROP0723 (CD).....	£95
OS/2 Warp Connect with WinOS2 Version 3 EUROP0753 (CD).....	£125
OS/2 Warp Connect v3 Upgrade.....	Call
OS/2 Warp Connect with WinOS2 v3 Upgrade. Call	

Versions with WinOS2 come with support to run Windows applications.

Versions without WinOS2 must be installed over existing Windows 3.1 or Windows for Workgroups 3.1 to run Windows applications.

OS/2 Warp allows you to connect to customers, co-workers, and the Internet from your desktop!

OS/2 Warp Version 3.0 EUROP0173 (3.5") .....	£50	OS/2 Warp v3 Upgrade EURUP1556 (3.5") .....	£49
EUROP0174 (CD) .....	£39	EURUP1555 (CD) .....	£30
OS/2 Warp w/WinOS2 Version 3.0 EUROP0198 (3.5") .....	£99	OS/2 Warp W/Win OS/2 v3 Upgrade EURUP1557 (3.5") .....	£75
EUROP0732 (CD) .....	£89	EURUP1558 (CD) .....	£65
OS/2 Warp v3 to Win OS/2 upgrade EURUP1559 (3.5") .....	£49	OS/2 Warp v3 to Win OS/2 upgrade EURUP1560 (CD) .....	£49



**LOTUS BUSINESS  
PARTNER**



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



# LOTUS SMARTSUITE 96

FOR  
WINDOWS 95

## The desktop solution for you and your team

The best suite for you and your team, SmartSuite 96 brings together your five most important desktop tools: Lotus 1-2-3 spreadsheet, Lotus Approach database, Freelance Graphics presentation graphics, Organizer personal information manager and the new WordPro word processor.

- Unique Team Computing features enable you to easily communicate and collaborate with others, improving quality and productivity.
- Lotus' innovative interface is consistent throughout all SmartSuite applications. Learn one and you've essentially learned them all.
- SmartMasters and Lotus Assistants - both exclusive features - give you a speedy way to be more productive.
- Because SmartSuite is truly integrated, it works the way you do: moving from one task to the next, whether you're working in one application or between them.
- Get the most from your new operating system SmartSuite takes full advantage of the Windows 95 environment.



Lotus

## LOTUS WORD PRO 96 WINDOWS 95

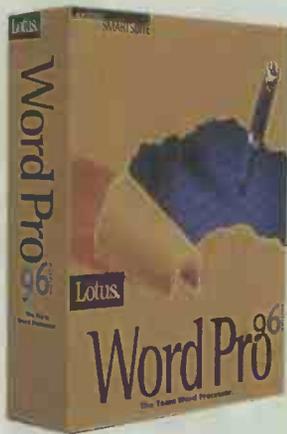
### Productivity for teams, power for individuals

Lotus Word Pro 96 is a new breed of word processor - designed for the way you work today. The first and only Team Word Processor, it combines powerful writing and editing features with breakthrough ways to collaborate and share ideas.

Smart Word Processing innovations provide all the tools you need to create persuasive, professional-looking documents. TeamReview and TeamConsolidate features make it easy to gather and manage everyone's contributions to create the final draft.

With Lotus Word Pro 96, individuals and teams can Work Together faster, smarter, and more productively.

**Full Product 3.5" ..... £84**



SmartSuite 96 currently includes 16bit versions of Lotus 123, Organiser and ScreenCam. A coupon in the box allows you to upgrade to the 32bit version when they become available.

## MANAGE IT LOTUS APPROACH 96 for Windows 95

The easiest way for everyone on your team to track, manage and analyse business information. Lotus Approach is the only database designed to enable everyone on your team - from salespeople to operations managers to financial analysts - to track, manage, and analyse business information.

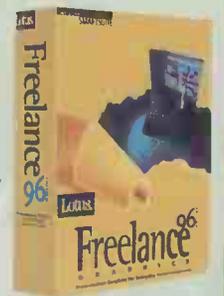
**Full Product ..... £81**



## PRESENT IT FREELANCE GRAPHICS 96 for Windows 95

Transforms presentation graphics into an essential tool for everyday visual communications for you and your team. Freelance Graphics gives managers and teams on the move invaluable new ways to create visual plans, reports, and proposals for everyday communication.

**Full Product ..... £258**  
**Upgrade/Trade-up ..... £88**

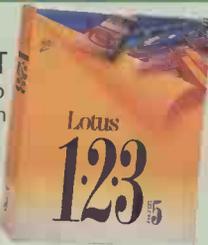


## ANALYSE IT LOTUS 1-2-3 V5.0 SPREADSHEET

Lotus 123 Spreadsheet has everything you need to make your everyday spreadsheet tasks easier. With Lotus 1-2-3, Lotus redefines spreadsheet productivity - again.

**Full Product ..... £219**

**Upgrade/Trade-up ..... £88**



## ORGANISE IT ORGANISER V2.1 PERSONAL ORGANISER

**Full Product £82**



## RECORD IT **NEW** SCREENCAM V2.0 MULTIMEDIA UTILITY

**Full Product £89**



### SMARTSUITE 4.0 WINDOWS

Lotus SmartSuite v4.0 Win CD	£293
Lotus SmartSuite v4.0 Win 3.5"	£293
Lotus SmartSuite v4.0 Win Upg/Comp 3.5"	£158
Lotus SmartSuite v4.0 Win Upg/Comp CD	£158

### SMARTSUITE 96 WIN 95

Lotus SmartSuite 96 Win 95 CD	£293
Lotus SmartSuite 96 Win 95 3.5"	£293
Lotus SmartSuite 96 Win 95 Upg/Comp 3.5"	£158
Lotus SmartSuite 96 Win 95 Upg/Comp CD	£158

### LOTUS PASSPORT

Lotus Passport is an easy way to purchase volume levels of Lotus Products. It offers exceptionally low prices, options for upgrades and support. Please call our specialist sales team for advice and pricing.



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

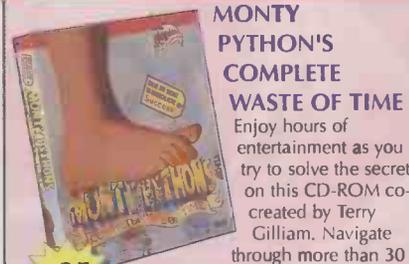
PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Quality Software

## ENTER THE 7TH LEVEL! A WORLD OF FUN, EXPLORATION AND LEARNING



### MONTY PYTHON'S COMPLETE WASTE OF TIME

Enjoy hours of entertainment as you try to solve the secret on this CD-ROM co-created by Terry Gilliam. Navigate through more than 30

BBC-TV episode favourites, sing songs and play arcade-like games. Use the Desktop Pythonizer to customize your computer with interactive screen savers, living wallpapers, audio clips, desktop icons, rude keyboard noises, and more. Desktop Pythonizer also sold separately on CD-ROM.  
Monty Python Desktop Pythonizer CD ..... £19



### BATTLE BEAST

Spectacular gameplay that blows away Mortal Kombat, Street Fighter and Primal Rage. Fight through

nine war zones. Fight against your computer or friends. Go head-to-head over networks or modems. Fight in multiple areas of each battle zone and move freely in the Z-axis. 8,000 frames of movie-quality animation, mind blowing special effects and awesome audio. Challenge an advanced computer brain that learns and reacts to your fighting style.  
(486DX33+, 8MB, CD, Soundcard, Joystick required.)

### TUNELAND



Join your preschoolers on an adventure to a magical place of fun, music and laughter with one of

the most awarded children's CD-ROMs of all time. Tuneland stars Howie Mandel as Lil' Howie, a lovable animated playmate in the first fully interactive cartoon. Join your kids and Lil' Howie for hours of playing, singing jokes, and learning that computers can be fun.

### TAKE YOUR BEST SHOT



Challenges you with three twisted arcade games. Laugh yourself silly with Best Shot, the stress reliever, that lets you name

characters and then punch, smash and blast them. Customize your computer with side-splitting interactive screen savers, wallpapers, desktop icons, and more than 200 outrageous audio clips.  
(Joystick compatible.)

**COREL DRAW 6**

**NEW for Windows 95**

**UPGRADE FROM £145**

**The Best in 32-bit Graphics!**

**Includes**

- ★ CORELDRAW 6 - illustration and page layout
- ★ COREL PHOTO-PAINT 6 - Photo-editing and bitmap creation
- ★ COREL PRESENTS 6 - Business and multimedia presentations
- ★ CORELDREAM 3D 6 - 3D modeling and rendering

**Plus**

- ★ 25,000 clipart images and symbols
- ★ 1,000+ TrueType & Type 1 fonts
- ★ 300+ Presentation Backgrounds
- ★ 1,000+ Photos
- ★ 1,000+ 3D models
- ★ 2,000+ Chart samples
- And Much More

### New Features

- ▲ Increased speed and power
- ▲ Multiple Document Interface (MDI)
- ▲ Fully-customisable toolbars, hot keys & status bars
- ▲ Greater ease of use with Wizards & Tutor Notes
- ▲ Precision to 0.1 micron
- ▲ New tools: polygon, knife, panning, spiral, graph tables, eraser tool, connector lines and angled dimension lines
- ▲ 3D modeling, rendering and animation
- ▲ Natural media brushes, chalk, airbrush, felt tip and more
- ▲ AVI file editing (video)
- ▲ Professional business and multimedia presentations
- ▲ OLE 2.0 in-place editing and OLE automation
- ▲ Macro recorder
- ▲ Printing and prepress enhancements: OPI, print styles, proofing options and impositioning.

Full Product EURGR1626(CD) .....	£275
Upgrade from v3/v4 EURUP1621(CD) .....	£229
Upgrade from v5 EURUP1622(CD) .....	£145

## Quicken 4 <sup>25</sup>

for Windows FN2194 (3.5")

**RUNS ON WINDOWS 95 & WINDOWS 3.1**

The fastest, easiest way to organise home and small business finances - Quicken organises all your finances in one place. It's easy to use, provides insight into your spending habits and helps you plan a better financial future.

### Quicken 4 CD <sup>25</sup>

NEW Quicken 4 CD for Windows uses multimedia to make it easier than ever to have your PC organise your finances. On-screen Tutors show you Quicken's key features, talking you through the basics and making sure Quicken starts working for you to in next to no time.

**NEW**

**Quicken Deluxe Home Pack v4 for Windows ..... £45**  
Includes: Quicken UK 4.0 for Windows, Quicken Home Inventory UK for Windows & QuickTax Planner 96. If you need to organise more of your home finances, inventory of your home and plan your 1996 income tax position. EURFN0115

## QuickBooks UK v3 <sup>84</sup>

for Windows

**Accounting without the hassle**

The Fastest, easiest way to manage your business

Everything you need is in one easy to use, fully integrated package. QuickBooks is the UK's best selling accounting package for Small Business. Designed for business people not accounting experts, QuickBooks is a robust industrial strength system - the beauty is, that you never get to see the double entry - There's no Debits & Credits just simple forms that you already know how to use.

**COMPLETE FINANCIAL CONTROL**

- ACCOUNTS RECEIVABLE REPORTS
- ACCOUNTS PAYABLE REPORTS
- BUSINESS MANAGEMENT

FN2223 (3.5")

- SALES REPORTS
- ADMIN. REPORTS
- STOCK REPORTS
- GRAPHS

**FREE TECHNICAL SUPPORT FROM INTUIT**

**Quicken Deluxe Business Pack v4 for Windows ..... £45**  
Includes: Quicken UK 4.0 for Windows, QuickInvoice UK for Windows & QuickTax Planner 96. For the self-employed, sole trader or small business owner if you deal with a few invoices and need to plan your income tax position. EURFN0114

# SoftRAM 95

## Double Click

### Double your Memory

The only Ram Doubling software for Windows 95

**ONLY £49**

Double your memory and expand your System Resources seamlessly with SoftRAM 95.

Eliminate the expense and hassle of opening your PC to install hard RAM. SoftRAM 95 installs in seconds and is compatible with Windows 95, Windows 3.1 or later, and all Windows applications. 4MB becomes 8MB. 8MB becomes 16MB and so on. Install SoftRAM 95 and instantly speed up Windows, run larger applications, and open more applications simultaneously. No more "Out of Memory" messages. RAM compression technology takes your Windows memory and at least doubles it. In fact, SoftRAM 95 now achieves RAM compression rates of up to 5x and higher. And SoftRAM 95 expands System Resource space under Windows 3.1 or later so you can load and run more applications and take full advantage of Windows powerful multi-tasking.

- Avoid the expense, hassle, and risk of hard RAM installation
- Works with Windows 95 and Windows 3.0/3.1/3.11
- Installs in seconds - safe, tested, and guaranteed
- Automatic, transparent, and no user configuration required
- Works with all 386 and higher desktops and laptops
- Use with as little as 4MB RAM
- Compatible with all Windows applications
- Ideal for RAM-hungry programs and Multimedia
- Special user-definable feature for those high-end tasks

**WORKS WITH WINDOWS 95 AND WINDOWS 3.0 + HIGHER**

**EURUT1419 (3.5")**

# QUALITY SOFTWARE AT AFFORDABLE PRICES



Amex Surcharge 1%

**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



Microsoft



## Microsoft Encarta 96

CD-ROM for  
Windows &  
Windows 95

The most up-to-date  
content and technology  
available in a  
multimedia  
encyclopedia  
developed for the UK.

**£32**

- World English edition developed specifically for the UK
- New home screen with quick easy access to the main features
- Yearbook Builder - stay current through on-line updates
- 27,000 articles - more than 5,000 updated for 96 version
- More than 8,000 photos and images, plus more than 100 videos and animations, 9.5 hours of sound and more than 800 detailed maps
- Ten interactivities - a unique interactive learning experience
- Eighty exciting new tours of Encarta's finest content
- On screen link to the Concise Oxford Dictionary 140,000 definitions 2 million words of text.

ED7272 Encarta 96 Win/Win 95 CD **£32**  
ED7273 Encarta 96 World Atlas Win 95 CD **£Call**

**Get Microsoft  
Windows 95  
upgrade for only  
£55 when you buy  
any of these great  
new products**



## Microsoft Fury<sup>3</sup>

Optimised for Windows 95 on CD-ROM

Microsoft Fury<sup>3</sup>, the first shoot 'em-up action arcade game from Microsoft, is a futuristic first-person game with nonstop game play. Seated in a fully armed spacecraft, pilots complete combat and rescue missions while saving eight planets from destruction during a space-age civil war.



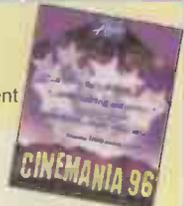
- Attack key enemy installations on 3 parallel playing fields You have 8 worlds to save
- Fully orchestrated cinematic stereo surround sound
- Optimised for Windows 95 - will run on Windows 3.x
- True 32-bit gaming technology • Intense 3-D graphics
- Fury<sup>3</sup> is available on its own and bundled with the NEW Microsoft SideWinder 3D Pro joystick

EUREN0097 Fury<sup>3</sup> CD ..... **£29**

## Microsoft Cinemania 96

CD-ROM for Windows 95

With Microsoft Cinemania 96, choosing a movie to rent can be almost as much fun as watching it! It's your easy-to-use, personal guide to a world of great films, complete with reviews, video clips, biographies, and insightful articles about the movies. Plus, Microsoft presents current movie reviews, updated monthly - FREE ONLINE! (Offer good through August 31, 1996).



- 20,000+ movie reviews • 2,500+ Photos • 4,000+ biographies
- 1,200 stills • 162 dialogues • 120 film music tracks
- 20+ video clips • Find by category

EN9433 Cinemania 95 Win 95 CD ..... **£24**

## Microsoft SideWinder 3D Pro Joystick

The innovative Microsoft SideWinder 3D Pro joystick using new Digital-Optical technology, increases precision and reliability and eliminates drift. The 3D rotation gives an extra dimension to game play, and with Thrustmaster and CH emulations it is ideal for all MS-DOS games. The SideWinder 3D Pro is also the first Windows 95 joystick, utilising Digital Overdrive to increase performance and responsiveness.



- Digital Optical technology • 6 degrees of freedom
- Designed for Win 95 with 2x analogue performance and 4 Win 95 buttons

IN5486 Sidewinder ..... **£26**  
IN5485 Sidewinder 3D Pro ..... **£39**

**Sidewinder 3D  
Pro & Fury CD  
£45**

## Microsoft 3D Movie Maker

CD-ROM for Windows 95

Microsoft 3D Movie Maker represents the next generation of creativity software, and is the first to allow children ages 8 and up to create 3D animated movies. Microsoft 3D Movie Maker enables children to be both producer and director of their own 3D animated movies. Children can explore a virtual 3D movie theatre, with various rooms that provide the ideas, tools and content to bring their ideas to life like never before!

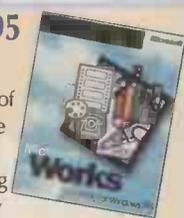


- 12+ 3D sets • Camera angles • 40 actors/movie
- Over 20 motions • Add music • Win 95 technology

EN9434 MS 3D Movie Maker ..... **£29**

## Microsoft Works v4.0 for Windows 95

Create professional documents easily and quickly with Microsoft Works for Windows 95. No matter what kind of work you need to do, you'll find Works has a tool for the job. It combines a wordprocessor, spreadsheet with charting, a database, communications tools, and drawing tools - to create the best selling integrated package. New features include the work task launcher, easy calc for financial and budget calculations, repeat creator which links to your database and direct access to the works forum on the Microsoft network.



£20 cashback offer for upgrades.

EURBS0354 (3.5") ..... **£59**  
EURBS0365 Microsoft Works v4.0 Win 95 & Bookshelf 95 (CD) **£79**



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Quality Software

## SYMANTEC. READY FOR WINDOWS '95

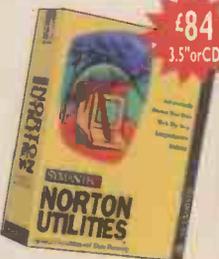
### Norton Utilities

FOR WINDOWS '95

The NEW 32 bit Automated System & Data-Protection Solution

This new version has been designed specifically for Windows 95. It works in the background constantly monitoring vital system resources and data integrity to ensure stability and reliability. In the event of a crash the Rescue disk gets you up and running. Already extensively Beta tested, this product is seen as an essential tool for Windows 95.

- Norton Pre-Installation tune-up
- DOS Mode recovery tools
- Norton System Doctor
- 32-bit Norton Disk Doctor
- 32-bit Norton speed disk
- Recovers lost data
- System information
- Norton rescue disk
- Unerase



£84  
3.5" or CD

Trade up from Norton Utilities, Norton Desktop or PC Tools (3.5") ..... **£52**

### Norton Antivirus

FOR WINDOWS '95

The Most Complete Windows '95 Virus Protection that detects, destroys and prevents viruses

Trade up from Norton AntiVirus, CP AntiVirus, Norton Desktop or PC Tools (3.5") .. **£28**



£53  
3.5"

### Norton Navigator

FOR WINDOWS '95

Guaranteed to make file management and working in Windows 95 faster and easier

Trade up from XTree, Norton Desktop or PC Tools (3.5") ..... **£34**



£67  
3.5"

This upgrade program will search your system to confirm your upgrade eligibility for the following Windows 3.1 product (Full product supplied). Only certain version numbers qualify for trade up. Please call to check.

## Marketing Plan Pro

Build sales, increase market share, and make more money with Marketing Plan Pro. Easy-to-use windows and dialogues guide you step-by-step through every phase of your plan.

BS10373 (3.5") ..... **£59**



AS LOW AS  
**£49**

## Business Plan Pro

Business Plan Pro lets you finish a professional-quality plan in hours instead of days. A unique interview method guides you through every topic to help you think critically about your business.

BS10383 (3.5") ..... **£59**

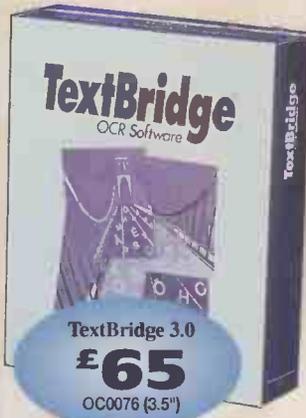
**NEW!**

## Decision Maker

Decision Maker gives you the advantage of decision tree science! Use Decision Maker to decide whether to expand, build, or subcontract, finance with debt or equity, remodel or move, buy or lease, sue or settle, add or cut product lines — and much more.



BS10343 (3.5") ..... **£49**



## TEXTBRIDGE 3.0 FOR WINDOWS

Consistently delivers OCR accuracy and is rated as the most accurate on fax documents. Patented Lexifier technology provides greater accuracy on non-word documents, such as dates, phone and part numbers. It also comes with an application server, for direct operation from inside any Windows application. Tighter filters and a standard TWAIN interface make it work with most scanners. It's today's easiest OCR package!

TextBridge 3.0  
**£65**  
000076 (3.5")

## TEXTBRIDGE PROFESSIONAL FOR WINDOWS

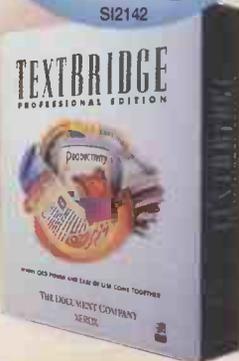
TextBridge Professional not only delivers the highest quality accuracy, but actually re-constructs your documents in your word processor, making them fully editable.

- DocuRT technology rebuilds cell tables for editing
- Page layouts, columns, and pictures are preserved
- Instant OCR access
- OLE 2.0 drag-and-drop
- 11 European languages

EURO00076 ..... **£269**

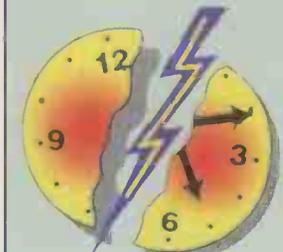
Competitive Upgrade

**£129**  
S12142



**FREE UPGRADE TO TEXTBRIDGE PRO FOR WINDOWS 95**  
IF YOU PURCHASE TEXTBRIDGE PRO FROM TECHNOMATIC BETWEEN 15.8.95 AND 31.12.95

BUY A SCANNER AND UPGRADE THE OCR SOFTWARE!

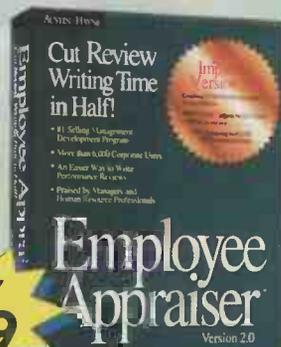


## Write Better Employee Reviews in Half the Time!

## Employee Appraiser 2.0

Now there's a faster way to write employee reviews, evaluations, and appraisals from start to finish. Employee Appraiser 2.0 for Windows is the first software designed to speed you through the review process. Its simple and concise approach consists of more than 600 professionally written paragraphs that you can use in your own review documents. Includes a coaching advisor that offers motivational ideas and solutions to everyday performance issues. The Language Scan feature ensures that you've said the right thing in the right way.

**ONLY £89**



BS10263 (3.5")

Over 600 writing samples to help you save time writing evaluations

# MICROSOFT WINDOW 95 RESOURCE TOOLKIT + 3.5" £46.99 THE ULTIMATE TECHNICAL REFERENCE



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



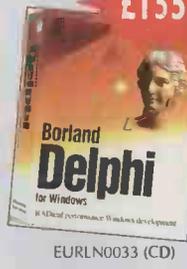
## BORLAND DEVELOPMENT DELPHI - RAD-ically fast!

Special Offer - Purchase Delphi or Delphi Client Server before 31/12/95 and get

- Free CompuServe Membership for 1 month with access to over 3000 services
- Free CompuServe Information Manager to connect to CompuServe
- Free Net.Launcher software for one step access to the World Wide Web
- Your own personal E-Mail address

Delphi Client Server (CD) ..... £659  
Delphi RAD Pack ..... £125  
Delphi Competitive upgrade (CD) ..... £120

This offer also applies to Paradox 5 for Windows



EURLN0033 (CD)



LN3204 (CD)

£62

## TURBO C++ 4.5

"The cost effective way to get into C and C++ programming"  
"The same technology the professionals use!"

Turbo C++ for Windows makes learning fun with sample games and a step-by-step multimedia introduction. Play the games and look at the code to see how they work - then write your own. AppExpert will write the basic framework of your applications for you, including SpeedBars, PrintPreview and more. ClassExpert, TargetExpert, and DialogExpert also dramatically streamline development time.

Turbo C++ v3 Dos (3.5)" ..... £59

## ClarisImpact v2.0

Automatic chart, diagrams & more

for Windows & Windows 95

£95

ClarisImpact software lets you create more kinds of structured business diagrams than other programs - flow charts, org charts, data charts, calendars, network diagrams and much more. And they've never been so easy to create. Instead of building them one piece at a time, you simply select the diagram type you need. ClarisImpact creates your entire graphic - instantly.

EURGR1665 3.5"



- 10 TOP USES FOR CLARISIMPACT**
1. Flow charts
  2. Organisation charts
  3. Network diagrams
  4. Timelines
  5. Calendars
  6. Tables
  7. TQM charts
  8. Brainstorms
  9. Reports
  10. Presentations

Upgrade (EURUP1648) 3.5" ..... £49

- NEW FEATURES**
- 32 bit for Windows 95
  - Datadraw - turns data into charts
  - New styles
  - New diagram symbols
  - New presentation features

## Plan, Design & Visualise your Home or Office with FLOORPLAN Plus 3D

Add the 3rd dimension to your space planning. Design in 2D, then walk around and view in 3D. With over 300 editable symbols it's ideal for offices, kitchens, bathrooms, gardens, even exhibitions stands and whole houses. Draw up extra 3D symbols with 3D Design Plus and cost out your design with Estimator.

CAO373 FLOORPLAN Plus 3D for Windows ..... £45  
EURCA0007 FLOORPLAN Plus 3D Win & 3D Design Plus .. £89  
EURBN0006 FLOORPLAN Plus 3D Win & Estimator Win .... £75



FREE UK SYMBOL LIBRARY INCLUDED

NEW - Now available Floorplan Plus 3D on CD-ROM



## allCLEAR III for Windows

The Intelligent Flowcharter that draws flowchart for you

- Cuts flowcharting time by over 50%
- Write out your flowchart - allCLEAR

automatically converts it into a professional flowchart.

Or select from drag and drop templates

- Includes Lotus Notes support, automatic page connectors, shape editor, over 200 symbols and CLEAR VIEWER to let others view and 'walk through' your flowchart.

Full Product £175

MORE THAN 120,000 CUSTOMERS WORLDWIDE

COMPETITIVE UPGRADE £85



## FileMaker Pro v2.1 for Windows

At last a database that provides power without programming

Filemaker Pro is a database that can organise information in ways that are useful to you. You can use it to publish a catalogue, or to keep an inventory of all your belongings. In fact the uses of Filemaker are limited only by your imagination. What's more, it can do all without the help or expense of a programmer. Its ease of use, form design features, multiple layout features and workgroup capabilities makes this package immensely popular.

- Includes 6 ready to run applications:
- Contact manager
  - Project manager
  - Product manager
  - Plus 75 cliparts
  - Lead tracking manager
  - Expense manager
  - Invoicing system

- Limited Offer:
- Computer introductory membership
  - Bacchus Junior - database of over 1000 wines
- On Registration Claris will send you a CD with a mixture of 100 demonstrations & applications created using FileMaker Pro + a Claris T-shirt

£84

## XCAD The New Generation of 2D/3D CAD Software for Windows, Windows NT & Windows 95

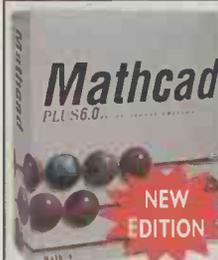
	XCAD3.0	AutoCADLT	AutoCADR13
Price	£368	£354	£3,150
System Architecture	32bit	16bit	32bit
AutoCAD DWG Format	R12	R12	R13
Advanced 2D	Yes	Yes	Yes
Advanced 3D	Yes	No	Yes
Advanced Surfacing Option	Yes	No	Yes
Photo-Realism Option	Yes	No	Yes
IGES Option	Yes	No	Yes
Programming Environment	Yes	No	Yes
Memory Requirements	4/8MB	4/8MB	20/32MB
Available Hard Disk Space	20MB	40MB	250MB



"One of the most exciting products to come to the market that CADD (magazine) has ever reviewed"

£368 (3.5") EURCA0068

Evaluation Pack (3.5") ..... £15



## If you use Maths, you need Mathcad Plus Mathcad Plus v6.0

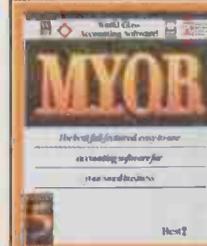
Calculators are inflexible and limit you to tiny, hard-to-read screens.

Spreadsheets box you in. And programming languages are too complex. But Mathcad is different. Available in Student,

OVER 600,000 MATHCAD USERS

Standard and PLUS Professional Editions, you use real math notation to design and solve problems in a live worksheet environment that provides instant feedback, recalculating formulae as you work. Analyse data, create models and test scenarios. Create quality reports including text, graphics, equations and formulae, then print them out or share them via email, Lotus Notes and the Internet. Easy-to-use, with a standard user interface and Worksheets that provide quick reference to common maths techniques, equations and formulae.

Mathcad Plus v6 for Windows CA0427 (3.5") ..... £340  
Mathcad v6 for Windows CA0430 (3.5") ..... £169  
Mathcad Student Edition v6 for Windows EURCA0067 (3.5") ..... £35



## M.Y.O.B. 5.0

Meet your new business partner! Thousands of growing businesses, from stationers to graphic designers, have trusted their

books to M.Y.O.B. Accounting. Instant accounting templates and a step-by-step setup interview make getting started a snap. You'll be writing cheques and producing invoices within minutes. M.Y.O.B. is full-featured accounting, including nominal ledger, chequebook, invoicing, cash flow forecasting, stock control, debtors and creditors, and over 90 management reports. Winner of more international awards than any other small business accounts package, M.Y.O.B. can handle the special needs of your business with World Class Accounting!

M.Y.O.B. Small Business Accounting FN2143 (3.5") .....

£135



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Printers

## LASER PRINTERS (a)

## NEW MODELS

HEWLETT-PACKARD	SPEED/RES	RAM/FONTS	LANG.	I/F	1 Year RHP	3 Year OSM
HP LaserJet 5L <b>NEW</b>	4ppm/600dpi	1Mb/265	PCL5e	B	£352	£455
HP LaserJet 5P	6ppm/600dpi	2Mb/455	PCL5e	B,AIR	£579	£710
HP LaserJet 5MP	6ppm/600dpi	3Mb/805	PCL5e	B,AIR	£725	£855
HP LaserJet 4 Plus	12ppm/600dpi	2Mb/455	PCL5e	B,S	£979	£1140
HP LaserJet 4M Plus	12ppm/600dpi	6Mb/805	PCL5e	B,S,AN	£1295	£1465
HP LaserJet 4V <b>A3</b>	16ppm/600dpi	4Mb/455	PCL5e	B,S	£1365 (3xa)	£1590 (3xa)
HP LaserJet 4MV <b>A3</b>	16ppm/600dpi	12Mb/805	PCL5e	B,S,AN	£1975 (3xa)	£2199 (3xa)
HP LaserJet 5Si <b>A3</b>	24ppm/600dpi	4Mb/455	PCL5e	B	£2079 (3xa)	£2599 (3xa)
HP LaserJet 5Si MX	24ppm/600dpi	12Mb/805	PCL5e	B,AN	£2965 (3xa)	£3475 (3xa)

CANON	1 year OSM	Speed/Res	RAM	Lang	I/F	Price
LBP-460W	A4	4ppm 600	256KB	P4	B	£289
LBP-1260	A4	12ppm 600	3MB	P5	B	£899
<b>EPSON 1 year OSM</b>						
EPL3000 New	A4	4ppm 300	1MB	P5	B	£375
EPL5200+	A4	6ppm 300	1MB	P5	P	£460
EPL9000	A4	8ppm 600	2MB	P5	B,S	£1195
EPL9000PS	A4	8ppm 600	6MB	P5,PS	B,S,A	£1359
<b>NEC</b>						
SuperScript 660	A4	6ppm 1200x600	256KB	G	B	£395
SuperScript 660i	A4	6ppm 1200x600	256KB	G,PS	B	£565
<b>PANASONIC</b>						
KXP4430 2yr OSM	A4	5ppm 300	1MB	P5	PS	£459
KXP4440 2yr OSM	A4	10ppm 300	1MB	P4	PS	£695
KXP6100 NEW	A4	6ppm 300	256KB	G	B	£239
KXP6150 NEW	A4	6ppm 300	1MB	P4	B	£309

I/F: P=Parallel, B=Bi-directional Parallel, S=Serial, A=Appletalk  
Lang: G=GDI (Win 3.1), P4=HP PCL4, P5=HP PCL5e, PS=PostScript

### MEMORY UPGRADES?

We can offer a large range of memory upgrades - SEE PAGE 14

### PRINTER CABLES (c)

Length	25M/36M	36M/36M	25M/25M
1.8m	£4	£6	£4
3m	£6	£8	£6
5m	£7	£10	£7
10m	£15	£17	£18

25M/36M is standard PC parallel cable 25/25 & 36/36 are for use with printer switches

### SWITCHES

SWITCHES (b)		AUTODATA SWITCHES	
2:1 2 PCs to 1 PRN	£19	4:1 4 PCs to 1 PRN	£29
8:1 8 PCs to 1 PRN	£75 (a)		
MANUAL DATA SWITCHES		Reversible & Inexpensive Par Ser	
2 in > 1 out	£10	£10	3 in > 1 out
4 in > 1 out	£20	£21	2 way cross over
			£24
AUTO CROSSOVER SWITCHES		4PCs > 2PRN Parallel Once a data path has been set it can be switched by soft code.	
			£85 (b)
Bi-Directional Converters Par>Ser/Ser>Par			£65 (b)

### TONER CARTRIDGES (b)

HEWLETT-PACKARD	Price	PANASONIC	Price
LaserJet IIP/IIIP/IIIP	£46	4410/4430	£29
LaserJet II/III/III/III	£46	4410/4430 Drum	£95
LaserJet 4/4+/4M/4M+	£66	4410/4430 Developer	£90
LaserJet 4V/4VM	£109	4420	£26
LaserJet II/S/4S/4MX	£75	4420 Drum	£57
LaserJet 4L/4ML/4P/4MP	£42	4420 Developer	£57
LaserJet 5P/5MP	£54	4400/II/5400 Drum	£55
LaserJet 5L	£Call	NEC	
		S60/60P/62P/102/102P	£109
		610	£79
EPSON		LX110/7500/8100	£115
EPL 4000/4100/4300	£64	4039 Toner	£165
EPL 5000/5200	£83	Optra (7K)	£139
EPL 5600	£110	Optra (14K)	£189

### COLOUR PRINTERS (a)

Model	Price	Cartridges
		Blk Colour
Canon BJC4000 (A4)	£217	£9 £14
Canon BJC600e (A4)	£321	£10 £7*
Canon BJC800 (A3)	£975	£18 £18*
Canon BJC-70	£219	£9 £14
Epson Stylus Pro XL (A3)	£1449	£12 £23
Epson Stylus Color IIs (A4)	£207	- -
Epson Stylus Color II (A4)	£261	- -
HP Deskjet 600 (A4)**	£185	£20 £22
HP Deskjet 660C (A4)	£243	£20 £22
HP Deskjet 850C (A4)	£331	£29 £19
HP Deskjet 1200C (A4)	£630	£19 £22*
HP Deskjet 1200C/PS (A4)	£995	£19 £22*
HP Deskjet 1600C (A4)	£829	£20 £22
HP Deskjet 1600CM (A4)	£1219	£20 £22
HP Deskjet 340** (A4 Port)	£172	£13 £18
HP Paintjet XL300 (A3)	£1649	£13 £19*

\*\*Requires optional colour kit \*Specify C/M/Y Cart

HEWLETT-PACKARD COLOUR LASERJET £4195 (3xa)

### TEKTRONIX PHASER 340

The revolutionary low-cost colour printer offering up to 4ppm in full colour. Ideal for PC & Mac environments **£3650 (1a)**

### MONO PRINTERS (a)

Model	Price	Cartridges
Canon BJ-30 (A4)	£139	£10
Canon BJ-200ex	£158	£16
Canon BJ230 (A3)	£239	£16
Canon BJ300 (A4)	£352	£11
Canon BJ330 TF (A3)	£395	£11
Epson Stylus 820* <b>NEW</b>	£182	-
Epson Stylus 1000 (A3)	£325	£9
Epson SQ870 (A4,Cont)	£439	£20
Epson SQ1170 (A3,Cont)	£595	£20

	Blk	Colour
HP Deskjet 600 (A4)**	£185	£20
HP Deskjet 340** (A4 Port)	£172	£13

\*\*Requires optional colour kit for full colour printing

**Canon BJ-200ex**

**£158!**  
+ FREE  
Avery Label Pro  
RRP £56

### DOT MATRIX PRINTERS (a)

Model	PIN	Colm	Price	Blk	Rib	Model	PIN	Colm	Price	Blk	Rib
FX870	9	80	£245	£4.50	LQ570+	24	80	£215	£5		
FX1170	9	136	£305	£6	LQ1070+	24	136	£295	£7		
LX300	9	80	£99	£4.50	LQ1170	24	136	£432	£7		
LQ3000 NEW			£139	-	DFX5000+	9	136	£1159	£22.50		

### PRINTER MEDIA (b)

EPSON	Price	EPSON EPL5000/5200	Price
STYLUS COLOUR COATED PAPER		PostScript	£249
360 dpi A4 200 sheets	£18	Local Talk Kit	£379
820 dpi A4 200 sheets	£20	<b>CANON SHEET FEEDERS</b>	
Transparencies A4	£49	BJ300 1st	£87
360dpi Super A3	£	BJ300 2nd	£65
720dpi Super A3	£	BJ330 1st	£90
Gloss Super A3	£	BJ330 2nd	£65
Gloss A3	£	<b>See Page 3 for HP Media</b>	
<b>CANON</b>			
BJ800C A4 Paper	£21		
BJ800C A3 Paper	£36		
BJ800C Transparency CF101	£35		
BJ600C Transparency CF102	£35		

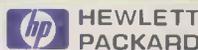
### TEKTRONIX PHASER 140

Entry level 360dpi, inkjet with 8MB RAM, Adobe PostScript L2, Parallel & AppleTalk I/Fs. **£895 (a)**

Plotters

## PLOTTERS AND DIGITISING TABLETS

### HP PLOTTERS



Size	A1	Price	A0	Price
Designjet 230	C4694A	£1485*	C4695A	£1999*
Designjet 250C	C3190A	£1845*	C3191A	£2489*
Designjet 750C	C3195A	£3699*	C3191A	£4395*
Designjet 755CM			C3198A	£6650*

Prices include one year on-site maintenance. This can be upgraded to 3 years OSM with next day response for: £420 or £771.  
Technomatic can supply the full range of accessories and upgrades.  
CARRIAGE AVAILABLE ON REQUEST.

### PLOTTER MEDIA (a)

### CARTRIDGES (c)

HP Paper	Price	Blk	C/M/Y
HP Paper A0 150 sheets	£64		
HP Paper A1 150 sheets	£42		
HP DJ650C Paper 24"x150ft	£23		
HP DJ650C Paper 36"x150ft	£29		
HP DJ650C Paper A1 100 sheets	£43		
HP DJ650C Paper A0 100 sheets	£83		
Designjet 200/220/16			
Designjet 600	£16		
Designjet 650	£20		
Designjet 750	£20		
Designjet 755cm	£20		

## Summagraphics

INKJET PLOTTERS	A1	A0
Summajet Mono	£1819*	£2345*
Summajet Colour	£2345*	£2625*
LEGS	£220*	£320*

Call for cartridges & paper, \*Call for carriage

DIGITISERS (S=Stand Opt)	A4	A3
SummaSketch III	£225(a)	£435(a)
SummaSketch FX	£275(a)	£495(a)
Summa Grid IV 1824 A2 Tablet (S)		£959*
Summa Grid IV 2436 A1 Tablet (S)		£1279*
Summa Grid IV 3648 A0 Tablet (S)		£1695*
Manual A1/A0 Tablet Floor Stand		£195(a)
Cursor: 4 Button	£99(a)	16 Button
MicroGrid Ultra 1724 A2		£2199*
MicroGrid Ultra 2436 A1		£2649*
MicroGrid Ultra 3648 A0		£2999*

### GENIUS TABLETS



HiSketch SP Model	Price
1212 SP (12"x12")	£120(a)
1812 SP (18"x12")	£185(a)
1812D SP (18"x12") LCD coord disp	£210(a)

**Features:-**

- Windows 3.1 & ADI drivers
- Up to 19,200 bps data rate
- 5 to 90 pairs/sec sampling rate
- 1000 lines per inch resolution
- ± 0.01 inch accuracy
- Proximity sensing
- AutoCAD R10/11/12 compatible templates
- Multi-directional puck
- 3 button stylus

**LEADING THE MARKET WITH  
LEADING PRODUCTS**



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



Racal

# The Future NOW!!

New Low Cost, Plug and Play ISDN Solutions from

# RACAL

The UK Market Leader in ISDN

Superb quality and reliability with outstanding value. The DAP 6200's powerful features and astonishing speed bring significant benefits at an amazingly low price!

Whether you're accessing the Internet, communicating with your office or into large file transfer and you believe time is money but thought ISDN was expensive - **THINK AGAIN!**



## DAP 6200

### ISDN Applications

- Internet Access ✓
- E-Mail Access ✓
- On-Line Teleworking ✓
- Remote Network Access ✓
- Simultaneous Analogue and data ✓
- Video Conferencing ✓

### DAP 6200 Features

- Basic Rate ISDN Access ✓
- High Speed V24 Data Port ✓
- Two Analogue Ports ✓
- Speeds up to 57,600 bps ✓
- Sub-second Connection time ✓
- Calling Line Identification ✓
- Multiple Subscriber Numbering ✓

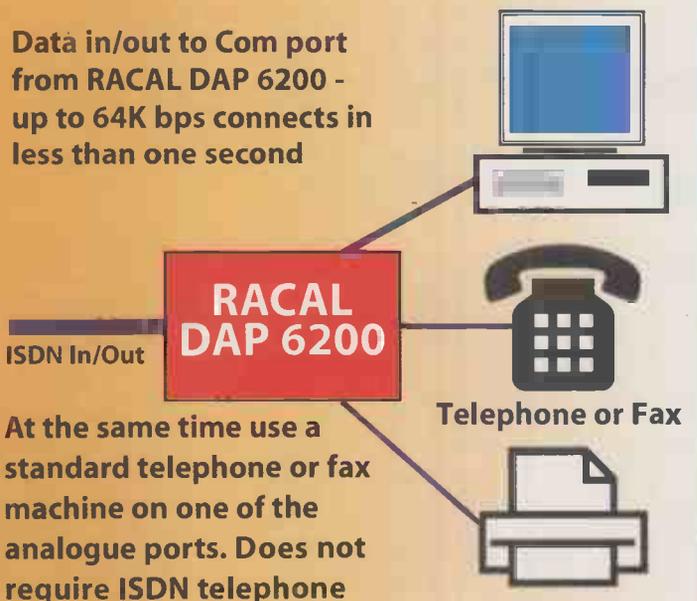
Racal Datacom, market leading manufacturer of ISDN access equipment, has extended its range of ISDN Digital Access Products (DAP) with the release of a new generation of intelligent ISDN terminal adapters, the DAP6000 series.

The first product in the series to be released is the DAP6200. This exciting new product is designed for very simple plug and play integrated ISDN access. Both dat and analogue traffic can easily share a single Basic Rate ISDN line. It provides one high speed Data Port for connection to a PC serial port, plus two analogue ports for connection to traditional PSTN equipment such as telephones or fax machines. Any two of the three ports can be used simultaneously.

The DAP 6200 is ideally suited for PC Applications which can greatly benefit from ISDN connectivity. Example applications include INTERNET access, Microsoft Mail, cc:Mail, Farsite Document Conferencing, Lotus Notes etc.

The DAP 6200 is designed to simply connect to a PC serial com port, and plug into the Basic Rate ISDN service.

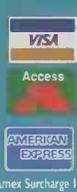
**Data in/out to Com port from RACAL DAP 6200 - up to 64K bps connects in less than one second**



# Racal-Datacom



**NEW! Logitech PageScan Colour**  
Scanner • 24bit colour • 400dpi • Parallel port  
interface • Motorised head • Textbridge  
OCR • Image software  
**only £289**



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



**PCMCIA DEVICES(a)**

**HARD DRIVES TYPE III**

CALLUNA HD			
100MB	£219	130MB	£249
170MB	£325	260MB	£399

**PCMCIA FOR DESKTOPS(a)**

**Cardport ISA** £159

- 2 x Type III slots
- 1 x ISA half card with rear slot
- 1 x drive bay with front slot
- Full s/w suite for card & socket

**Cardport Solo** £99

- 1 x Type III slot
- 1 x drive bay with front slot
- Full s/w suite for card & socket

**Cardport Uno** £89

- 1 x Type III slot
- 1 x ISA half card with rear slot
- Full s/w suite for card & socket

**PC PARTS (b)**



**High Speed Multi I/O Cards**

- ◆ Enhanced IDE mode 3 (ATA-2) for VLB card
- ◆ Standard IDE mode for ISA card
- ◆ 2 x 16550 UART buffered serial ports
- ◆ 2 x 2.88Mb floppy disk support
- ◆ Multi-mode parallel port (standard, B0Dir, ECP, EPP)

IDE-4 ISA £39(b) IDE-5 VLB £59(b)

IDE-2 AT HD/FD/2S/1P inc cables	£14
IDE-3 VLB HD/FD/2S/1P card	£17
I/O-1 AT 2S/1P/1G	£14
I/O-2 XT/AT Dual Serial Port	£14
I/O-4 XT/AT Dual Parallel Port	£14

**FLOPPY DRIVES(b)**

Teac. 1.44Mb 3 1/2" FD + 5 1/4" Kit	£36
Teac 1.2Mb 5 1/4" Floppy Drive	£42
Teac 2 IN 1 : Dual Floppy Drive	£69*
3 1/2" + 5 1/4" in half height frame	

\*While stocks last

**CACHING CONTROLLERS(b)**

IDE - 0MB fitted

- Support for Dos, Windows, NT, OS/2 Netware, SCO AT&T UNIX
- Hardware disk mirroring (RAD 1)
- Up to 4 drives supported • Fast ATA support
- 4 x 30 pin Simm sockets (16MB max)
- Auto configure & drive select

TIC 20V VLB 0Mb £65

SCSI - 0MB fitted

- Support for Dos, Windows, NT, OS/2 Netware, SCO AT&T UNIX
- AHA 154X compatible
- Supported by Corel SCSI (approved)
- Hardware disk mirroring • S/W configuration
- 4 x 30 pin Simm sockets (16MB max)

TSC 10i ISA 0Mb £125

**SUPER IDE CONTROLLER**

**FUTURE DOMAIN  
ISA IDE CONTROLLER  
WITH BIOS**

- Supports Drives > 528MB
- Supports up to 4 Devices
- Including CD-ROM Drives

**ONLY £45**

**IOMEGA ZIP DRIVES**

**Store 100MB on one 3.5" disk!**

- Expand your data storage inexpensively
  - Each 3.5" disk holds 100MB
  - Zip Drive is compact and weighs 1lb
  - 1.25MB/s transfer rate
  - 29MS seek time
  - Drive comes complete with manual & s/w
- Zip Drive 100MB (SCSI) £149(a)  
Zip Drive 100MB (Parallel) £150(a)  
Zip-Zoom PC SCSI Interface £69(a)  
Zip PC Disks, 100MB formatted 1pk £13(a)

**PANASONIC 5.25" OPTICAL DRIVES**

LF7304 1.5Gb SCSI int drv	£1477(a)
LF7300B 1.5Gb SCSI ext drv	£1539(a)

**PARALLEL PORT DRIVES(a)**

**BackPack Hard Disk Drives**

420Mb	£259	850Mb	£319	1.2Gb	£375
-------	------	-------	------	-------	------

**BackPack Floppy Disk Drives**

1.44Mb	£115	1.2Mb	£125
--------	------	-------	------

**BackPack CD-ROM Quad speed** £255  
**BackPack CD-ROM 4x5 (with sound)** £309

**Tape Drives - Also see Colorado section**  
**BackPack ti 700 Travan** £189

**SCSI CONTROLLERS(b)**

**COREL SCSI** - Support the widest range of SCSI card & devices in Dos, Windows & Netware.

**COREL SCSIII** S/w for Dos/Win v2 £65  
**COREL SCSIII** Network Manager £267

**ADAPTEC - INDUSTRY STANDARD SCSI**

**Low PRICES**

BUS TYPE	CARD ONLY		ASPI S/W KIT	
	ONLY	S/W KIT	ONLY	S/W KIT
ISA	-	£42	-	-
ISA	-	£60	-	-
ISA	£125	£159	-	-
MCA	-	£199	-	-
EISA Dual	-	£239	-	-
VLB	-	£159	-	-
PCI	-	£178	-	-
PCI Dual	-	£299	-	-

**ADAPTEC PARALLEL PORT ADAPTERS**

**358 Miniscsi EPP (1Mb/sec)** £125

**PCMCIA SCSI CONTROLLERS**

**ADAPTEC PCMCIA SCSI card** £165

**FUTURE DOMAIN PCMCIA SCSI 2Gb** £165

**DPT FAST SCSI-2** Ideal for Servers

**CACHING CONTROLLERS**

**DPT ISA 16 Bus Mastering kit** £199

**DPT EISA 32 High Performance kit OMB** £329

**DPT PCI High Performance kit OMB** £299

**DPT Caching Module Upgrade OMB** £299

**DPT Disk Array Module Upgrade** £299

**SCSI ACCESSORIES**

**SCSI DEVICE CASES WITH PSU(a)**

Includes: 50-way Centronics input & output, PSU, mains cable, fan, activity LED, SCSI ID switch, mounting screws.

	Single	Dual	Quad
3.5" HH	£65	-	-
5.25" HH	£65	£99	£139

**SCSI CABLES(c)**

**INTERNAL (50-way IDC-IDC)**

1 device 28cm	£6	2 devices 45cm	£9
4 devices 1m	£22	6 devices 1.4m	£32

**EXTERNAL**

50-way Centronics each end	1m	£18
50-way Micro-D each end	1m	£45
50-way Centronics to Micro-D	1m	£38
25-way D to 50-way Centronics	1m	£25

**TERMINATORS (50-way Centronics)**

Passive £9 Active £29 Forced Perfect £69

**TAPE BACKUP NEW**

**COLORADO BACKUP SYSTEMS (a)**

**NEW LARGER CAPACITIES**

**Internal Tape Backup Solutions**

**TRAVAN T1000 400MB/800MB £108**

Jumbo 350 170/340MB (QIC-80XL)	£72
Jumbo 1360MB NEW	£179
KE-10 External Mounting Kit	£61
FC-20 Fast Controller card	£49

Full range of accessories & mounting kit - Call

**Parallel Port Backup Solutions**

Trakker 350 170/340MB (QIC-80XL)	£142
Trakker 680 340/680MB (QIC-3010)	£199
Trakker Carrying Case	£39

Colorado Backup Software Win v2 £39  
Colorado Backup for OS/2 £60  
SU53J Unix/Xenix Backup s/w £79

**NEW HP SURESTORE DAT BACKUP (a)**

HP's new Surestore range of drives gives the system user the flexibility to choose the correct drive and options to suit all needs. All netware kits contain Cheyenne backup software. Call for full details. Unix solutions also available.

	Int Drive	Ext Netware Drive	Bundle
Surestore 2000 2Gb	£587	£670	£849
Surestore 5000 4Gb	£679	£773	£1699
Surestore 6000 8Gb	£799	£899	£1899

**NEW HP AUTOLOADER 48GB**

**SURESTORE 12000e £1999**

CALL FOR FULL DETAILS

HP Support Pack for Surestore £210(b)

(Provides 3 years OSM direct from HP)

**TECHNO DAT Drives Kits (a) 1 yr RTB warranty**

Leading DAT Drives (HP)	INT
TEC 2Gb DAT (C35470)	£489
TEC 2-8Gb DAT (C35480)	£589
TEC 4-16Gb DAT (C1553)	£699
TEC 24-48Gb DAT Autoloader (C1553)	£1549

**Cheyenne Backup Software (a)**

Arcsulo DOS	£89	Win	£95	OS/2	£135
Arcserve NLM					
No. of Users	5	10	25	50	100 250
v4 for DOS	174	289	489	619	699 815
v5 for Win	174	335	575	695	795 995

**EXABYTE HIGH PERFORMANCE TAPE DRIVES**

- SCSI-2 Interface • Mini cartridge (DC2000 format)
  - 1Gb native, 2Gb compressed
  - 567Kb/sec data transfer rate, faster than DAT
  - Kits complete with PC card, s/w, cable & 1 cartridge
- EXABYTE 2501 FS1Gi Internal Kit £539(a)  
EXABYTE 2501 FS1Ge External Kit £649(a)  
EXABYTE 2501 Bare drive only £399(a)

**TAPE CARTRIDGES**

**Colorado Formatted - 3 Pack(c)**

DT-120 (QIC-40) £49 DT-250 (QIC-80) £42  
DT-350 (QIC-80XL) £52 DT-740 (QIC-3010) £66

**Iomega QIC-3010 (for Jumbo 680)**

Formatted 1Pk £24 3Pk £66

**3M QUALITY TAPE CARTRIDGES**

Unformatted	1(c)	5pk (b)
DC2120 (QIC-80)	£9	£40
DC2120XL (QIC-80XL)	£14	£66
MC3000XL (QIC-3010)	£20	£95
DC6150	£12	£55
DC6250	£15	£70
DC6525	£17	£80
Exabyte DC3000XL (1Gb)	£23	£105

**4mm DDS DAT tapes - 5 tapes per pack**

3M (1Tape)	SONY	HP
1.3Gb 60m	-	£45
2Gb 90m	£9	£55
4Gb 120m DDS-2	-	£75 £79
HP DDS DAT Cleaning Kit - 2 tapes	-	£24

**DISKETTES(c)**

**3M 3.5" DISCS (10/PACK)**

HD	£6.00	HD Formatted	£7.00
----	-------	--------------	-------

**BULK DISCS 3.5" HD (1.44MB) FORMATTED**

50:	£25.00	100	£44.00	200	£82.00(b)
-----	--------	-----	--------	-----	-----------

Floptical Diskettes 21Mb 5pk £70 10pk £130

Magneto Optical Diskettes

128Mb	£17	10pk	£155
230Mb	£24	10pk	£219
1.5Gb	£99	5pk	£475

CALL FOR HIGH VOLUME DISCOUNTS

**HARD DISKS (a)**

**BAD BLOCK - EMERGENCY!!**  
Recover lost data on hard disk or floppy with SPINRITE 3.1 "the most comprehensive data recovery package available. If you can't get your data back with this, you're in trouble!" PC PRO April 95. No PC should be without it.  
CE80 S23 Spinrite 3.1 Data Recovery £99

MODEL	SIZE (Mb)	PRICE
Fast - SCSI-2 Drives (a)		
IBMIGB	Pegasus	£259

**HP 1GB SCSI £316**

**PLEASE CALL FOR LATEST PRICES & AVAILABILITY**

**CONNER**

IDE		
CF-425A	425	£98
CF-635A	635	£119
CF-850A	850	£139
CF-1275A	1200	£195
Fast SCSI-2		
CFP1080S	1080	£249
CFP2105S	2GB	£499
CFP4207S	4GB	£789

**SEAGATE**

IDE		
ST3660A	545	£115
ST51080	1050	£169
ST31270A	1280	£229
Seagate	1.6GB	POA
FAST SCSI-2		
ST5660N	528	£175
ST31230N	1050	£295
ST32430N Hawk	2100	£575
ST32550N B/cud	2100	£635
ST15230N Hawk	4000	£765
ST15150N B/cud	4000	£999
ST410800N	9090	£1579

**FUJITSU(a)**

IDE		
M1603T	545MB	£119
M1606T	1090MB	£169
FAST SCSI-2		
M2637SA (2.5")	240MB	£175
M1603S	545MB	£129
M1606S	1090MB	£219
M2932S	2017MB	£499
M2934S	4350MB	£739

**MICROPOLIS(a)**

FAST SCSI-2		
4221S (LP) 3.5"	2050	£549
3243S (HH) 3.5"	4294	£769
1991S (FH) 5.75"	9100	£1459

**AKHTER Caddi**

Reliable, Low cost, removable disk system  
Over 20,000 units sold

- IDE or SCSI configuration
- Withstand mechanical shocks up to 150G
- Reliable insertion/removal up to 25,000 cycles
- Ideal for securing data overnight
- Housing fits standard 5.25 drive bay
- IDE & SCSI controllers available as options
- Full compatibility with Dos, Windows, OS/2 Unix & Novell Netware

**Housing Chassis (a) IDE: £49 SCSI: £69**

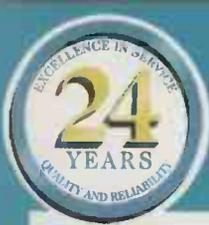
**Caddi Drives (a)**

IDE 525MB	£169	850MB	£235	1GB	£315
SCSI 545MB	£249	1GB	£399	2.1GB	£799

**5.25" ADAPATOR KIT FOR 3.5" HARD DRIVES £12(c)**  
**"Y" POWER SPLITTER (YCB/DSW101) £8(c)**

**CUSTOMERS ARE RESPONSIBLE FOR ENSURING THAT PRODUCTS WILL BE COMPATIBLE WITH THEIR SYSTEMS BEFORE ORDERING.**

**PLEASE CHECK CURRENT PRICE AND AVAILABILITY BEFORE ORDERING. ALL DRIVES ARE 3.5" FORMAT UNLESS OTHERWISE SHOWN.**



# TECHNOMATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

Networking

**Xircom PCMCIA ETHERNET + MODEM II**  
**ETHERNET + MODEM IN ONE**  
**TYPE II PCMCIA CARD**  
**ONLY £269(a)**

**NETWORK BACKUP**  
**SEE STORAGE PAGE**

### ETHERNET PRODUCTS (a)

**GENIUS COMBO CARD**  
**GE2000** Lifetime warranty, BNC & TP, NE2000 compatible, s/w & h/w configure, T Piece. See Taxan/Genius page for more info.  
**£28 (b)**  
5 pack £138(a)



B = BNC, A = AUI, T = TP, I = ISA, M = MCA, E = EISA, V = VLB, P = PCI

NETWORK BUS				
3COM		IPK	5PK	20PK
3C509B	B A - I-16	£65	£315	£1175
3C509BTP	- T - I-16	£66	£299	£1099
3C509B-Combo	B A T - I-16	£75	£349	£1299
3C529B	B A - M-32	£142	£699	-
3C529B-TP	- A T - M-32	£139	£699	-
3C579	B A - E-32	£145	£699	-
3C579-TP	- A T - E-32	£144	£699	-
3C590	B - T - P-32	£99	£475	-

SMC Ethercard Plus				
		IPK	5PK	20PK
Ether EZ BNC	B - - I-8/16	£58	£275	£979
Ether EZ TP	- - T - I-8/16	£58	£249	£849
Ether EZ Combo	B - T - I-8/16	£65	£299	£1059
EtherPower EISA 10/100	B - T - E-32	£179	£789	£2899
EtherPower PCI 10/100	B - T - P-32	£159	£739	£2599
Ultra Boot Rom Multi-Protocol				£29

Novell - Genuine Cards				
		IPK	5PK	20PK
NE2000 +	B - - I-16	£49	£219	POA
NE2000T +	- - T - I-16	£49	£219	POA
NE2000+3	B - T - I-16	£59	£279	POA

D-Link Ethernet *While stocks last				
		IPK	6PK	50PK
DE220C	B - - I-8/16	£39	£209	£1599
DE220T	- - T - I-8/16	£39	£209	£1599
DE220CT	B - T - I-8/16	£45	£245	£1899
DES10CAT VLB	B A T - V-32	£199	-	-
DE320CT MCA	B - T - M-32	£99	-	-
DE400 EISA	B - T - E-32	£149	-	-
DE530 PCI	B - T - P-32	£99	-	-
DEDE220X Novell Boot Rom		£19	-	-

Intel EtherExpress (E.XP)				
		IPK	5PK	20PK
E.XP PRO 16C	B - T - I-8/16	£59	£285	£1099
E.XP PRO Flash 16C	B - T - I-8/16	£69	£319	£1199

#### Ethernet for Portables

Parallel Port	BNC	TP	DUAL
Genius E3000-II with printer	-	-	£59
Multiplexer built-in & EPP support			
Xircom Pocket III	£185	£186	£199
SMC Elite Note	-	-	£159
D-Link DE600	-	-	£79
D-Link DE620 EPP Support	-	-	£99

PCMCIA			
	BNC	TP	DUAL
3COM 3C589B	-	£109	£129
Xircom PCMCIA - Performance range	£129	£135	£149
SMC Elite Card	-	-	£115
Genius ME3000II - LOW PRICE	-	-	£79
D-Link DE650	-	-	£99

Boot ROM for NE2000 & clones TEC/NK/R09R £10(c)

#### Cables & Accessories

Length (m)	3	5	10	15	20	25	30	50
Thin	£6	£8	£12	£16	£20	-	£27	£35
TP	£9	£12	£17	£22	-	£30	-	-
100M Reel	Thin	£45(2xa)		300M TP		£169(2a)		

BNC T-piece 5 Pack £15(c) BNC F-F Barrel 5 Pack £15(c)  
BNC 50ohm Earthed Terminator 2 Pack £4(c) BNC M-M Barrel 5 Pack £17(c)  
BNC Crimp Tool £19(b)  
RJ45 TP Connectors 20PK £20(b)  
RJ45 TP Crimp Tool £19(b)

FREE NETWORK SOFTWARE WITH EVERY NETWARE 3.12 OR 4.1	NETWORKING						
	NOVELL NETWARE	5 User	10	25	50	100	250
Netware 4.1 CD ROM (a)	413	944	1493	2033	Call	Call	
Netware 3.12 (a)	395	963	1443	1940	Call	Call	

PRINTER SERVER (a)										
CONNECTION					PROTOCOL					PRICE
PARALLEL	SERIAL	MIOP/P	NOVELL (IPX)	NETBIOS	WANG	WINDOW NT	TCP/IP (UNIX)	APPLE TALK	DEC LAT	
Intel Netport Express XL BNC/TP										£299
Intel Netport Express XL Token Ring										£449
Intel Netport Express EL BNC/TP										£255
Intel Netport Express EL Token Ring										£389
HP JetDirect Ex Plus 3 - Special Offer while stocks last										£299
HP JetDirect Ex										£249
HP JetDirect J2552A MIO Lj4 Series										£289
EMULEX NetQue BNC/TP										£399
EMULEX NetJet MIO Lj4 Series										£369

### UPS PROTECT AGAINST POWER FAILURE



**TRIPPLITE THE POWER PEOPLE**  
**SMART Series**  
• Microprocessor Controlled  
• Made in USA  
• SMNP Option  
• Battery Saver  
• 2 year swap out warranty

SU 600 VA		BC250 VA	
£219(a)		£79(a)	
-Free Surge Bar		BC400 VA	£115(a)
SU 750 VA	£229(a)	BC600 VA	£149(a)
SU 900 VA	£349(a)	BC900 VA	£250(a)
PowerAlert For: Netware £49 Unix £89 Dos/Win £55			
American Power Conversion (APC) 2yr swap-out.			
Smart-UPS (Line-interactive)	SU1400		£599(+)
SU250	£169(a)	SU2200	£999(+)
SUVS600	£210(a)	Back-UPS (off-line)	
SU700	£245(a)	BK400	£119(a)
SU900	£369(a)	BK600	£159(a)
SUI1000	£389(+)	BK900	£275(+)
SUI250	£510(+)	BK1250	£349(+)
Powerchute for Netware £55 For Unix £95 For Win £59			
For VMS (Tape) £195 For Win NT £95 For HP/UX £119			
+ = Call for carriage, volume discounts available			

### HUBS & REPEATERS

Model carr (a)	Ports			SMNP Stackable Price	
	TP	BNC	AUI	Option	
<b>HP ADVANCE STACK HUBS + = 5 YEAR OSM</b>					
Advance Stack 8U 8	-	-	-	Yes No	£119
Advance Stack 16U 16	-	-	-	Yes No	£249
Advance Stack 12+ 12	1	-	-	Yes Yes	£399
Advance Stack 24+ 24	1	1	1	Yes Yes	£699
Advance Stack 48+ 48	1	1	1	Yes Yes	£1249
<b>3COM</b>					
L.Build FMS II	12	OPT	1	Yes Yes	£375
L.Build FMS II	24	OPT	1	Yes Yes	£675
<b>SMC</b>					
Tiger TP6	6	OPT	1	No No	£119
Tiger TP6B	6	1	-	No No	£120
Tiger TP12	12	-	1	No No	£249
Tiger CX3	-	3	1	No No	£219
Elite 3812TP	12	OPT	2	Yes Yes	£399
Genius 1000/D	12	1	2	Yes No	£174
<b>Techno</b>					
8TP Port	8	-	1	No No	£89
4 Port Repeater	-	4	2	No No	£225
2 Port Repeater	-	2	2	No No	£139

**FREE NETWORKING SOFTWARE**

With every NetWare 3.12 or 4.1 from Technomatic

- WanderLink
- Netmagic
- Config Pro for NetWare Basic
- GroupEase for Windows
- McAfee's 30-day Test Drive

**LOW PRICES ON UPGRADE - CALL**

### COMMUNICATION SERVER (a)

US Robotics Fax Server 1 Port £929 2 Port	£1149
US Robotics Comms Server	£999
Comm Server Software	
WinPort V5 1 modem	£135
FaxPort V5 5 user	£275
Novell Connect 2 port	£279

### PEER TO PEER NETWORKS

All Techno starter kits contain 5M BNC cable & terminators. All Techno add-on kits contain 3M BNC cable. All starter kits contain everything necessary to connect stated no of PCs.

### Microsoft WINDOWS

Item Description	Full Product MLP	
	Full	MLP
MS Windows NT 3.51 Workstation	£218	£199
MS Windows 95 Upgrade	£59	-
Windows for WG 3.11	£89	£86
Add-on for Win 3.1/W4WG 3.1	£42	£39
Add-on for MS-DOS	£41	£40

### Techno W4WG Add-on Kits

For those users with MS Windows 3.1 installed

Techno W4WG 2 Stn Starter Kit £149(a)  
Techno W4WG 1 Stn Add-on Kit £69(a)

### Techno Hardware only Kits

For those users with MS W4WG 3.11 installed

Techno 5 Stn Starter Kit H/W only £175(a)  
Techno 2 Stn Starter Kit H/W only £66(a)  
Techno 1 Stn Add-on Kit H/W only £35(a)

### NOVELL Personal Netware

Personal Netware (PNW)	£44(b)
<b>Techno Personal Netware Kits</b>	
Techno PNW 5 Stn Starter Kits	£199(a)
Techno PNW 2 Stn Starter Kits	£85(a)
Techno PNW 1 Stn Add-on Kit	£49(a)

### LANTASTIC v6.0 EASY - SAFE AFFORDABLE

NodeRunner 2000SI 1 node kit ...	£99
2 node kit .....	£180
A1 software Win + Dos only .....	£65
5 pack .....	£245
NodeRunner 2000SI card only .....	£69
5 pack .....	£265
A1 upgrade 1 user .. £29 5 user	£79
10 user .....	£125
Lantastic for OS/2 1 user .....	£69
5 user .....	£299
Lantastic Central Station II .....	£Call
Lantastic Utility Pack .....	£199
Lantastic Powersulte .....	£Call

# WORLD WAR II V 50 YEARS

Investigate using military archives what happened 50 years ago.  
 D-DAY special edition (MPC) "The war in Europe" £20  
 The World War II Archives (MPC) "complete war archives" £75  
 World War II Encyclopedia "European Theatre" (MPC) £39

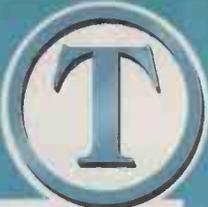


**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



## CD-ROM DRIVES (a)



Model	Access	Transfer	Video CD AT Card	Loading	INT Bare	EXT Bare	INT Kit	All the below use MPC2 and multi-session compatible
<b>SCSI I/F DRIVES</b>								
Nakamichi MBR-7	380ms	300kb (2X)		Caddy (7)		£275		£359
NEC 3xp+	250ms	450kb (3X)	£42 (16b)	Tray		£244		£286
NEC 6x/e	200ms	900kb (6X)	£42 (16b)	Caddy	£264	£341	£306	£383
Panasonic LF1004	150ms	600kb (4X)	YES	Caddy	£499	Panasonic PD	£589	
Pioneer DRM624X	150ms	660kb (4.4X)	YES	Caddy (6)		£419		£499
Pioneer DRU124X	150ms	660kb (4.4X)	YES	Tray	£189		£255	
Toshiba XM3601	150ms	660kb (4.4X)	YES	Tray	£208	£277	£264	£341
Toshiba XM3701	130ms	1Mb (6.6X)	YES	Tray	£POA	£POA	£POA	£POA
Toshiba XM5301	190ms	600kb (4X)	YES	Tray	£135		£209	
<b>GENERIC I/F DRIVES</b>								
Backpack Quad speed		600kb (4X)		Tray		£255	(Parallel port)	
CD952 PCMCIA drive	350ms	300kb (2X)		Tray		£249		
Panasonic CR562	320ms	300kb (2X)		Tray	£48	(+cables+s/w)	£58	
<b>IDE I/F DRIVES</b>								
Aztech CDA268-01	320ms	300kb (2X)	YES	Tray	£49	MPEG drive	£60	
Aztech CDA468-01	235ms	600kb (4X)	YES	Tray	£95		£106	
Aztech CDA668-01	150ms	900kb (6X)	YES	Tray	£149		£160	
Mitsumi FX300	250ms	450kb (3X)		Tray	£65		£76	
Mitsumi FX400	230ms	600kb (4X)	YES	Tray	£99		£110	
NEC Quad 4X	220ms	600kb (4X)	YES	Tray	£109		£120	
Pioneer DRUA124X	150ms	600kb (4X)	YES	Tray	£118		£129	
<b>CD-RECORDERS</b>								
HP Surestore 4020i	N/A	300kb(2X)					£799 (a)	
Plasmon 2X recorder	N/A	300kb (2X)					£899(a)	
Philips CDD2000	N/A	300kb (2X)		Caddy			£999(a)	
Yamaha CDR102	N/A	300kb (2X)		Tray			£999(a)	
New CD-Recorder kits include Cables +SCSI controller + mastering software incat sw								
COREL Creator SW(CO				Multi	£115 (b)			
Recordable CD media (TDK)	10 off	74min	£55(b)		100 off	74min	£490 (a).	(1-4X speed)

Kits include AT interface card, data cable and software. ADD £9 for Photo-CD Access. NEC PAR IIF shuttle Adaptor £90(b). Dual IDE cable may be necessary for connecting IDE drives to H.D. £8. Mitsumi 2nd IDE IIF card £11 (b). Bare SCSI drives require audio(see Creative page) and data cables, s/w drivers supplied with your SCSI IIF card. Please ensure IDE CD-ROM drives are compatible before placing order.

## PIONEER

The Pioneer DRU-A124X is one of the fastest IDE based quad speed CD-ROM drive's currently available with a random access time of only 150ms. The transfer rate is an equally impressive 614kb/s. A free shareware A free shareware CD-ROM is included.



**ONLY £118(a)**

**DRU-A124X ONLY £118(a)**  
**DRU-A124X + SB16 Value IDE Kit £178(a)**  
**DRU-A124X + SB AWE32 Value IDE Kit £238(a)**

## SPEAKER SPECTACULAR!

**SCREENBEAT 3(2W) TECHNO HI-FI PRO (25W)**



Purchase a soundcard or CD-Drive from us to take advantage of these fantastic speaker offers!



**£10 (b) (ex VAT)**

**£25 (b) (ex VAT)**

## VIDEO EDITING

**VIDEO CAPTURE BOARDS -VIDEO FOR WINDOWS REAL TIME COMPRESSION.**

ADOBE PREMIERE FOR WINDOWS V4.00	£399(a)
INTEL SMART RECORDER PRO	£285(a)
MIRO 20TD LIVE "PCI OR VLB vers"	£298(a)
VIDEO BLASTER RT300	£265(a)
VIDEOSPIGOT	£84(b)
VIDEOBLASTER SE-100	£165(a)
VIDEOBLASTER RT300	£240(a)
<b>CREATIVE SHAREVISION PC3000</b>	<b>£840(a)</b>
Miro DC1 + VideoStudio (SVHS In & Out !)	£339(a)
Miro DC1 + Premiere (SVHS In & Out !)	£430(a)
Miro DC1 PRO + VITC Controller (SVHS In & Out !)	£799(a)
Miro MPEG-1 encoding s/w	£185(a)
Black Widow VGA-PAL encoder Professional Plus	£219(a)
Black Widow VGA-PAL encoder Professional -R/C	£195(a)
Techno MPEG Playback card. 24bit chips used in philips CDI machines.	
No feature conn	£180(b)
Nogavision PCMCIA Video digitiser	£379(b)

## HAUPPAUGE



WIN-TV CELEBRITY	£259(a)
Amazing combination of television/teletext card.	
WIN-TV CELEBRITY+OS/2 WARP OFFER	£295(a)
WIN-TV CELEBRITY VIDEO OUT MODULE	£149(b)
WIN-TV CELEBRITY + UPDATA TELESARES	£349(a)
Amazing combination of television/teletext card and Updata share capture software. Please call for details. C4, current share data supplied on request.	
WIN-TV CELEBRITY + VIDEO OUT+VIDEO DIRECTOR V2	£449(a)
Desktop video editing based on WIN-TV CELEBRITY requires compatible Video Camera & Recorder.	

## SPECIAL OFFER

Buy a CD-ROM drive from us and select an incredible CD-ROM at an amazing price. Promotionally packaged.



**Encarta 95**  
 An easy to use encyclopedia for all the family. 26,000 articles with video pictures and sounds.  
**Grolier 95**  
 An easy to use encyclopedia designed for academia. 29,000 articles with video pictures and sounds.  
**Works 3**  
 Popular integrated wordprocessor/spreadsheet package, with multimedia training/help.

## ATTICA 95 OFFER

- Five of the best educational CD-ROMS !
- HUTCHINSON MULTIMEDIA ENCYCLOPEDIA 95 (MPC).** This single volume encyclopedia contains over 27,000 articles, 2000 images and 250 audio clips.
  - INTRODUCTION TO CLASSICAL MUSIC (MPC),** explore classical music with this indispensable guide. Contains more than 3 hours of excerpts from over 200 pieces.
  - THE DAILY TELEGRAPH 1992 (MPC),** contains a full years edition of the Daily & Sunday Telegraph 1992. Complete with sophisticated search facility using words, dates and subjects.
  - THE INTERACTIVE PERIODIC TABLE (MPC),** examine the elements through animation's and pictures.
  - WORLD WAR II ARCHIVES (MPC),** re-live the events of World War II through the actual sites and sounds of history. Film, photos and documents are sourced from the Imperial War Museum.
- Available purchased with hardware **ONLY £92**

## GROLIER 95 BUNDLE

- MPC GROLIER ENCYCLOPEDIA 95 CD-ROM,** this contains 21 volumes of a true multimedia encyclopedia including Video for windows films (AVI), pictures and sounds
  - MPC WORLD ATLAS V5.0,** new maps of the world, with detailed statistics, AVI films and photographs.
  - MPC GUINNESS DISK OF RECORDS 94,** the latest records, a multimedia guide.
  - MPC ANIMALS,** 1300 photos. 2500 pages of 200 animal descriptions.
  - MEGARACE !** Award winning 3D race game.
  - MPC PREHISTORIA,** investigate ancient animals. 100's drawings.
  - CD SAMPLER,** Mindscapes product sampler on CD-ROM.
- Available purchased with hardware **ONLY £59**

Multimedia - Hardware

# THE SOURCE TECHNOLOGICAL

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

### Telesales Hours

Mon-Fri: 8am to 7pm  
Sat: 9am to 5pm  
Callers welcome - check availability for collection  
Prices valid from 2/11/95

## NEW TECHNOLOGICAL PRO 95 MULTIMEDIA UPGRADE KITS

### NEW TECHNOLOGICAL PRO 95 multimedia upgrade kits TEAC CD-56E BASED Kits

Complete multimedia solutions at Technomatic prices with the world's most popular family of sound cards, based on the ultra-fast TEAC CD-56E six-speed CD-ROM drive. Which with an access time of only 139ms is ideal for video for windows, and fully Video-CD compatible and Windows 95 certified.

- Fast access time 139ms.
- Six speed 900kb/sec transfer rate.
- Enhanced IDE interface.
- Multisession, photo-CD compliant.

Microsoft family pack and the brilliant TECHNO HI-FI PRO (25VW) mains speakers with volume, bass and treble controls, are included with kits 2PP-5PP. Only Creative Labs full retail products used, bundled with the latest full software suite and full UK Creative technical support. Only full UK retail boxed TEAC drives used, with UK technical support and warranty.

- KIT 1PP TEAC CD-56E drive +AT bus interface card £204(a)
- KIT 2PP 5B16 VALUE + TEAC CD-56E +TECHNO HI-FI PRO SPEAKERS £315(a)
- KIT 3PP 5B16 PRO ADSP + TEAC CD-56E +TECHNO HI-FI PRO SPEAKERS £359(a)
- KIT 4PP 5B AWE VALUE + TEAC CD-56E +TECHNO HI-FI PRO SPEAKERS £368(a)
- KIT 5PP 5B AWE-32 + TEAC CD-56E +TECHNO HI-FI PRO SPEAKERS £425(a)

### MICROSOFT FAMILY PACK

An amazing bundle of Microsoft CD-ROM's. The Microsoft CD-ROMs are MS Encarta 95, MS Works for Windows, MS Dangerous Creatures, MS Money, MS Golf and MS Scenes + Aldus Photostyler SE provided with Creative 563 drive. Scenes is on a 3.5" disk, money is part of works.

### PIONEER DRU-A124X BASED Kits

Complete multimedia solutions at Technomatic prices with the world's most popular family of sound cards, based on the superb Pioneer DRU-A124X quad-speed CD-ROM drive. Which with an access time of only 150ms is ideal for video for windows, and fully Video-CD compatible and Windows 95 drivers available.

- Fast access time 150ms.
- Quad speed 600kb/sec transfer rate.
- Enhanced IDE interface.
- Multisession, photo-CD compliant.

Microsoft family pack and the brilliant TECHNO HI-FI PRO (25VW) mains speakers with volume, bass and treble controls, are included with kits 2PP-5PP. Only Creative Labs full retail products used, bundled with the latest full software suite and full Creative technical support.

- KIT 1PP PIONEER DRU-A124X drive +AT bus interface card £125(a)
- KIT 2PP 5B16 VALUE+PIONEER DRU-A124X+TECHNO HI-FI PRO SPEAKERS £239(a)
- KIT 3PP 5B16 PRO ADSP +PIONEER DRU-A124X +TECHNO HI-FI PRO SPEAKERS £289(a)
- KIT 4PP 5B AWE VALUE +PIONEER DRU-A124X +TECHNO HI-FI PRO SPEAKERS £309(a)
- KIT 5PP 5B AWE-32 +PIONEER DRU-A124X +TECHNO HI-FI PRO SPEAKERS £359(a)

Only Technomatic can offer you the best full retail CD-ROMS at a fraction of their RRP.

Attica Interactive French Tutor (MPC)	Classical Library (MPC)	Hyperglot Learn To Speak Spanish V3.0 (MPC)	Interactive Space Encyclopedia (MPC)	Jupiter Impact (MPC)	Magic Carpet Game "rated 5/5"	GIFS Galore (MPC) i1000's GIFS	So Much Space

### CHILDREN CD-ROMS

- 3D Body Adventure ages 7+, rated 4.5/5 £26
- 3D Dinosaur Adventure ages 4-11 £26
- Arthur's Teacher Trouble ages 3+ £24
- BodyWorks Voyager iHuman body for young children £26
- Bugs! An Insect Adventure £21
- DK Incredible Cross-Section Stowaway (MPC) "4+" £25
- DK My First Amazing Dictionary (MPC) £25
- DK P B Bears Birthday Party (MPC) £24
- DK The Way Things Work (MPC) ages 4+ £33
- Fatty Bears Birthday Surprise "rated 5/5" £27
- Freddie Fish "rated 5/5" £27
- Jungle Book £27
- Just Grandma And Me £25
- Magic Theatre "children create their own plays 5+" £27
- Mano is Missing Deluxe (MPC) "rated 4.5/5" £20
- Mano Teaches Words (MPC) £17
- Mavis Teaches Typing for kids (MPC) £17
- MS Creative Writer (MPC) £22
- MS Explorapedia The World Of Nature (MPC) £22
- MS Fine Artist "iMPC" £22
- MS Gahan Haunted House (MPC) £28
- MS Magic Bus - Human Body (MPC) £27
- MS Magic Bus - Solar System (MPC) £27
- Ruffin Bone "ages 3+, rated 4.5/5" £29
- Sesame Street Letters "ages 3-6" £26
- Sesame Street Words "ages 3-6" £26
- Sintom £29
- Where In The World is Carmen Deluxe £36
- Word World for children (Fr, Ger, Eng langs combined) £29
- Britannica Family Choice (Educ. Games) £15

### DTP AND IMAGES

- Corel Artshow 3 + book (MPC.CO) £13
- Corel Artshow 4 + book (MPC.CO) £19
- Corel Artshow 5 + book (MPC.CO) £20
- Corel Draw V4 (MPC, CD ONLY) £84
- Corel Draw V5 (MPC, CD ONLY) £278
- Corel Draw V6 (MPC, CD ONLY) £275
- Corel Draw V6 UPD (MPC, CD ONLY) £145
- Corel Gallery V2.00 (MPC, iOK + Clipart.CO) £45
- Garden Of Unearthly Delights "William Latham IBM" £25
- Great Artists (MPC) "Wonderful art guide, rated 4.5/5" £29
- GIFS Galore £9
- Hulton Deutsch People Disk (MPC) £78
- "1000's famous photographs, from the past fifty years"
- Investigating 20th Century Art (MPC) "Tate Gallery" £79
- MS National (art) Gallery (MPC) £27
- Passion For Art (MPC) "Herman Hilles collection, rated 5/5" £49
- The Louvre (MPC) "rated 4.5/5" £29
- Walkthrough's & Flybys (500MB Animations+book) £19
- Colour Magic Clip-Art £10
- Deep Voyage (Media Clips) £6
- Fractals (Walnut Creek) £10
- Laser Printer Companion (fonts etc.) £10
- Picture Library Vol1 £6
- Publishers Paradise (>150 true type fonts) £10

### DICTIONARIES & ENCYCLOPEDIA

- CIA World Factbook 1995 (MPC) £15
- Compton's Interactive Encyclopedia 96 (MPC) £38
- Grolier Encyclopedia 1996 V8 (MPC) £49
- Guinness Disc Of Records 1994 (MPC) £26
- Hutchinson's Encyclopedia 1995 (MPC) £29
- Mindcape Reference Library (MPC) "Budget Bookshelf" £39
- MS Bookshelf 95 (MPC) £39
- MS Encarta Encyclopedia 96 (MPC) £32
- Oxford Compendium (MPC) £45
- Oxford Concise Dictionary (MPC) £31
- Oxford Dictionary Of Quotations (MPC) £31
- Oxford English Dictionary V2: 499 RRP" (MPC) £359
- Oxford Reference Shelf (MPC) £45
- "Includes Writers, Business, Language, and science shelf"
- Oxford Study Shelf (MPC) £25
- Oxford Textbook Of Medicine (DOS) £280
- Oxford Thesaurus (MPC) £31
- Warplanes Vol1 (MPC) £19

### ENTERTAINMENT

- CH-ESSMASTER 4000 TURBO (MPC, ST, 386+) £25
- Dark Forces £28
- DOOM 2 game £34
- DOOM the Ultimate Flight Unlimited £35
- Full Throttle £33
- Fury £29
- High Octane iBrilliant, Brilliant 3D game" (EA) £33
- Lemmings 182 ONLY £15
- Magic Carpet-Hidden Worlds extra disc (EA) £19
- MS Flight Sim 5.1 (MPC) £22
- MS Golf (MS) £24
- Myst (PC) BEST SELLER £26
- PGA Golf 486 £31
- Populous II & Powermonger (EA) ONLY £10
- Rebel Assault (CD Starwars) £28
- Sim City 2000 for windows £25
- Strike Commander (EA) ONLY £10
- Wing Commander II (EA) ONLY £10
- Wing Commander Privateer (EA) ONLY £10
- Elite II Frontier £8
- Estatica £19
- Sherlock Holmes Consulting Det III (ST) £15
- System Shock £19
- Video Cube (MPC) £10

### E.A BUY ONE GET ONE FREE OFFER

FIFA Soccer (EA), Theme Park (EA) & Magic Carpet (EA) please call for details

### GEOGRAPHY

- 3D World Atlas (MPC) i3D flights, rated 4.5/5 £33
- DK World Reference Atlas (MPC) £36
- Global Explorer ixdetailed maps of countries" £41
- ITN European Atlas (MPC) £31
- MS Autoroute Express (MPC) £44
- Precision Mapping USA (+USA Phone CD) £49
- Toolworks World Atlas V5.00 (MPC) £27
- America Alive (MPC) £15

### HISTORY

- 20th Century Almanac (VESA required, 5CDs) £95
- Complete History (3CD) Consists - £99
- "US History, History Of The World, Countries Of The World"
- Discoverers "The age of discovery, US, AUS etc." £27
- DK History Of The World (MPC) £33
- Medieval Realms (MPC) £149
- Medio Vietnam (MPC) £26
- MS 500 Nations (MPC) £31
- MS Ancient Lands (MPC) £22
- The World War II Archives (MPC) "complete war archives" £75
- World War II Encyclopedia iEuropean Theatre" (MPC) £39
- Proter Prehistoria (MPC) £30
- Timetable Of History Arts & Entertainment £10
- Timetable Of History Science & Technology £10
- USA Wars-Korea £15
- USA Wars-Vietnam £15
- USA Wars WWII & Medabitz (MPC) £15

### LANGUAGE

- Attica interactive French Tutor (MPC) iGCSE" £79
- Hyperglot Learn To Speak French (MPC) V3.0 £45 (each)
- Hyperglot Learn To Speak Spanish, French (MPC) V4.0 £69 (each)
- British Think And Talk German, French, Italian, Spanish (MPC) £84 (each)

### LEISURE GUIDES

- MS Cinemania 96 (MPC) £24
- MS Cooking For Windows (MPC) £31
- MS Wine Guide (MPC) £31
- ADVENTURES (MPC) "Adventure Holiday Guide" £10
- Internet iNFO "The CD Net guide, i2K docs" £10
- Wines Of The World (MPC) "Guide To Wine" £10

### LIFE SCIENCES

- Animals (San Diego Zoo, DOS) £17
- Animals (San Diego Zoo, MPC) £17
- BodyWorks V3.00 (MPC) £22
- BodyWorks V4.00 (MPC) "human body/for students" £31
- British Birds (MPC) iRSPB Encyclopedia" £135
- DK Encyclopedia Of Nature (MPC) £33
- DK The Ultimate Human Body (MPC) £33
- Family Doctor V3 (MPC) iHome cures for common ailments" £17
- MS Dangerous Creatures (MPC) £22
- MS Dinosaurs (MPC) £22
- MS Dogs For Windows (MPC) £22
- NEW Dictionary Of The Living World (MPC) £29
- The Living Body "Human body GCSE A level" £189
- Whales And Dolphins (MPC) £38
- Yoga "different positions for relaxation" £15
- Endangered And Threatened Species £15
- The Big Green Disk (MPC) £19
- The Zoo (MPC) £19

### LITERATURE & BOOKS

- Library Of The Future 3rd Ed (MPC) NEW £99
- Oxford Shakespeare "Complete Works" (MPC) £24
- Complete Works Of Twain (MPC) £15
- Factomatic Executive, Sales Manager (MPC) £20 each

### MAGAZINES & NEWSPAPERS

- ITN World News 93 (MPC) £19
- Time Mag Almanac 1994 (MPC) £69
- (Mindcape+Attica+Microsoft) Sampler Trio £6
- Time Mag Almanac 92 + CIA factbook (DOS) £20

### MUSIC

- Beethoven 5th (MPC) "rated 4/5" £19
- MS Beethoven (MPC) "9th Symphony" £22
- MS Composer Collection (MPC) £47
- Introduction To Classical Music (MPC) £30
- MS Soundbits (MPC, cartoon, world teach) £21
- Soundbits are floppy based
- MS Mozart (MPC) "The String Quartet" £22
- MS Musical Instruments (MPC) £22
- MS Schubert (MPC) "Trout Quartet" £22
- MS Strauss (MPC) "Three Tone Poems" £22
- MS Stravinsky (MPC) "Rite Of Spring" £22
- Tchakovskiy's 1812 Overture (MPC, ST) £15

### PROGRAMMING

- C Users Group Library (WC) £10
- Source Code (WC) £10

### RELIGION

- Dead Sea Scrolls (MPC) "uncover the bible foundations" £45
- World Religions (MPC) "History, practices, beliefs" £39
- Creation Stories (MPC) "egg & turtle cosmologies etc" £20
- Illustrated Bible "The complete Bible + pics" £10

### SCIENCE & EDUCATION

- A Brief History Of Time (MPC) "Hawking's book" £25
- Aviation Adventure £29
- Computer Works "Guide to how computers work" £24
- DK The Eyewitness Encyclopedia Of Science (MPC) £33
- Electricty & Magnetism "GCSE electricity" £24
- Encyclopedia Of Science & Technology (MPC) £899 (a)
- PC Computing-How Multimedia Computers Work (MPC) £25
- McGraw-Hill Science Navigator (MPC) £109
- PUSH-CD "University Guide" £95
- The Interactive Periodic Table (MPC) £59
- MPC MILITARY TITLES (Picture, sound & videos. Encyclopedias of military equipment)
- Russian Military 3CD: NEW (MPC) £24
- USA AIR 6CD: (MPC) £48
- USA Army 4CD: (MPC) £32
- USA Navy 7CD: (MPC) £66

- Science Adventure ii "science becomes easy for children" £27
- Complete House (MPC) £15
- Energy Resources (BT) £25
- Speed Adventure (KA) £25
- World Of Flight "Plane Pictures" £10
- World Of Trains "Tran Pictures" £10

### SHAREWARE

- Scientific Library eScientific shareware, Aug 94" £15
- Gen Shareware Vol V (MH Black box 6) £6
- Giga Games "100's great shareware games" £6
- Krks Comm Disk "modems etc, July 94" £6
- Shareware Overload Tino "3-CD super shareware bundle" £10
- Sintel Repository "2-CD super shareware Sept/Oct 94" £10
- So Much Shareware Vol 3 £6
- Ultimate Shareware Vol 2 £6
- Win Platinum "windows shareware" £6
- WorldVision Shareware "3-CD super shareware bundle" £15

### SOFTWARE

- Mavis Beacon Teaches Typing V3 (MPC, ST) £25
- MS Multimedia Viewer (MPC) £195
- MS Works For Windows V3.00 (MPC) £68

### SPACE

- Redshift (MPC) "best selling astronomy program" £32
- Small Blue Planet (MPC) "explore the Earth" £35
- Space Adventure (OT) £29
- Earth And Universe "GCSE Astronomy/physics" £15
- Space & Astronomy (100's pics, WC) £8

### 95 BUNDLE SPECIALS (b)

- Buy a CD-Drive or multimedia kit from Technomatic, and choose from a selection of top class CD-ROM titles <— MAKE VERY BOLD
- 7th Guest £12
- Animals of San Diego Zoo (MPC) £12
- Arthur's Teachers Troubles (MPC) £14
- Authorware Star "Multimedia authoring" (MPC) £25
- Beethoven's 5th Symphony (MPC) £14
- ChessMaster 4000 (MPC) £14
- Compton's Encyclopedia 1995 (MPC) £23
- Family Doctor V3.00 (MPC) £16
- Grolier V7 encyclopedia 95 (MPC) NEW £15
- Guinness Book Of Records 93 (MPC) £16
- Indy Car Racing £12
- Just Grandma & Me (MPC) £14
- Library Of The World (MPC) £40
- Lotus 123 (MPC) £40
- Macromedia Action (MPC) £25
- Mano is Missing CD Deluxe £14
- Mano's Playschool £14
- Mano Teaches Sums £14
- Mavis Beacon Teaches Typing (MPC) £16
- Mayo Family Clinic (MPC) £16
- Mega Race £6
- Prehistoria (MPC) £16
- World Atlas V5.00 (MPC) £16

# WINNER 1994 COMPUTER SHOPPER READERS AWARD



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



Quality Software

## INTEGRATED

### MICROSOFT OFFICE

Microsoft	Full	Upg	Comp	IMLP
Office 95 Standard	332	139	163	289
Office 95 Professional	429	204	245	370
Office 4.2 Standard	325	161	218	285
Office 4.3 Professional	429	245	285	361
Office 4.2 for NT	342	-	-	-
Please specify CD or 3.5" media				
EURIB0244 Microsoft Office Assistant Win	-	-	-	55

### LOTUS SMARTSUITE

Lotus	Full	Upg	Comp	IMLP
SmartSuite v4	293	158	158	284
SmartSuite 96 Win 95	293	158	158	-
Notesuite	665	-	-	453
Please specify CD or 3.5" media				

### NOVELL PERFECT OFFICE

Novell	Full	Upg	Comp
Perfect Office v3 Std 3.5	264	119	154
Perfect Office v3 Std CD	264	119	-
Perfect Office v3 Pro 3.5	348	179	205
Perfect Office v3 Pro CD	348	175	-

\*See Novell Page for Special Offers!

## ACCOUNTING

### SAGE

EURFNO197 Sage Financial Controller V7 Dos	317
EURNT0384 Sage Financial Cont. Lan Dos	497
EURFNO196 Sage Accountant Plus V7 Dos	240
EURNT0383 Sage Accountant Plus Lan Dos	393
EURFNO195 Sage Accountant V7 Dos	159
EURFNO194 Sage Bookkeeper V7 Dos	55
EURFNO205 Sage +2 Financial Cont. Win v3	349
EURNT0388 Sage +2 Financial Cont. Lan Win	548
EURFNO206 Sage +2 Accountant Plus Win v3	270
EURNT0387 Sage +2 Accountant Plus Lan Win	463
EURFNO207 Sage +2 Accountant Win v3	189
EURFNO208 Sage +2 Bookkeeper Win v3	84
EURFNO191 Sage Moneywise V2	35
EURFNO192 Sage Instant Accounting Win	85
EURFNO198 Sage Payroll II Dos v5	135
EURNT0385 Sage Payroll II Network	165
EURFNO204 Sage +2 Payroll Win	135
EURFNO193 Sage Instant Payroll Win	68

### INTUIT

FN 2 2 2 3 Intuit QuickBooks v3.0 Win	84
FN 2 1 9 4 Intuit Quicken 4.0 Win 3.5"	25
FN 2 1 7 0 Intuit Quicken 4.0 CD	25
EURFNO115 Intuit Quicken 4 Deluxe Home Pack Win	45
EURFNO114 Intuit Quicken 4 Deluxe Business Pack Win	45
FN 2 1 4 3 Intuit Quicken V6 Dos	32

EURFNO188 Tas Books Accounting	76
EURFNO003 MS Money V3 Win	25
EURTX0004 Which? - Tax Calc for Windows	35
FN 2 1 4 3 M.Y.O.B. v5.0 Win 3.5"	135
EURFNO219 MS Money v4 Win 95 CD	29
EURFNO216 MS Money v4 Win 95 3.5"	29

## SPREADSHEET

Microsoft	Full	Upg	Comp	IMLP
Excel v5 Win 3.1	224	85	129	196
Excel v7 Win 95	225	82	107	195
B S 1 0 3 5 3 MS Excel V5.0 for Windows NT CD	235	-	-	218
EURFNO124 Crystal Ball (Add-On for Excel 5.0)	-	-	-	218
Lotus	Full	Upg	Comp	IMLP
Lotus 123 v5 Win 3.1	219	88	88	193
Lotus 123 v4 DOS	287	-	-	246
Lotus 123 v2.4 DOS	245	-	-	212
S S 0 2 3 2 Quattro Pro V5.5 DOS	45	-	-	149
EURSS0052 Quattro Pro V6 Win 3.5" + CD	149	-	-	35
U P 2 9 6 3 Quattro Pro v6 Upg Win	35	-	-	69
B S 7 4 7 3 CA Supercalc V5.5 Dos	69	-	-	170
EURNT0302 CA Supercalc V5.5 Lan 3 User	170	-	-	68
EURBS0008 CA Supercalc Win	68	-	-	-

Please call for the latest products and prices. Education and volume purchase discounts are available. Call our friendly sales team.

**from £139**

**from £158**

**from £119**

## DATABASE

### MICROSOFT

Microsoft	Full	Upg	Comp	IMLP
Access v7 Win 95	225	82	107	Call
Access v2 Win 3.1	224	82	129	Call
Access Developers Kit v2	225	-	-	-
D B 0 4 4 6 MS Access Developers Toolkit Win 95 3.5"	Call	-	-	-
V Visual FoxPro v3 Std	142	99	-	121
V Visual FoxPro v3 Pro	312	199	-	-
FoxPro v2.6 Std DOS	71	-	-	-
FoxPro v2.6 Pro DOS	275	-	-	-
FoxPro v2.6 Std Win 3.1	71	-	-	-
FoxPro v2.6 Pro Win 3.1	287	-	-	-

### BORLAND

D B 0 4 4 9 Visual dBase 5.5 for Windows	209
D B 0 4 5 0 Visual dBase Compiler for Visual dBase 5.5 for Windows	169
EURUP1638 Visual dBase 5.5 Win upgrade	55
EURDB1010 Borland Visual DBase v5.5 Client Server Win CD	349
EURUP1706 Borland Visual DBase v5.5 Client Server Win Upg CD	159
D B 0 3 8 3 Borland Dbase 5 Dos	298
U P 2 6 5 3 Borland Dbase 5 Dos Upg	138
EURS11077 Borland Dbase 5 Dos Comp. Upg	140
D B 0 1 0 3 Borland Paradox V4.5 Dos	274
D B 0 4 0 3 Borland Paradox V5 Win	95*
U P 2 4 5 3 Borland Paradox V5 Win Upgrade	69
EURDB0003 Borland Paradox V4.5 Dos Runtime	138
D B 0 4 4 2 Borland Paradox V5 Win Runtime	235
EURDB0116 Borland Report Smith (Pc) v2.5	59
D B 0 4 4 3 Borland Report Smith (Pc+Sq) v2.5	199

\*See free Compuserve offer with Delphi Advert

### DATAEASE

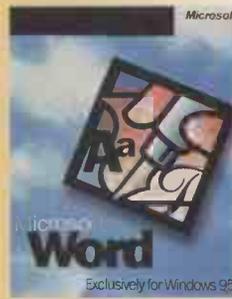
EURDB0165 Dataease V4.53 Dev. Edition	1199
EURDB0166 Dataease 5 Dos	370
EURUP1640 Dataease 5 Dos Upgrade 3.5"	149
EURDB0167 Dataease 5 Windows	98
D B 0 4 4 3 Dataease 5 1 User Network Lic	238
EURDB0145 Alpha 5 for Windows	69
D B 0 4 3 8 Alpha 5 Home & Business Edition	39
EURDB0176 Aksam v2 Win 3.5"	94
L N 3 2 2 1 CA Clipper V5.3 DOS	289
EURDB0157 Cardbox Plus V4.1	176
EURDB0158 Cardbox for Windows	192
EURDB0162 Crystal Reports Std v4 Win	129
EURDB0163 Crystal Reports Prof v4 Win	249
EURNT0316 Crystal Reports Server	699
D B 0 1 4 4 Claris Filemaker Pro v2.1 Win	84
D B 0 3 5 3 Lotus Approach V3 Win	81
EURBS0362 Lotus Approach 96 Win 95	81
B S 9 4 2 4 R&R Report Writer Win (XBase)	175
EURWP0575 Symantec Q&A V5 Dos	215
D B 0 2 6 3 Symantec Q&A V4.0 Win	142
EURNT0402 Symantec Q&A Lan 3 User Pack Win	235

## INTEGRATED

EURBS0354 MS Works V4 Win 95 3.5"	55
EURBS0365 MS Works v4.0 Win 95 & Bookshelf 95 CD 79	79
B S 5 7 4 6 3 MS Works V3 Dos	83
EURLP0434 MS Works Dos 1 Lic	84
EURBS0363 MS Works V3 Win	82
B S 8 6 7 0 MS Works V3 Win CD	68
EURUP1580 MS Works V3 CCP Upg	49
EURLP0432 MS Works Win 1 Lic	74
EURUT1453 OfficeBox '95 Win 95 3.5"	59
B S 7 2 0 3 Lotus Symphony V3	373
EURIB0256 WP Works v1 Dos	45
EURXX Novell PerfectWorks Win	Call
EURIB0234 CA Simply Business Win	25
B S 1 0 3 6 3 Claris Works V3 Win	87
B S 3 6 0 3 PFS Window Works Win	29
EURIB0246 PFS First Choice V3.02 Dos	29
B S 1 0 5 1 2 Corel Office Companion CD	65

## BUSINESS TOOLS

EURFNO221 Plan-it Business Plan v2.0 Win 3.5"	88
EURWP0186 Performance Now Win	99
B S 1 0 2 6 3 Austin-Hayne Employee Appraiser	89
B S 1 0 3 8 3 Business Plan Pro v1.0 Win 3.5"	59
B S 1 0 3 7 3 Marketing Plan Pro v1.0 Win 3.5"	59
EURCODE Which - Legal Letters	25
EURCODE BT Telepower Pro Win CD	35



**Word for Windows 95 Upgrade only £82**

## WORDPROCESSING

### MICROSOFT

Microsoft	Full	Upg	Comp	IMLP
Word v7 Win 95	225	82	107	Call
Word v6 Win 3.1	224	82	129	195
Word v6 DOS	172	-	-	-
Word v6 for NT CD	235	-	-	-

## NOVELL/WORDPERFECT

EURWP0110 WordPerfect 6.1 Win	165
EURWP0193 WordPerfect V5.2 Plus Win	189
U P 1 1 8 3 WordPerfect V6 Dos Upg	81
EURUP0358 WordPerfect V6.1 Win Upg	62
EURS0023 WordPerfect V6.1 Win Comp Upg	75
W P 2 3 3 3 WP Grammatik 5 Dos	28
W P 2 6 0 3 WP Grammatik 6 Win	28
EURUT1404 Novell Convert Perfect 2.0 Win	85
EURUT1405 Novell Convert Perfect 2.0 Dos	39

## ACCENT - MULTILINGUAL

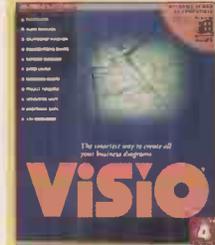
EURWP0572 Accent v2 Express Win	37
EURWP0570 Accent v2 Pro Win	189
EURWP0571 Accent v2 Special Edition Win	90
W P 2 6 9 8 Lotus Word Pro 96 Win 3.5"	84
EURWP0189 Top Level Fine Words Win	15
E D 2 8 2 3 Mavis Beacon Typing Tutor Dos	22
EURCODE Mavis Beacon Teaches Typing v4.0 Win 3.5"	25
U T 6 2 3 4 Word For Word v7 Dos	95
U T 6 2 3 5 Word For Word v7 Win	95
W P 0 4 5 3 Wordstar V7 Dos	223
EURWP0149 Wordstar V2 Win	28
EURWP0206 Wordstar Writing Tools*	25

\*While stocks last

## CHARTS & DIAGRAMS

B S 7 7 0 3 Calendar Creator Win V2	28
B S 9 9 9 3 Corel Flow Win 3.5" + CD*	42
EURCODE Corel Flow v3 Win 95	Call
B S 1 0 5 1 2 Corel Office Companion CD	65
EURCODE Corel Printhouse	19
EURGR1520 Easyflow for Windows	95
H H 8 0 3 Family Tree Maker Win	36
EURGR1462 Form Tools Gold	43
EURGR1647 Form Tools Gold Windows	49
EURGR1627 Fastcad Allclear III for Windows	75
EURCODE AllClear III Win Comp Upg 3.5"	85
B S 1 0 3 2 3 SPC Harvard Chart XL Win	69
B S 1 0 5 4 3 Chart XL v2.0 for Windows 95	148
EURUP1722 Harvard Chart XL v2.0 Win 95 Upg 3.5"	79
EURGR1695 Clear Orcharts Win 3.5"	79
B S 9 9 3 3 Inspiration for Windows	97
EURBS0040 Micrografix Windows Orchart	108
B S 1 0 4 0 3 Org Plus v3 Win	85
EURGR1628 Key Form Plus Designer Win	29
EURGR1470 Delrina Perform Win	59
EURGR1629 Visio 4 for Win & Windows 95	99
EURUP1623 Visio 4 Win & Windows 95 Upgrade	59
STEN CIL Visio Stencil (specify)	39
G R 9 1 5 3 Visio Express For Office Win	39
G R 9 1 4 3 Visio Express For SmartSuite Win	19
EURUP1586 Visio Technical Productivity Pk Add-on	110
EURGR1665 Claris Impact v2.0 Win/Win 95 3.5"	95
EURUP1648 Claris Impact v2.0 Win/Win 95 3.5" Upgrade	49

\*While stocks last



**Visio v4 Win & Win 95 Upg only £59**

## DESKTOP PUBLISHING

EURCODE Pagemaker v6.0 Win 95 3.5" + CD	379
EURGR1458 Adobe Pagemaker V5 Win 5 User	1375
EURBS0010 Adobe Pagemaker Classic Win	55
D T P 0 1 4 4 Adobe Pagemaker v6 Mac	439
N T 7 3 2 3 Adobe Acrobat V2 Win	135
N T 7 3 4 3 Adobe Acrobat Pro V2 Win	295
N T 7 3 3 3 Adobe Acrobat Pro V2 for Workgroups	1108
FT 0 1 0 3 Adobe Type Manager Win v3	48
EURFT1013 Adobe Plus Pack Win	105
G R 5 4 0 4 Adobe Streamline Win	135
G R 8 8 9 0 Corel Ventura VS Win CD only	199
S I 1 9 3 3 Corel Ventura VS Win Upg/Comp CD only	60
G R 8 2 3 3 Quark Xpress V3.31 Win	559
D T P 0 1 1 0 Quark Xpress Mac	609
EURGR1645 MS Publisher v3.0 for Windows 95 3.5"	65
EURGR1662 MS Publisher v3.0 for Windows 95 CD	65
G R 9 2 8 3 MS Publisher V2 Win	65
EURGR1690 Framemaker v5.0 Win 3.5" + CD	459
EURGR1526 PFS Publisher Win*	20
EURGR1525 PFS First Publisher Dos	25
EURGR1094 GST Pressworks V2.03 Win	25
G R 9 3 4 5 Serif Page Plus v3.0 Win	45
EURGR1673 Serif Page Plus Publishing Suite Win CD	75
G R 8 7 9 3 Kai's Power Tools Win	107
EURFT1020 Bistream Facelift Win	49
EURFT1029 GST - Headline Font Collection	16
G R 5 5 4 3 Fontographer Win	35

## CLIPART/IMAGES

G R 9 3 0 9 Corel Gallery v2 CD (15,000 Cliparts)	45
G R 8 0 8 0 Corel Artshow 3 CD	13
G R 8 1 3 0 Corel Artshow 4 CD	19
G R 9 1 5 0 Corel Artshow 5 CD	20
EURGR1101 GST Pictures Photo-CD Collection	17
EURGR1487 GST Clipart Portfolio Win (Pic 1)	17
EURGR1488 GST Clipart Gallery Win (Pic 2)	15
EURGR1528 PFS Power Album Win*	27
EURGR1522 Softkey Key Clip Master Pro Win CD	34
EURGR1524 Softkey Key Color Photo Pro Win CD	34
EURGR1523 Softkey Key Mega Clipart (7000 Images) Win CD	34
EURGR1513 IMSI Masterclips (6000 Cliparts) CD	61
G R 6 9 8 3 Incredible Image Pak Win & Dos (3.5")	49
G R 7 5 9 0 Incredible Image Pak Win CD ROM	49

\*While stocks last

# THE SOURCE TECHNO MATIC

Techno House, 468 Church Lane, London NW9 8UF

PRICES EXCLUDE VAT @ 17.5%

**Telesales Hours**  
 Mon-Fri: 8am to 7pm  
 Sat: 9am to 5pm  
 Callers welcome - check availability for collection  
 Prices valid from 2/11/95

Quality Software

GRAPHICS & DESIGN			£
Corel Draw Full	3.5 + CD	CD Only	
Corel Draw 3	62		42
Corel Draw 4	105		84
Corel Draw 5	355		278
Corel Draw 6			275
Corel Draw Upgrades	3.5 + CD	CD Only	
Corel Draw 5 from v4	145		115
Corel Draw 5 from v3	254		198
Corel Draw 6 from v5			145
Corel Draw 6 from v3/v4			229
GR 5 143	Adobe Illustrator V4 Win		319
EURGR1686	GST Designworks Win v3 3.5 + CD		35
EURGR1619	Freehand V5 Win CD		325
EURGR1489	Hijaak v3 Graphics Suite Win		99
EURCODE	Hijaak v5 Win 95 CD	Call	
EURUT1403	IMSI Graphics Converter Gold Win		33
EURGR1661	Micrografx ABC Graphics Suite Win 95 CD		205
EURUP1683	Micrografx ABC Graphics Suite Win 95 Upg/Comp	CD 99	
GR 6 2 53	Micrografx Graphics Works Win		75
GR 9 3 15	Micrografx Design Power Pack Win CD		345
GR 2 8 33	Micrografx Windows Draw Win		66
GR 9 1 33	Micrografx Designer v4.1 TE Win		288
EURUP0353	Micrografx Designer 4.1 TE Upgrade		99
EURCODE	Corel Xara Studio CD		179

IMAGE EDITING			£
GR 9 0 40	Corel Photo-Paint 5 Plus CD Win		48
EURGR0061	Adobe Photoshop V3 Win		397
UP 2 9 03	Adobe Photoshop v3 Win Upg		149
EURGR1149	Fractal Design Painter V3 Win		315
EURGR1491	Dabblor for Windows		75
GR 9 1 93	Micrografx Picture Publisher v5 Win		275
EURUP0441	Micrografx Picture Publisher 5.0 Upgrade		99
EURGR1541	PC Paintbrush V Win		25
GR 6 4 45	Micrografx Photomagic Win		59

ANIMATION/VIDEO			£
EURGR1459	Animator Studio Win 3.5		199
EURGR1041	Adobe Premiere v4 Win		348
EURCODE	Video Director Home v1.0 Win		45
EURCODE	Video Director Suite v2.5 Win		79
GR 3 1 63	Gold Disk Animation Works Interactive Win		179
EURGR1474	Gold Disk Add Impact Win		75

PRESENTATION			£
EURLN0060	Asymetrix Toolbook Win		185
EURLN0059	Asymetrix Mmedia Toolbook V3 Win		460
EURLN0067	Macromedia Director 4.0 Win CD		695
EURBS0270	Gold Disk Astound 2 for Win 3.5 + CD		149
SI 2 1 10	Astound v2.0 Win Upg 3.5 + CD		90
GR 2 3 03	SPC Harvard Graphics V3 Dos		275
GR 8 7 23	SPC Harvard Graphics V3 Win		185
GR 9 3 76	Harvard Graphics v4.0 Win 95 3.5		249
EURUP1723	Harvard Graphics v4.0 Win 95 Upg/Comp Upg 3.5		95
EURGR1532	SPC Harvard Graphics V2 Win + Powerpack		75
EURGR1025	SPC Harvard Graphics Presenters Pack		185
GR 9 1 83	SPC Harvard Spotlight Win		89
GR 9 3 49	Hardvard Montage Win		79
EURGR1694	ASAP Win 3.5		99
SI 0 0 03	Lotus Freelance 2.1 Win		258
EURUP1566	Lotus Freelance Graphics Win Upg/Comp		88
EURCODE	Lotus Freelance Graphics 96 Win 95		258
UT 6 2 39	Lotus ScreenCam V2.0 Win		89
GR 7 6 13	MS Powerpoint V4 Win		234
GR 9 2 03	Aldus Persuasion V3 Win		220

3D			£
GR 9 2 95	VS Simply 3D v1 CD Win		49
EURGR1533	VS Visual Reality v1.0 CD Win		295
GR 9 3 01	Truespace v1 Win		149
EURGR1625	Truespace v2.0 Win		369
EURGR1460	Asymetrix 3D FIX CD		99

MATHS & STATS			£
CA 0 4 30	Mathcad Win V6		169
CA 0 4 27	Mathcad Plus v6 Win		340
EURCA0067	Mathcad V6 Student Edition Win 3.5		35
EURBS0333	Mathcad DOS V2.5		259
EURBS0341	Mathematica V2.2 Dos		665
EURBS0343	Mathematica V2.2 Win		705
EURUT0153	Statgraphics V7 Dos		559
EURBS0337	Statgraphics Win		559
EURBS0338	Statgraphics Plus Win		855
EURGR1492	Longman Logotron Pinpoint v3 Win		495
BS10 476	JMP v3.1 Statistical Discovery Win 3.5		399

PROFESSIONAL CAD			£
CA 0 3 33	Autosketch V2 Win		95
EURCA0059	Autocad LT v2 Win		354
EURUP1542	Autocad LT v2 Win Upg from V1		95
EURUP1540	Autocad LT v2 Upg from Autosketch		299
EURUP1541	Autocad LT v2 Upg from Generic CAD		199
EURUP1539	Animator Studio Win Upg from Anim Pro 3		185
CA 0 2 7 4	Drafix Cad Ultra Dos		129
EURCA0054	Drafix Windows Cad V2.1		45
EURCA0055	Drafix Windows Cad Prof		145
EURCA0057	Drafix Quick Cad		55
CA 0 3 7 3	FastCad Floorplan Plus 3D Win		45
EURCODE	Fastcad Floorplan Plus 3D Win CD		45
EURCA0007	FastCad Floorplan+ 3D & 3D Design Plus		89
EURBN0023	FastCad Floorplan+ 3D + Estimator Win		75
CA 0 4 0 3	FastCad Visual CADD Win		399
EURUP1553	FastCad Visual CADD Win Upg or Comp Upg		169
EURCA0048	FastCad EasyCAD V4.0 Win		83
EURUP1657	FastCad EasyCAD v4.0 Upgrade Win		69
JZ 0 7 5 3	Softkey KeyCad Complete for Win		29
DB 0 2 1 3	Planix Win Office Management		87
EURCA0058	Planix Home Architect		39
EURCA0051	Turbocad 3D V3.2 Dos		54
EURCA0006	Turbocad Win		53
EURCA0068	X-CAD v3.0 Win/Win NT/Win 95 3.5		368

**The complete Digital Studio Bundle for your PC**

**Adobe PhotoShop 3.0 & OmniPage Direct OCR with FREE**

Microtek Scanner ii Af flat Bed Scanner with 16.7 million colours, 300x600dpi, 256 greyscale. Includes SCSI card and cables.

**All for only £449** While stocks last

DEVELOPMENT			£
<b>BORLAND</b>			
LN 3 1 60	Borland C++ 45 CD Win/Dos (On-line manual)		215
LN 3 1 70	Borland C++ 45 & Database Tools Win/Dos CD		329
LN 3 1 94	Borland C++ V2 OS/2 CD		295
EURLN0063	Borland Turbo C++ V3 For Dos		59
LN 3 2 04	Borland Turbo C++ 45 Win CD (On-line manuals)		62
EURLN0091	Borland Turbo Assembler & Debugger v4.5 Dos/Win		59
LN 3 1 93	Borland Visual Solutions v1.1 Pack Win		49
EURLN0033	Borland Delphi for Win CD*		155
EURLN0051	Borland Delphi Client/Server Win CD		659
SI 2 1 43	Borland Delphi Competitive Upg Win CD		120
EURUP1688	Delphi Desktop Upg to Delphi Client Server CD		555
UT 2 6 2 45	Borland Rad Pack for Delphi Win CD		125
EURLN0061	Borland Notes Add-on for Delphi Desktop CD		49
EURLN0084	Borland Notes Add-on for Delphi Client Server CD		199
EURDB0122	Borland Database Engine 2.0 Win CD		172
LN 0 4 43	Borland Turbo Pascal V1.5 Win		78
EURBK0087	Borland Pascal V7 DOS		79
DB 0 4 4	Borland Paradox V5 Developers Tools Win		135

MICROSOFT			
	Full	Upg	Comp
Visual Basic v4 Standard	65	39	-
Visual Basic v4 Professional CD	299	110	195
Visual Basic v4 Enterprise	620	359	-
Visual Basic v3 Win Std	72	-	-
Visual Basic v3 Win Pro	191	-	-
Visual Basic v3 DOS Std	85	-	-
Visual Basic v3 DOS Pro	192	-	-
EURLN0073	Microsoft Visual C++ V2 16/32 Bit CD NT		245
EURCODE	MS Visual C++ 4.0 CD		Call
LN 3 2 3 6	MS Visual C++ Subscription 4.0 CD		329
SI 2 1 7 6	MS Visual C++ 4.0 Upg CD		169
EURLN0068	Microsoft Fortran 77 V5.1		119
LN 2 0 8 3	Microsoft Macro Assembler V6.11		99

POWERSOFT			£
EURLN0092	Powersoft Portfolio Win CD		329
EURUT0416	Powersoft Adv Dev Kit Pwrbuilder Win 3.5		249
EURUT0417	Powrbuilder Desktop 4.0 Win CD		429
EURSI059	Powerbuilder Desktop 4.0 Comp Upg Win CD		159
LN 3 2 2 6	Watcom C/C++ 10.5 Win CD		179
EURSI097	Watcom C/C++ 10.5 Win CD Comp Upg		139
LN 3 2 2 7	Watcom SQL 4.0 Win CD		195

LANGUAGE TRANSLATORS			£
Language Assistant Win			45
Power Translator Win			98
Power Translator Pro Win			287
Power Translator Deluxe Win CD			129

Please specify French, German or Spanish



CONTACT MANAGEMENT			£
NT 7 5 2 9	MS Schedule + Win 95 3.5		75
NT 7 5 30	MS Schedule + Win 95 1 MLP		69
BS 1 0 6 4	Symantec Act V2.1 Dos		195
PM 0 3 4 3	Symantec Act V2 Win		129
PM 0 4 3 3	Symantec Act V2 Win 4 User Lan Pack		369
PM 0 2 1 3	Symantec 1st Act Win		79
EURPM1037	Sidekick 2.0 for Windows		29
EURPM1038	Sidekick 95 for Win 95		29
EURCODE	Ecco Pro v3.0 3.5		129
PM 0 5 7 3	Lotus Organizer v2.1 Win		82
EURLP0512	Lotus Organizer v2.1 Win Single Lic		75
EURPM1025	Microsoft Schedule+ Win		87
EURPM1023	Maximizer Win		225
EURPM1024	Maximizer Dos		229
EURN1030	Maximizer Win 5 User Lan pack		635
EURPM1029	Sage Telemagic Dos		169
BS 9 6 3 3	Novell/WordPerfect Infocentral Win 1.1		49

BOOKS/TRAINING			£
EURBK1320	Introducing Microsoft Windows 95 Book		11.99
EURBK1321	Microsoft Windows 95 Help Kit Book		46.18
B K 0 4 7 2	Ultimate Microsoft Windows 95 Book		22.99
B K 0 4 7 1	Microsoft Windows 95 Resource Kit Book + 33 46.99		
B K 0 5 1 6	Microsoft Office 95 Resource Kit Book		45.99
EURBK1323	MS Win NT 3.51 vol set Resource Kit Book		187.99
EURBK1324	MS Windows NT 3.51 (Vol 5 only) Resource Kit Book		46
EURVE0033	Softvision MS Windows 95 Video		89
EURVE0038	Softvision - All about the Internet/Video		99
EURBN0394	Softvision MS Windows 95 + Internet Video		149
EURED1348	CRT Easy Tutor V1 Windows 95 CD		29
EURCODE	Mastering Visual Basic v4.0 Book		Call

MOUSE & KEYBOARD			£
<b>JOYSTICK</b>			
EURIN1122	MS Home Mouse Serial		26
IN 5 3 1 7	MS Natural Keyboard (Win/Win 95)		65
EURIN1207	MS Mouse With Bus Interface		48
EURIN0004	MS Mouse V2 Win 3.1/95 (Serial + PS/2)		36
EURIN0008	MS Mouse V2 S-Pack (Serial + PS/2)		169
IN 5 4 8 5	Sidewinder 3D Pro Digital Joystick Win		39
IN 5 4 8 6	Sidewinder Analogue Joystick Win		26

**Visual Basic v4.0 for Windows 95 or Windows NT 3.51**

Visual Basic 4.0 is the hot, new development tool for Windows 95 based applications. Transform your 16-bit applications created with Visual Basic 3.0 easily to the power of Windows 95. The versatile language, broad access to data, and ready-to-use customised controls haven't changed. But they now take full advantage of Windows 95 32-bit power! Visual Basic 4.0 now includes more than 20 OLE controls and pre-built components that save you development time. Full 32-bit OLE controls and new OLE Automation enhance the development process. Take advantage of the 32-bit world with Visual Basic 4.0 from Microsoft!

**Up from £39**

LEISURE			£
---------	--	--	---

ENTERTAINMENT			£
EN 9 2 6 3	MS Golf Win 3.5		25
EUREN0066	MS Golf v2.0 Win CD		25
EUREN0121	MS Mauna Kea Add-on Golf Course 3		20
EUREN0118	MS Flight Simulator v5.1 DOS 3.5		25
EUREN0119	MS Flight Simulator 5.1 DOS CD		26
EURUT1331	MS Paris Scenery Pack		15
EURUT1330	MS New York Scenery Pack		15
EUREN0122	MS Space Simulator Dos		25
EUREN0115	MS Arcade Games Win		16
EURCODE	MS Return of Arcade Win 95 3.5	Call	
EUREN0116	MS Best of Entertainment Packs		20
EUREN0123	Simcity 2000 DOS		26
EUREN0097	MS Fury 3 Arcade Game Win/Win 95		29
EURCODE	MS SideWinder 3D Pro & Fury3 Win		45
EURCODE	Battle Beast CD		32

REFERENCE/EXPLORATION			£
ED 7 2 7 2	MS Encarta 96 Win/Win 95 CD		32
ED 7 2 7 3	MS Encarta 96 World Atlas Win 95 CD	Call	
EURED1524	MS Bookshelf 95 CD		59
EURED1525	MS Dangerous Creatures CD		22
RE 0 2 4 9	MS Ancient Lands CD		22
EN 9 4 3 3	MS Cinemania 96 Win 95 CD		24
EURED1519	MS National Art Gallery CD		27
EN 9 0 7 0	MS Schubert CD		22
MU 0 3 1 4	MS Music Central 96 Win 95 CD		29
EURED1530	MS 500 Nations Win CD		22
EURED1528	MS Exploradia - The World of Nature Win CD		22
HH 0 8 8 5	MS World of Flight Win CD		24
EURED1526	Microsoft Dogs Win CD		22
EURED1527	Microsoft Wine Guide Win CD		22
ED 7 2 2 8	MS Oceans 1.00 Win CD		24
EUREN0113	Corel Adventures with Edison CD		29
EN 9 4 2 1	Corel All-Movie Guide CD		29

CHILDREN'S SOFTWARE			£
EN 9 4 3 4	MS 3D Movie Maker Win/Win 95 CD		29
EURED1346	How The Leopard Got His Spots Win CD		25
ED 2 9 6 3	MS Creative Writer Win 3.5		22
EURGR1503	MS Fine Artist Win 3.5		22
EURCODE	MS Magic School Bus Oceans MPC Win CD	Call	
EURED0109	MS Gahan W U Haunted House		22



# MICROSOFT WINDOWS 95 (UPGRADE)

1. Get Windows 95 for £55 When you purchase any other product over £25
2. FREE 10-Pack software bundle (CD-ROM) With every Windows 95 order (see page 1)
3. Order Now on our Windows 95 Hotline 0181 358 8095



**SALES 0181-205 9558**

**FAX 0181-205 0190**

**ADMIN 0181-358 8100**

**PRICES EXCLUDE VAT @ 17.5%**



Quality Software

## UTILITIES

### FILE/DESKTOP

EURUT1399	Dashboard 3 for Windows	29
EURUT1400	Dashboard 95 for Win 95	29
NT 6 0 7 3	Corel Sci Network Manager	267
UT 6 0 3 3	MacDisk for The PC Win	69
UT 4 8 5 3	Mac in Dos Plus Win 3.5"	85
EURUT1429	Mac in Dos v2.0 Win 3.5"	64
UT 6 2 7 0	Conversions Plus v3.0 Win 3.5"	79
UT4883	Long File Names Win	29
UT 4 2 1 3	Symantec Norton Desktop Win V3	88
EURUT1361	Symantec Norton Commander VS DOS	54
UT 4 6 2 3	Symantec Norton Speedrive 4.0	49
D C S 1 3 3 9	Symantec Norton Admins for N/W S/Pk	199
UT 4 6 2 3	Symantec Norton Utilities V8 Win/DOS	87
LN 0 1 8 4	Symantec Norton Editor 2.0 DOS	49
UT 4 4 9 3	Symantec Pc Tools V2 Win	75
EURAC0164	Symantec Pc Tools Pro V9 DOS	74
UT 5 8 9 3	Symantec More PC Tools DOS/Win	45
EURUT1398	Symantec Norton Navigator Win 95 3.5"	67
EURUP1619	Symantec Norton Navigator Win 95 Upp 3.5"	34
EURUT1394	Symantec Norton Navigator Win 95 CD	72
UT 6 2 5 7	Symantec Norton Utilities Win 95 3.5"	84
EURUP1618	Symantec Norton Utilities Win 95 Upp 3.5"	52
EURUT1415	Symantec Norton Utilities Win 95 CD	84
UT6180	SPC On File for Windows	39
EURUT1369	SetUp Advisor Win	29
UT 4 7 4 3	Quarterdeck SideBar V1.0 Win	29
UT 3 6 1 4	SpinRite 3.1 DOS	99
EURUT1447	Stacker v4.1 Win 95/Win/DOS 3.5"	40
EURUP1711	Stacker v4.1 Win 95/Win/DOS Upp 3.5"	30
EURUT1371	Symantec Xtree Gold V3 DOS	86
UT 5 6 8 3	Symantec Xtree Gold V4 Win	59
B S 2 3 7 4	Symantec Xtree for Networks V3	259

## ANTIVIRUS

EURUP0017	Dr Sol Antivirus v7 DOS & Qtrly	59
EURUT1357	Dr Sol Antivirus Win + DOS & Qtrly	70
EURCODE	Dr Solomons Antivirus Toolkit Win 95	Call
EURUT0447	Dr Sol Antivirus For Netware Server	240
EUROP0742	Dr Sol Antivirus Toolkit for OS/2 & Qtrly	99
EURUT1421	Dr Sol Virus Guard 5 User Str Pack	175
UT 4 1 3 3	Symantec Norton Antivirus V3 Win + Dos	95
EURUT1360	Symantec Norton Antivirus For Netware	458
EURUT1401	Symantec Norton Antivirus Win 95 3.5"	53
EURUP1620	Symantec Norton Antivirus Win 95 Upp 3.5"	28
EURUT1340	FPROT Dos,Win,OS/2,Netware & Qtrly	71
EURUT1341	FPROT Dos,Win,OS/2,Netware + Monthly	120
EURCODE	McAfee VirusScan Win 95 (Intro offer)	49
EURUT1326	Datasave Dos/Win + Monthly Updates	69

## WINDOW CLEANERS

EURUT1448	Cleansweep 95 Win 3.1/Win 95 3.5"	27
UT 6 2 2 4	Uninstaller v3 Win 95 compatible	35
EURCODE	Uninstaller v3 for Networks 3.5"	Call
EURUT1416	Windex v2.0 Win 3.5"	35
EURUT1324	Uninstall it	42

## BACKUP

UT 3 5 5 3	Symantec Norton Backup 2.2 DOS	89
UT 4 1 5 3	Symantec Norton Backup 3.0 Win	89
UT 6 1 8 2	Colorado Backup v2 Win	39
EURDCS104	Cheyenne Arcserve V4 5 User DOS	179
EURNT0309	Cheyenne Arcserve V5 5 User Win	179
EURNT0315	Arcsolo Wstation Backup DOS	69
EURCSP1015	Arcsolo Wstation Backup Win	69
EURUT1257	Syos Premium Backup software for OS/2	149
EURNT0314	Arcserve for Windows NT	415
EURUT1257	Arcada Backup Exec v6 Win NT 3.5/3.1	345
UT 6 3 0 6	Arcada Backup Exec Windows 95	79

## DIAGNOSTIC TOOLS

EURUT1354	Dr Solomons Audit + Updates	298
EURUT0015	Check It Pro Volumes 1 & 2 (Sys Info + Tools)	59
UT 6 1 7 9	Check It Pro Deluxe v2 Win 3.5"	95
EURUT0020	Check It Analyst Win	55
EURUT1420	First Aid v2.0 for Win & Win 95 3.5"	35
EURUT1239	WinCheckIt Win	39
EURUT1441	Win 95 Advisor Win	20
EURUT1449	Quarterdeck Winprobe 4 Win 3.1/Win 95 3.5"	49

## PRINTING UTILITIES

NT 5 5 2 3	Superprint v3.1 for HP Printers	75
EURGR0075	ZScript Win Postscript Int	125
NT 5 5 1 3	Superqueue Win	49

## SCREEN SAVERS

EURCODE	Monty Python Complete Waste of Time CD	35
EURCODE	Monty Python Desktop Pythoniser	19
EURCODE	Take Your Best Shot CD	16
EURCODE	Berkeley After Dark Win 95	29
UT 5 1 9 3	Berkeley After Dark V3 Win	24
G R 5 8 8 3	Berkeley Star Trek Screen Saver Win	32
UT 5 3 4 3	Berkeley Simpson Screen Saver	32
UT 6 2 2 0	Berkeley Looney Tunes Animated Screensaver Win	27
EURUT1308	Asymetrix Pink Panther Screensaver CD + 3.5"	24
EURUT1455	Delrina Flintstones Screensaver Win	19
G R 7 6 9 3	Delrina Opus 'N' Bill Screensaver Win	15
UT 5 2 4 3	Delrina Far Side Screensaver Win	26

Call for Microsoft Screen Savers

## MEMORY MANAGEMENT

UT 3 6 4 3	Qualitas 386 Max V7	46
B S 1 0 4 6 5	Quarterdeck Desqview 386 V2.7	79
UT 5 9 7 3	Quarterdeck Qem Win 3.1/Win 95	45
EURUT1349	Quarterdeck Game Runner (incl Qem V7.0)	39
UT 5 6 3 0	Quarterdeck Qem V7.5 Win/Dos 10 Pack	Call
EURUT1456	Quarterdeck QEMM Win 3.1/Win 95 3.5"	45
EURUT1455	Quarterdeck Game Runner Win 3.1/Win 95	39
EURUT1450	Quarterdeck Magnaram 2 Win 3.1/Win 95 3.5"	39
EURUT1419	Softram for Win 3.1/Win 95 3.5"	49
UT 6 2 1 3	Ram Doubler for Windows	49
EURUT1402	MagnaRAM for Windows	38

## OPERATING SYSTEMS

### DOS

O P 0 4 5 5	MS Dos V6.22 Upgrade CCP	38
EURLP0393	MS Dos V6.22 Upp 1 Lic	36
D C S 1 4 4 4	Novell Personal Netware Software Only	44
D C S 1 4 4 7	Novell Dos 7 (+ Personal Netware s/w)	49
D P 0 5 4 3	IBM PC Dos 7.0	59
UP 3 2 5 5	IBM PC Dos 7.0 Upgrade	30

### WINDOWS

EURIN1208	Microsoft Plus for Win 95 v1.0 CD	29
EURIN1209	Microsoft Plus for Win 95 v1.0 3.5"	29
EURLP0410	Microsoft Plus for Win 95 IMLP	26
EUROP0737	Microsoft Windows 95 3.5"	112
EURLP0419	Microsoft Windows 95 IMLP	105
EURUP1578	Microsoft Windows 95 Upgrade CD	59
EURUP1579	Microsoft Windows 95 Upgrade 3.5"	59
EURUP1581	MS Windows V3.11 CCP Upp	39
O P 0 3 8 3	MS Windows V3.11 Rel 3.11	64
N T S 1 3 3	MS Wfww Add-on for Dos	41
EURUP1582	MS Wfww Add-On Win 3.11	42
EURLP0421	MS Wfww Add-On Win 3.11 I Lic	39
EURNT0001	MS Windows for WorkGroups V3.11	89
EURLP0423	MS Windows for WorkGroups V3.11 I Lic	86
EURUP0164	MS Windows NT Wstation V3.51 CD+3.5"	218
EUROP1665	MS Windows NT Server V3.51 3.5"	475
D C S 1 8 2 6	MS Windows NT Server V3.51 CD	475
EURUP1518	MS NT Workstation Win Upp v3.5 to v3.51 CD	39
EURUP1522	MS NT Server Win Upp v3.5 to v3.51 CD	57

### OS/2

EURUP0173	IBM OS/2 Warp V3 3.5"	50
EURUP0174	IBM OS/2 Warp V3 CD	39
EURUP1556	IBM OS/2 Warp V3 Upp 3.5"	49
EURUP1555	IBM OS/2 Warp V3 Upp CD	30
EURUP0198	OS/2 Warp V3 with Win-OS/2 3.5"	99
EURUP0732	OS/2 Warp V3 with Win-OS/2 CD	89
EURUP1557	OS/2 Warp V3 with Win-OS/2 Upp 3.5"	75
EURUP1558	OS/2 Warp V3 with Win-OS/2 Upp CD	65
EURUP1559	OS/2 Warp V3 to Win-OS/2 upgrade 3.5"	49
EURUP1560	OS/2 Warp V3 to Win-OS/2 upgrade CD	49
EURUP0723	OS/2 Warp Connect v3	95
EURUP0753	OS/2 Warp Connect with Win-OS/2 v3	125
VARIOUS	OS/2 Warp Connect Upgrades	Call

## NETWORKING

### NOVELL

B F 0 0 5 6	Novell Netware 3.12 5 User	395
D C S 1 7 4 0	Novell Netware 3.12 10 User	963
D C S 1 7 4 1	Novell Netware 3.12 25 User	1443
D C S 1 7 4 2	Novell Netware 3.12 50 User	1940
D C S 1 7 4 7	Novell Netware 3.12 100 User	Call
D C S 1 7 4 9	Novell Netware 3.12 250 User	Call
D C S 1 9 3 0	Novell Netware 4.1 CD 5 User	413
D C S 1 9 3 1	Novell Netware 4.1 CD 10 User	944
D C S 1 9 3 2	Novell Netware 4.1 CD 25 User	1493
D C S 1 9 3 3	Novell Netware 4.1 CD 50 User	2033
D C S 1 9 3 4	Novell Netware 4.1 CD 100 User	Call
D C S 1 9 3 5	Novell Netware 4.1 CD 250 User	Call
D C S 1 4 4 4	Novell Personal Netware Software Only	44
N T 1 9 6 4	Novell Personal Netware 5 Pack	195
D C S 1 4 4 3	Netware Connect 2 Port	279

NETWARE 3.12 ALSO ON CD.

## ARTISOFT

EURNT0595	Lantastic Powersuite 2 node starter kit	215
EURNT057	Lantastic Powersuite 1 node add-on kit	135
EURLP0520	Lantastic Powersuite software only	95

## MICROSOFT

D C S 1 8 2 6	MS Windows NT Server 3.51 CD	475
D C S 1 8 2 8	MS Windows NT Server Client licence 1-user 35	35
EURLP0409	MS Windows NT Server Client licence 20-user 455	455
075AV150	MS BackOffice Server 1.5 Windows NT	Call
2075AV150	MS BackOffice Client 1-user	Call
EURNT0191	MS SQL Server 6.0 for Windows NT	Call
EURLP0478	MS SQL Client licence 1-user	Call

SEE NETWORKING PAGE FOR MORE NETWORKING PRODUCTS. NOVELL

EURUT1396	Intel Landesk Management Suite 2.01 5-user	269
EURGR1620	Nodemap for Windows	185

## UNIX POWER

EURUP0749	SCO OpenServer v5.0 Host CD 5-user	342
EURUP0750	SCO OpenServer v5.0 Enterprise (Net) CD 5-user	629
EURUP0751	SCO OpenServer v5.0 Desktop CD	385
EURLP0456	SCO OpenServer v5.0 add licence 10-user	249
EURLP0457	SCO OpenServer v5.0 add licence 25-user	499
EURUP0752	SCO OpenServer Dev. RS System CD	385
EURVW0079	SCO Portfolio Contract 1 Year	1,500
EURDCS1127	Novell Lan Workplace Dos V5	189

Call for SCO Merge & SCO WABI products

Call for upgrades

## ELECTRONIC MAIL

### MICROSOFT

EURNT0577	MS Mail V3.5 + 10 User	310
EURLP0506	MS Mail PC 5 MLP Pack	175
EURUP0026	Microsoft Mail Post Office Upgrade	220
D C S 2 2 2 6	MS Mail v3.5 Upgrade 3.5"	239
EURNT0349	Microsoft Mail Remote Win	105
D C S 2 1 0 0	Microsoft Mail SMTP Gateway	Call

PLEASE CALL FOR OTHER MS MAIL GATEWAYS

### LOTUS

N T 7 2 4 5	Lotus CcMail Desktop Dos	70
N T 7 5 3 3	Lotus CcMail Desktop Win	70
N T 7 4 9 6	Lotus CcMail Workgroup Lic 10 User	259
N T 7 2 4 8	Lotus CcMail Router (Gateway)	75
N T 7 5 0 2	Lotus CcMail Workgroup to Lan 10 user	287
N T 7 2 5 2	Lotus CcMail Mobile Dos	115
N T 7 5 3 2	Lotus CcMail Mobile Win	115
N T 7 4 6 0	Lotus CcMail Lan System Lic Pack 10 User	446
N T 7 5 1 8	Lotus Notes Starter Pack Win OS/2 NLM CD	585
I B 0 2 8 1	Lotus Notes Suite Starter Pack CD	665
I B 0 2 8 2	Lotus Notes Suite 1 LLP Pack	453
EURNT0176	Lotus Notes Express Win CD	133

## NOVELL/WORDPERFECT

EURNT0416	Novell Groupwise Client (B) Admin Pack Dos	340
EURNT0417	Novell Groupwise Client (S) Admin Pack Win	340
EURLP0436	Novell Groupwise Additional 1 user licence	79
D C S 1 9 1 2	Novell Groupwise Additional 5 user licence	335
EURNT0418	Novell Groupwise Message Server Dos	239

Please call for other Novell Groupwise Gateways

## PROFESSIONAL OCR

EUROCO0007	Caere Omnipage Direct	72
OC0077	Omnipage Pro v6.0 Win 3.5"	325
EURUP1705	Omnipage Pro v6.0 Win Upp 3.5"	129
EUROXCODE	Omnipage Pro v6.0 Win Comp Upp 3.5"	149
EUROCO0006	Caere Omnipage v5 Standard Win	319
O C 0 0 7 4	Calera Wordscan Plus V4 Win	385

CALL FOR FREE SCANNER OPTION

EURUP1652	Calera Wordscan Plus V4 Win Comp Upp 3.5"	149
UP 3 2 5 6	Calera Wordscan Plus V4 for Win Upgrade 3.5"	129
O C 0 0 7 6	Xerox Textbridge 3.0 Win	65
EUROCO0076	Xerox Textbridge Professional v3 Win	269
S I 2 1 4 2	Xerox Textbridge v3 Prof Ed Comp Upp	129

SEE OUR RANGE OF SCANNERS

## COMMUNICATION

### ON LINE/FILE TRANSFER

C M 1 5 8 4	Crosstalk Win V2.2	105
C M 0 0 3 4	Crosstalk Mkiv V2.1	163
EURCM0174	*Datatalk V4 Dos/Win	39
BS 105 19	Fastmover Filetransfer Win	39
C M 0 4 2 3	Procomm Plus v2.01 Dos	54
EURCM0086	Procomm Plus 2.1 for Windows	56
EURCM0184	Hayes Smartcom Data/Fax Pro Win	46
C M 1 9 6 6	Wincompro	54
EURUT1365	Laplank VS Dos	58
UT 5 4 3 3	Laplank v6 Win	83

\*Limited Offer - WHILE STOCKS LAST

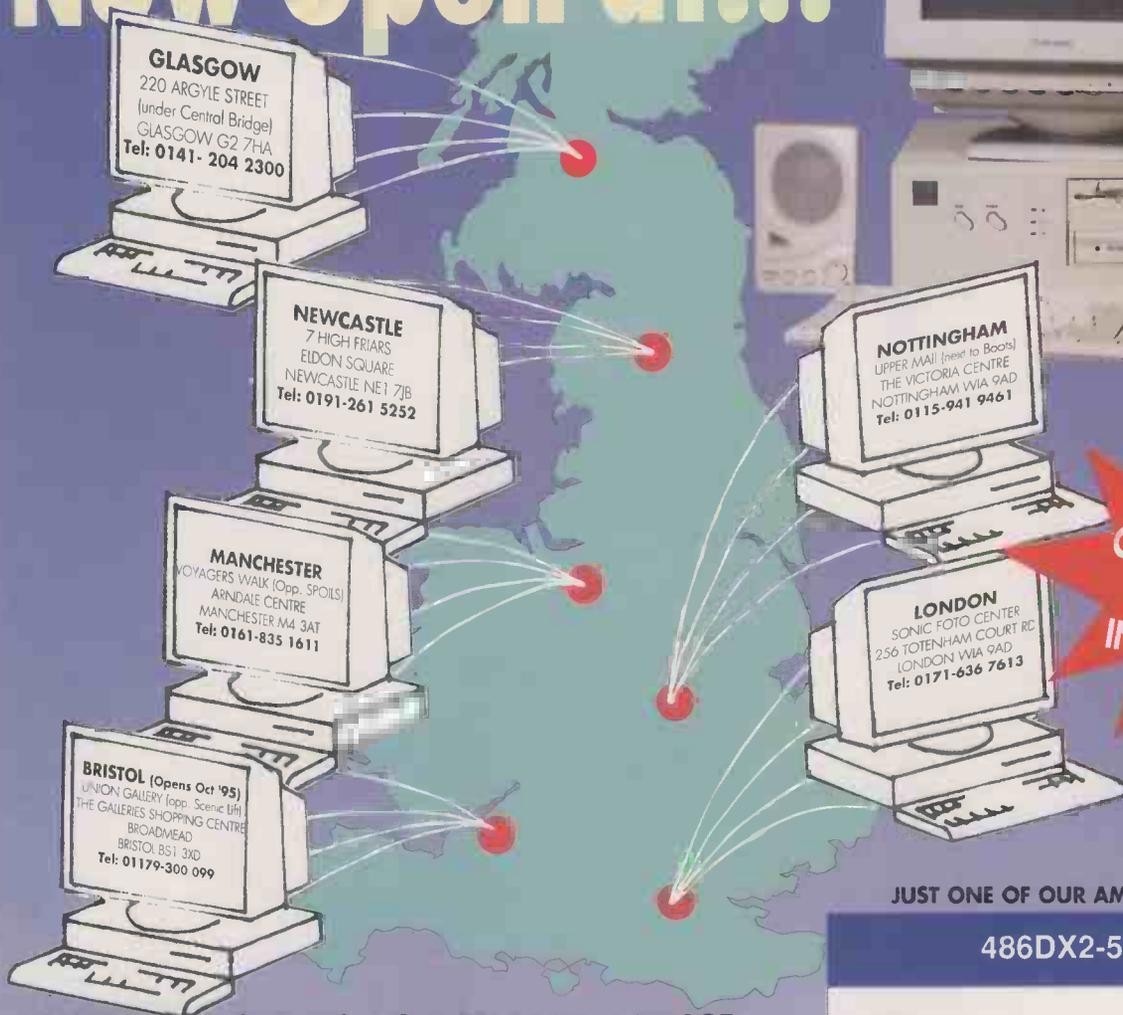
### REMOTE ACCESS/CONTROL

D C S 1 8 1 8	Carbon Copy v6.1 Dos	73
C M 2 0 0 7	Carbon Copy v3.0 Win	73
D C S 1 9 2 3	Commworks Win (Inc Laplink Dos)	69
C M 1 9 9 1	STAC Reachout v5 Modem Host/View Win	79
EURCM0222	STAC Reachout v5 Modem Host Win	57
EURCM0223	STAC Reachout v5 Modem View Win	57
C M 1 6 2 3	PC Anywhere VS Dos Host + Remote	89
EURCM0225	PC Anywhere VS Dos Host Only	58
D C S 1 5 4 1	PC Anywhere VS Dos Remote Only	65
EURCM0224	PC Anywhere V2 Win Host + Remote	95
C M 1 8 9 3	PC Anywhere V2 Win Host	57
C M 1 9 0 3	PC Anywhere V2 Win Remote	67

### TERMINAL EMULATION

EURCM0233	Reflection 4 Plus Dos	219
EURCM0232	Reflection 4 Win	249
C M 1 5 7 3	Smarterm 320 Dos	89
C M 1 9 7 3	Smarterm 340 Dos	159
C M 1 9 7 7 3	Smarterm 340 Win	159
C M 1 8 4 3	Smarterm 420 Win	125
D C S 2 0 5 5	Smarterm for Windows NT v4 (32-bit Edn)	173
EURCM0255	Smarterm for OS/2 32bit Edition Win 95 3.5" & CD	95
EURCM0214	Termite Async Dos	169
EURCM0215		

# Lowest Computer Prices in the UK Guaranteed Showrooms Now Open at...



**GLASGOW**  
220 ARGYLE STREET  
(under Central Bridge)  
GLASGOW G2 7HA  
Tel: 0141- 204 2300

**NEWCASTLE**  
7 HIGH FRIARS  
EIDON SQUARE  
NEWCASTLE NE1 7JB  
Tel: 0191-261 5252

**MANCHESTER**  
VOYAGERS WALK (Opp. SPOILS)  
ARNDALE CENTRE  
MANCHESTER M4 3AT  
Tel: 0161-835 1611

**BRISTOL (Opens Oct '95)**  
UNION GALLERY (Opp. Scenic Liff)  
THE GALLERIES SHOPPING CENTRE  
BROADMEAD  
BRISTOL BS1 3XD  
Tel: 01179-300 099

**NOTTINGHAM**  
UPPER MALL (next to Boots)  
THE VICTORIA CENTRE  
NOTTINGHAM W1A 9AD  
Tel: 0115-941 9461

**LONDON**  
SONIC FOTO CENTER  
256 TOTENHAM COURT RD  
LONDON W1A 9AD  
Tel: 0171-636 7613

**TRY  
BEFORE  
YOU  
BUY!!**

**SPECIAL  
OFFERS ON ALL  
PENTIUMS  
IN NOVEMBER**

**JUST ONE OF OUR AMAZING OFFERS!**

## 486DX2-50MHz

- 4MB RAM Upgradeable
- Supports EDO RAM
- 540MB Fast HDD with 128KCache
- 16 bit VGA Adapter card
- 14" SVGA Colour Monitor
- Pentium P24T Upgradeable
- 3.5" 1.44MB FDD
- 6 Spare PCI/ISA Slots
- 102 Key Keyboard
- IBM Compatible\*
- 2 x Serial Ports
- 1 x Parallel Port
- 1 x Game Port
- High Quality Steel Desktop case

**£499**  
ABSOLUTELY UNBEATABLE TINY PRICE!!

\*IBM is a registered trademark of International Business Machines

**tiny**  
direct to you!

## COME AND SEE US FOR EXPERT ADVICE

Pop into any of our showrooms and meet our qualified, friendly staff.

All our sales team are fully conversant with computers and will gladly advise you on the best system for your needs, whether you're a first time computer buyer or you need to upgrade your existing computers.

**12 MONTHS UK BACK TO BASE WARRANTY**

CALL NOW

**01293-821333**

PRICES EXCLUDE VAT & DELIVERY FAX: 01293-822514



NO  
SURCHARGE  
ON  
CREDIT  
CARDS

All prices and manufacturers specifications are subject to change without prior notice. Please check availability before ordering. Goods are offered for sale subject to our standard conditions of sale available on request. E&OE.

# THE LOWEST UK PRICES - CALL NOW!

**SCANNERS \* SCANNERS \* SCANNERS \* SCANNERS \* SCANNERS**

## UMAX

- Umax are the second largest manufacturer in the world
- Tech Direct are the largest UK reseller for Umax scanners
- Our scanner experts will gladly discuss your requirements
- Demo available for the Powerlook Pro model
- We will match or beat any delivered price in this magazine

tech direct offers you...

### THE LOWEST PRICES

Our purchasing power means low low prices for you! our commitment to providing our customers with the best deals is there for you to see.

### THE LATEST PRODUCTS

NO GREY IMPORTS. All our products are UK sourced and supplied with the manufacturers full warranty (minimum 12 months)

### CONFIDENCE

No credit card surcharges (except Amex @ 1.5% - sorry!) Your credit card will only be debited on despatch of your order

### NEXT DAY DELIVERY

Order from us and if we have the goods in stock we will deliver tomorrow

### COLLECTIONS

If you wish to collect please call to ensure availability and to reserve stock! A £5 handling charge will apply for collections

### OPENING HOURS

MONDAY to FRIDAY:  
9.00am to 5.30pm  
SATURDAY:  
9.00am to 1.00pm

### PAYMENT TERMS

To offer you the lowest prices we operate on a payment to accompany order basis. Add £9.95 delivery and VAT at 17.5% to all prices. Please allow five working days for cheque clearance. We are delighted to fax or send Pro-forma invoices.

### CONDITIONS OF SALE

Prices and specifications are unfortunately subject to change. Please check suitability with manufacturers before purchase. Goods are not supplied on a trial basis and are subject to our standard conditions of sale. A re-stocking fee of 15% will apply to non-defective returns. Errors and omissions excepted.



### UMAX T630

- Personal Computer World Editors Choice!
- Inc SCSI card and software
- 600 x 300 dpi optical
- 4800 dpi with interpolation
- Adobe Photoshop V3.0 LE
- Umax Vistascan software
- One year on-site warranty
- \*T630 PRO £725
- Three pass
- Lowest price **£299**



### UMAX VISTA S8

- Low cost bundle
- Ultra View Technology
- 400 x 800 dpi optical
- 6400 dpi with interpolation
- Adobe Photoshop V3.0 LE
- Umax Vistascan software
- One year on-site warranty
- Single pass scanner
- \*S8 PRO £944
- \*S8 PLUS £679
- Excellent value **£539**



### UMAX UC1260

- 600 x 1200 dpi optical
- Excellent for lineart
- 9600 dpi with interpolation
- Adobe Photoshop V3.0 LE
- Umax Vistascan software
- One year on-site warranty
- \*UC1260 PLUS £739
- \*UC1260 PRO £999
- Three pass scanner
- Optional OCR
- Great value **£599**



### POWERLOOK PRO

- Personal Computer World Highly Commended
- Ultimate flatbed solution
- Inc. SCSI card & software
- 600 x 1200 dpi optical
- 9600 dpi with interpolation
- Adobe Photoshop V3.0
- Umax Magicscan software
- Inc. transparency adaptor
- Lowest price
- The best!! **£1895**



### UMAX GEMINI

- 30 bit scanner
- Single Pass colour
- 800 x 1600 dpi optical
- 3200 dpi with interpolation
- Adobe Photoshop V3.0 LE
- Dual lens system
- One year on-site warranty
- The photographers choice!
- \*Gemini PRO £1199
- \*Gemini PLUS £939
- New Model **£799**



### MIRAGE A3

- Scans x-ray film, satellite photos and negatives
- 800 x 1600 dpi optical
- 9600 dpi with interpolation
- High dynamic range
- Adjustable light intensity
- Call for full spec sheets!
- Multiple & batch scanning
- Inc. transparency adaptor
- Professional choice
- Dual lens **£5999**

\* PRO versions include a transparency adaptor and a full version of Adobe Photoshop V3.0  
 \* PLUS versions include a full version of Adobe Photoshop V3.0  
 Umax Page Office scanner **£288**  
 \*\*\*\*\*FREE PRESTO FILE MANAGEMENT & OCR SOFTWARE ON ALL UMAX SCANNERS UNTIL 31/12/95\*\*\*\*\*



- Market leader in handhelds
- New models now available
- Scanner experts on hand
- Genius Mouse III just £15
- 800dpi scanmate colour £99



## HEWLETT PACKARD



### SCANMATE COLOR PRO

- Now improved with higher resolution!
- Stunning 1600 dpi, 16Million colours
- The ultimate 24 bit hand scanner
- Photo Finish 3.0 image software
- Smart Page Direct OCR software
- Fully TWAIN compliant
- MorphEditor software **£129**



### HP SCANJET 4C

- Upgraded version of popular HP 3C
- Largest manufacturer in the world
- Call for specifications
- Available now!
- The latest model
- New software
- HP 4P model £Call **£Call**

## EPSON

## AGFA

## PRIMAX

- GT5000 - NEW! **£Call**
- GTX8500 PARALLEL **£469**
- GTX8500 SCSI **£564**
- GTX9000 PARALLEL **£593**
- GTX9000 SCSI **£663**
- GT18500 SCSI **£737**
- GT19000 SCSI **£846**
- GTX inc. Omnipage Direct, Adobe Photoshop LE & PK Portfolio. GTi inc. full version Adobe Photoshop V3.

- Agfa Studiostan  
300 x 600 optical resolution  
Available now @ £468
- Agfa Studiostan IISi  
400 x 800 optical resolution  
Available now @ £592
- Agfa Studiostan Arcus II  
600 x 1200 optical resolution  
Available now @ £2109



### COLOUR MOBILE OFFICE

- Portable colour scanner
- Connects to the parallel port
- Motorised rollers for accuracy
- Direct version available (£119)
- Ideal solution for portable computers
- Twain compliant
- Software included **£149**



tech direct

unit 1, princess mews, horace road, kingston, surrey KT1 2SZ

0 1 8 1 2 8 6 2 2 2 2  
 F A X L I N E S 0 1 8 1 2 8 6 0 2 0 0

# THE LOWEST UK PRICES - CALL NOW!



- Kyocera lead the way in economic printing
- Drums are guaranteed for the printer life
- The latest cost saving technology
- Three year on-site support options
- New A3 laser just launched!



## KYOCERA FS400

- 4 pages per minute printing
- Enhanced 300 x 1200 dpi
- Energy Star compliance
- 100,000 page drum guarantee
- 79 bitmap, 13 scalable fonts
- Optional Postscript emulation
- Low cost per page output
- Cartridge free design
- 12 month warranty **£365**

The above Kyocera FS400 desktop personal printer offers outstanding longterm value for money. The cartridge free design means the only consumable to buy is a replacement toner for £15.50 whilst the FS400 is still equipped with a wealth of features and network/paper options. Be kind to the planet and your wallet with a Kyocera FS400 printer.



## KYOCERA FS1550

- 10 pages per minute
- Enhanced 300 x 1200 dpi
- 250 page sheet feeder
- 79 bitmap, 13 scalable fonts
- HP Laserjet III emulation
- Optional network interface
- Optional Postscript
- Optional paper bins
- Low running costs **£871**

For speed and economy the FS-1550 leads the pack. Resolution enhancement ensures all your work is clear and precise, whilst the low running costs ensure you are making the best long-term investment. There is also an excellent selection of options for an expanding office, allowing the FS-1550 to actually grow with your business!

### KYOCERA LASERS

FS-400 Twin Bin	£495
FS-1600	£1067
FS-3400	£1388
FS-3600	£1749
FS-5500	£3821
FS-6500 A3 New!	£1829

### KYOCERA TONER KITS

FS-400	£15.50
FS-1550/1600	£44
FS-1500	£31
FS-5500	£38
FS-6500	£44

### KYOCERA ON-SITE WARRANTIES

	1 YEAR	2 YEAR	3 YEAR
FS-400	£75	£125	£150
FS-1550/1600	£99	£166	£199
FS-5500	£260	£416	£499
FS-6500	£199	£333	£399

### KYOCERA MEMORY

1 MEG	£60
2 MEG	£99
4 MEG	£159

### KYOCERA OPTIONS

	DUPLEX UNIT	500 TRAY	POSTSCRIPT
FS-1550/1600	£550	£279	£Call
FS-6500	N/A	£425	£Call

We can also supply the above units network ready. Please call Tech Direct for the best prices.



- Fantastic choice of colour and mono printers at affordable prices
- Canon are one of the worlds largest printer manufacturers
- From portable compact A4 models up to desktop A3 sizes
- Pioneers in low cost inkjet printing - refillable cartridge designs
- Call Tech Direct for the best Canon prices available!



## CANON BJC-70

- Colour portable printing!
- 360 x 360 dpi colour
- True black printing
- Built in 30 sheet feeder
- Can handle envelopes
- Portable kit available
- Universal adaptor available
- Fast drying inks
- Very light to carry **£217**

personal colour



## CANON BJC-4000

- Colour desktop printing!
- True black with colour
- 360 x 360 dot per inch colour
- 720 x 360 dpi black printing
- Built in 100 sheet feeder
- Can handle envelopes
- Optional high capacity tank
- Compact design
- Refillable ink tanks **£217**

desktop colour



## CANON BJC-800

- A3 colour printing!
- The professional choice!
- CAD drivers available
- Also handles envelopes
- Cost effective proofing
- Seperate colour tanks
- Prints on transparencies
- Prints on most paper
- BJC820 for Mac **£989**

dedicated colour

CANON BJ30 portable A4 mono printer	£138
CANON BJ200ex desktop A4 mono printer	£158
CANON BJ230 compact wide carriage printer	£235
CANON BJ600e dedicated A4 colour printer	£318
CANON BJ300 A4 mono tractor fed printer	£351
CANON BJ330 A3 mono tractor fed printer	£387
CANON BJC820 colour Macintosh printer	£1219
CANON 430W Windows laser printer	£357
CANON LBP1260 laser printer	£890

We can also supply extras and consumables for your Canon printer.

**CANON BN100C PRINTBOOK** - 486sx25 processor, 120Mb HD, 4Mb Ram, with built-in printer **£1570**

**CANON BN120C PRINTBOOK** - 486sx33 processor, 340Mb HD, 4Mb Ram, with built-in printer **£2319**

**CANON BN120C PRINTBOOK** - 486dx4/100 processor, 500Mb, HD 8Mb Ram, with built-in printer **£2498**

**CANON BN120C PRINTBOOK** - 486dx4/100 processor, 800Mb, HD 8Mb Ram, with built-in printer **£2769**

# tech direct

unit 1, princess mews, horace road, kingston, surrey KT1 2SZ

0 1 8 1 2 8 6 2 2 2 2  
F A X L I N E S 0 1 8 1 2 8 6 0 2 0 0

# THE LOWEST UK PRICES - CALL NOW!



# HEWLETT® PACKARD



Authorised Reseller  
Personal Computer  
Products

tech direct  
offers you...

**THE LOWEST PRICES**

Our purchasing power means low low prices for you! our commitment to providing our customers with the best deals is there for you to see.

**THE LATEST PRODUCTS**

NO GREY IMPORTS.  
All our products are UK sourced and supplied with the manufacturers full warranty (minimum 12 months)

**CONFIDENCE**

No credit card surcharges (except Amex @ 1.5% - sorry!) Your credit card will only be debited on despatch of your order

**NEXT DAY DELIVERY**

Order from us and if we have the goods in stock we will deliver tomorrow (£9.95 + vat)

**COLLECTIONS**

If you wish to collect please call to ensure availability and to reserve stock! A £5 handling charge will apply for collections

**OPENING HOURS**

MONDAY to FRIDAY:  
9.00am to 5.30pm  
SATURDAY:  
9.00am to 1.00pm

**PAYMENT TERMS**

To offer you the lowest prices we operate on a payment to accompany order basis. Add V.A.T. at 17.5% and £9.95 delivery to all prices. Please allow five working days for cheque clearance. We are delighted to fax or send Pro-forma invoices on request.

**CONDITIONS OF SALE**

Prices and specifications are unfortunately subject to change. Please check suitability with manufacturers before purchase. Goods are not supplied on a trial basis and are subject to our standard conditions of sale. A re-stocking fee of 15% will apply to non-defective returns. Errors and omissions excepted



## HP INKJET PRINTERS

### HP DESKJET 600



- 600 x 300 dpi Ret enhanced
- 3 ppm print speed in black
- Optional colour kit for just £29
- £243 including supportpack
- Built in sheetfeeder
- 3 year warranty

**£203**

This latest addition to the Hewlett Packard inkjet range is the ideal entry level printer for the home or small business. Although only a mono printer as standard the colour upgrade option is just £29 extra, and a worthwhile purchase at the same time as the printer.

## HP LASER PRINTERS

### HP LASERJET 5L



- 4 ppm print speed
- 600 dpi with enhancement
- £444 with supportpack
- 100 sheet paper input tray
- 1Mb standard memory
- 26 scalable fonts

**£339**

Just launched the new Hewlett Packard 5L sets an incredible pace to follow! Despite being the entry level laser in the range this unit delivers an incredible 600 dots per inch resolution at a rapid 4 page per minute sprint speed! Quite simply excellent value for money.

### HP DESKJET 660C



- 4 ppm print speed in black
- Improved 600 x 300 dpi colour
- New 2 Button control panel
- £334 including supportpack
- Built in sheetfeeder
- Excellent value

**£269**

Another new printer from Hewlett Packard! The 660C comes equipped for colour and mono printing with the advantage over the Deskjet 600 that you can print true black and colour on the same page. Now offered at an even lower price from Tech Direct!

### HP LASERJET 5P



- Rapid 6 ppm print speed
- 600 dpi with enhancement
- Infrared Port for Windows 95
- £704 including supportpack
- 2 Mb standard memory
- £719 5MP model

**£569**

For those requiring more speed take the Hewlett Packard 5P for a quick spin round the block! 6 pages per minute and 600 dpi make this the obvious choice for general office work. With 2Mb Ram as standard this unit is built to cruise through your paperwork!

### HP DESKJET 850C



- 6 ppm print speed in black
- Faster 600 x 300 dpi in colour
- New Model - 2 Button control
- £392 including supportpack
- Built in sheetfeeder
- Accepts envelopes

**£327**

The higher specification 850C is the ideal choice for faster printing in colour or in black and white. Offering a class leading print speed of up to 6 pages per minute in mono and improved colour production from new ink technology. This inkjet is the professional choice!

### HP LASERJET 4PLUS



- 12 pages per minute
- 600 dpi with enhancement
- Network options available
- £1135 including supportpack
- 2Mb standard memory
- £1288 4MPlus model

**£965**

Designed specifically to handle serious workloads the 4Plus delivers rocket ship performance at 600 dots per inch. If you want your business to really take off buy a Hewlett Packard 4Plus and blast past the opposition. If you're not starstruck yet just look at our pricing!

HP DESKJET 340	<b>£169</b>
HP DESKJET 340 + SHEETFEED	<b>£175</b>
HP DESKJET 340 COLOUR KIT	<b>£29</b>
HP DESKJET 1600C	<b>£816</b>
HP DESKJET 1600C PS	<b>£1217</b>

HP LASERJET 4SI	<b>£2052</b>
HP LASERJET 4SIMX	<b>£2922</b>
HP LASERJET 4V	<b>£1362</b>
HP LASERJET 4MV	<b>£1962</b>
HP COLOR LASERJET	<b>£4190</b>

## NEWSFLASH - PRINTER DISASTER AVOIDED!

A lucky Tech Direct customer recently avoided a possible disaster when their Hewlett Packard printer developed a fault during a critical project. Deadlines were upon them but the printer was down! Fortunately they had invested wisely in a Hewlett Packard three year support pack and with one call to the HP support centre within twenty four hours they were back in business.



HP MONO DESKJETS	<b>£40</b>
HP COLOUR DESKJETS	<b>£65</b>
HP DESKJET 1600C	<b>£100</b>
HP LASERJET 5L	<b>£105</b>
HP DESKJET 5P,5MP	<b>£135</b>
HP DESKJET 4PLUS,4MPLUS	<b>£170</b>
HP DESKJET 4V,4MV	<b>£220</b>
HP FAX 950	<b>£75</b>
HP OFFICEJET LX	<b>£100</b>
HP 4C SCANNER	<b>£Call</b>

## HP INK CARTRIDGES

HP DESKJETS	
HP310/320 BLACK	£16
HP500,510,520 BLACK	£19
HP540,560 BLACK	£19
HP500/320 COLOUR	£21
HP600C,660C BLACK	£22
HP600C,660C COLOR	£24
HP850C BLACK	£24
HP850C COLOUR	£22
HP 1200C BLACK	£21
HP 1200C COLOURS	£25
HP 1600C BLACK	£24
HP 1600C COLOURS	£25

## HP LASER TONERS

HP LASERS	
HP IIP,IIIP	£59
HP II,III,IIID	£49
HP 4L,4ML,4P,4MP	£45
HP 5P,5MP	£59
HP 4PLUS,4MPLUS	£68
HP 4V,4MV	£109
HP IIISI,4SI,4SIMX	£89

## LASER MEMORY

2MB UPGRADE	<b>£99</b>
4MB UPGRADE	<b>£148</b>

## HP OFFICEJET LX



- Printer \* Fax \* Copier
- PC Faxing directly from Windows
- Saves space and money
- 24 page memory
- Automatic switching
- £589 Fax 950

**£465**

unit 1, princess mews, horace road, kingston, surrey KT1 2SZ

# tech direct

0 1 8 1 2 8 6 2 2 2 2  
F A X L I N E S 0 1 8 1 2 8 6 0 2 0 0

# THE LOWEST UK PRICES - CALL NOW!

## PRINTERS \* PRINTERS \* PRINTERS \* PRINTERS \* PRINTERS

### LEXMARK

- Lexmark scoop several printer awards
- The latest technology available now!
- Continuous innovation of products



### WINWRITER 150C

- Personal Computer World Editors Choice!
- Computer Shopper "Best Buy" winner!
- 600 x 300 dpi colour and true black printing
- Free Coreldraw 4.0 software worth £99
- Ready for Windows 95 (includes drivers)
- Three year warranty included as standard
- Fast printing through Windows
- The Multimedia printer that talks!

**£254**

Tech Direct are pleased to present the latest award winning colour printer from Lexmark. Do not even consider another inkjet printer before comparing its specifications to this machine. Don't take our word for it, this printer has just beaten all the rivals in the latest magazine reviews! Call now for next day delivery

LEXMARK EXECJET IIC	£199	LEXMARK OPTRA R	£955
LEXMARK OPTRA L	£1365	LEXMARK OPTRA RX	£1465
LEXMARK OPTRA LX	£1895	LEXMARK OPTRA LXi	£2290



### OPTRA R LASER

- 12 pages per minute at 600 dpi
- 8 pages per minute at 1200 dpi (with 10meg)
- 25 MHz 32 bit RISC processor
- One year on-site warranty as standard
- Extra paper handling options available
- Includes 7000 page fine toner
- Postscript and PCL5 emulations
- Network options available

**£959**

### EPSON®

### Panasonic



**STYLUS COLOUR II**

#### INKJETS

STYLUS COLOUR IIs	£249
STYLUS 820	£198
STYLUS 1000	£328
STYLUS PRO A4	£637
STYLUS PRO XL A3	£1374

#### LASERS

EPL3000	£379	EPL5500	£Call
EPL9000	£1175	9000PS	£1368

### brother

HL630	£315
HL631	£347
HL660	£455
HL1260	£898



### 6100 LASER

KX-P6100	£264
KX-P6150	£298
KX-P4440	£698

### OKI

OKILASER 400EX	£268
OKILASER 410EX	£365
OKILASER 600EX	£299
OKILASER 610EX	£389
OKILASER 810EX	£629
OKILASER 850PS	£975
OKILASER 1200EX	£975

## MODEMS \* MODEMS \* MODEMS \* MODEMS \* MODEMS

### USRobotics®

The Intelligent Choice in Data Communications

### Sportster®



**£99**

SPORTSTER 28.8 EXT - see below!!	£154
SPORTSTER 28.8 INT - see below!!	£154
SPORTSTER 14.4 EXT	£99
SPORTSTER 14.4 INT	£99
COURIER V34 EXT/INT	£238
WORLDPORT DUAL	£119
PCMCIA V34 + FAX	£158
HIGH SPEED SERIAL CARD	£45

The sportsters are currently the number one selling modems in the UK. Fully approved for connection to the UK telecommunications system a US Robotics modem is the obvious choice. The latest range of 28.8 modems offer improved communications speeds that will save you money on your phone bills and allow you to work faster. Call for details on the complete US ROBOTICS range.

### NEW PRODUCT LAUNCHED!

With the internet rapidly taking off USRobotics have launched a new Sportster 28.8 Internet Bundle. Included with the modem is a one month free trial of PIPEX DIAL TRIAL, with further reduced rates on the full PIPEX DIAL service, one month free trial with COMPUSERVE, free access to the ACC call service saving up to 25% on BT rates for long distance and international calls, Quicklink II fax and data software, a serial cable and telephone cable. Added value from the biggest name in modems!

### CYBERTRONICS

### INTERNET TO GO

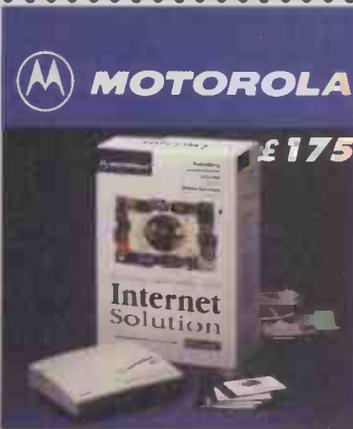


- Free Internet Access (up to 60 days)
- BAPT Approved
- 5 Year Guarantee for all hardware
- Free Technical support
- Free "Winwatch Home" software
- Free Fax-Comms & Internet connectivity software
- Free Internet simulator (for training)
- Free 60 minute video tutorial
- "Around the World in 21 days" by Neil Randall
- "The Essential Internet Guide" (CD)
- "The World Wide Web, Mosaic and more" (CD)

If you need connection to the Internet these are the kits for you! The Internet-to-Go kits include many free accessories that are not included in the price of other modem manufacturers; and will guide you through the maze. Comprehensive guides to understanding the Internet will save you money and let you start enjoying the benefits faster. There are also the following choice of free access schemes:

- PIPEX - 28 days free access extended to 60 if full upgrade is purchased
- COMPUSERVE - 30 days free membership + 10 hours free internet access
- UK ONLINE - Free trial software and infinite free access for 20 minute periods
- ECLIPSE NETWORKING - 60 days free access + connectivity software

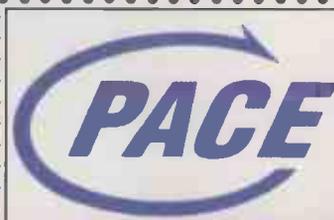
<b>14.4 KIT</b>	<b>£129</b>	<b>28.8 KIT</b>	<b>£169</b>
-----------------	-------------	-----------------	-------------



### MOTOROLA

**£175**

- Speed 28,800 bps - the fastest standard currently available
- True V34 - with worldwide compatibility
- Complete with all necessary cabling and connections
- Includes popular fax and communications software
- Comprehensive user manual included
- Telephone support helpline
- Easy install - includes free animated instruction disk



MICROLIN FX 32 PLUS	£169
MICROLIN FX 32 PLUS PC	£159
MICROLIN FX 34	£229
MICROLIN FX 34 PC	£249
MICROLIN NB 34	£245
MICROLIN NB 32 PLUS	£205
MOBIFAX 144	£119
LINNET 34 FX	£249
LINNET 32 PLUS FX	£175

#### PACE MESSAGEDESK

- Ansaphone, fax machine & modem
- Collect faxes & messages remotely
- Record outgoing message remotely
- Up to 1000 voice and fax mailboxes
- Lifetime warranty & phone support
- Fax-back & Fax-on-demand
- 100% UK produced

**£168**

# tech direct

unit 1, princess mews, horace road, kingston, surrey KT1 2SZ

0 1 8 1 2 8 6 2 2 2 2  
F A X L I N E S 0 1 8 1 2 8 6 0 2 0 0

# THE LOWEST UK PRICES - CALL NOW!

**NOTEBOOKS \* NOTEBOOKS \* NOTEBOOKS \* NOTEBOOKS**

# IBM

- IBM regularly gains worldwide acclaim and industry awards from the computer press
- IBM continues to lead the market in the field of notebook innovations and design
- Now offered at even better value for money and the lowest prices from Tech Direct
- IBM is the brand name you can trust for optimum quality and performance every time
- Please call us for a full range of IBM notebook accessories and connection options

**DUAL SCAN COLOUR  
IBM FOR JUST £899**



## IBM THINKPAD MODEL 340

Tech Direct are delighted to offer the entry level IBM portables at our usual exceptional pricing. These lightweight portable machines offer the legendary IBM build quality, and are ideal as an alternative to a desktop PC for home use, or for on the road staff. The 9.5" dual scan colour display includes brightness and contrast controls, whilst the unique IBM trackpoint device means this unit is genuinely ready for the road! Includes IBM Dos 6.3, Windows 3.11 and Lotus organiser preloaded.

- Weighs just 2.38Kg/5.3lbs
- Optional Nylon Carrycase - £49
- 16K internal CPU cache
- 486SLC2 50MHz processor
- Optional NiCad battery pack - £79
- 4Mb Ram upgrade - £186
- Dual Scan 9.5" Colour Display
- 12 month extendable warranty
- 8Mb Ram upgrade - £369

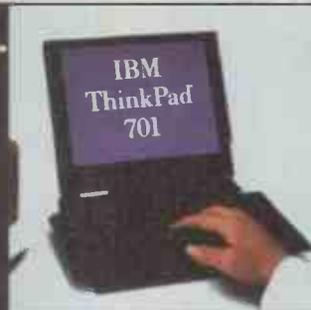
**486SLC2 50MHz, DUAL SCAN, 200HDD, 4 Mb RAM £899**

**486SLC2 66MHz, DUAL SCAN, 340 HDD, 4 Mb RAM £1095**

## IBM THINKPAD MODEL 701

As seen on T.V. these are the notebooks everybody is talking about! Offering incredibly high specifications whilst providing a full sized expanding keyboard for serious work - these are the professionals choice when it comes to portability. Expansion ports and docking stations are available for when you return to the office. If your work is important then you need the best - don't consider anything less than an IBM notebook. Tech Direct are delighted to offer the full range of these incredible machines complete with every upgrade or accessory you might need!

- Trackwrite full size 85 key keyboard
- 2 x PCMCIA Type II or 1 x Type III slot
- Dual Scan or TFT 10.4" Colour Display
- External 3.5" 1.44Mb floppy disk drive
- 44mm H x 247mm W x 201mm D
- 360Mb, 540Mb, or 720Mb hard disk drive
- Soundblaster/Pro compatible sound system
- MS DOS 6.22 & MS Windows 3.11 preloaded
- Internal Super NiCad rechargeable battery pack
- VGA/SVGA 1Mb VESA Local Bus graphics card



**701CS DUALSCAN DX2-50 360/4Mb £1499**

**£1499**

**701C TFT DX2-50 360/4Mb £1749**

**£1749**

**701CS DUALSCAN DX2-50 540/4Mb £1599**

**£1599**

**701C TFT DX2-50 540/4Mb £1899**

**£1899**

**701CS DUALSCAN DX4-75 360/8Mb £1899**

**£1899**

**701C TFT DX4-75 360/8Mb £2199**

**£2199**

**701CS DUALSCAN DX4-75 540/8Mb £1999**

**£1999**

**701C TFT DX4-75 540/8Mb £2299**

**£2299**

**701CS DUALSCAN DX4-75 720/8Mb £2199**

**£2199**

**701C TFT DX4-75 720/8Mb £2499**

**£2499**

# techbooks

- Tech Direct enter the notebook market in style!!
- The highest specs, the lowest prices, the best value!
- Upgradeable systems are ready for the future
- Multimedia ready systems at incredible prices
- Genuine alternatives to a desktop only machine

## THE TECHBOOK MULTIMEDIA NOTEBOOK

Tech Direct are delighted to present the ultimate range of multimedia ready notebook computers. With the increased popularity of CD ROMS as a means of software distribution and more applications making use of stereo sound it makes sense to purchase a system with these abilities either built-in or as a simple upgrade. These tech direct multimedia notebooks provide just that choice. Buy a standard specification machine now and in the future you can upgrade with an internal CD-ROM, bigger hard disk, faster processor or even overhead projector tablet. These units are available with the latest 3.3 volt Pentium processors, and come as standard with stereo sound. Just compare our system specifications and prices then call us for next day delivery!

**486DX4-100 DUAL SCAN, 340 HDD, 4 RAM £1349**

**£1349**

**PENTIUM 75 DUAL SCAN, 340 HDD, 8 RAM £1599**

**£1599**

**PENTIUM 90 DUAL SCAN, 340 HDD, 8 RAM £1659**

**£1659**

**486DX4-100 TFT SCREEN, 340 HDD, 4 RAM £1699**

**£1699**

**PENTIUM 75 TFT SCREEN, 340 HDD, 8 RAM £1949**

**£1949**

**PENTIUM 90 TFT SCREEN, 340 HDD, 8 RAM £2009**

**£2009**

- Upgradeable processor socket
- Removeable and upgradeable Hard Disk
- Optional dual speed CD-ROM (or faster)
- Built-in Trackpoint pointing device
- Two built-in speakers, Built-in microphone
- 1Mb VESA 32 Bit Local Bus graphics card
- 16 bit sound blaster compatible card
- 4 Mb RAM expandable to 64Mb
- 1 x Type III or 2 x Type II PCMCIA slots
- NiMH Battery with RTG for longer life

- 256 K External Cache
- Upgradeable Dual Scan 10.4" screen
- External mouse and keyboard ports
- External SVGA monitor port
- Autoswitching Mains battery charger
- External microphone and speaker ports
- MPEG live video option
- 3.5" (1.44Mb) Floppy Disk Drive
- Ports = 2 serial/1 Parallel, 1Midi/Joystick
- 3 year limited warranty

### OPTIONAL EXTRAS

- Dual Speed internal CD-ROM £125
- 4Mb Ram upgrade £160
- 8Mb Ram upgrade £315
- Upgrade to 510Mb Hard Disk £99
- Upgrade to 810Mb Hard Disk £199
- US Robotics V34 PCMCIA modem £159
- Spare NiMH Battery £75
- Carry case £19

**TECH BOOK 486DX2-66, 340 HDD, 4 MbRAM**

**MONO.....£749**

**DUALSCAN.....£1049**

**TECH BOOK 486DX4-75, 340 HDD, 4 MbRAM**

**MONO.....£849**

**DUALSCAN.....£1099**

**tech direct  
offers you...**

**THE LOWEST PRICES**

Our purchasing power means low low prices for you! Our commitment to providing our customers with the best deals is there for you to see.

**THE LATEST PRODUCTS**

NO GREY IMPORTS. All our products are UK sourced and supplied with the manufacturers full warranty (minimum 12 months)

**CONFIDENCE**

No credit card surcharges (except Amex @ 1.5% - sorry!) Your credit card will only be debited on despatch of your order

**NEXT DAY DELIVERY**

Order from us and if we have the goods in stock we will deliver tomorrow

**COLLECTIONS**

If you wish to collect please call to ensure availability and to reserve stock! A £5 handling charge will apply for collections

**OPENING HOURS**

MONDAY to FRIDAY:  
9.00am to 5.30pm  
SATURDAY:  
9.00am to 1.00pm

**PAYMENT TERMS**

To offer you the lowest prices we operate on a payment to accompany order basis. Add £9.95 delivery and VAT at 17.5% to all prices. Please allow five working days for cheque clearance. We are delighted to fax or send Pro-forma invoices.

**CONDITIONS OF SALE**

Prices and specifications are unfortunately subject to change. Please check suitability with manufacturers before purchase. Goods are not supplied on a trial basis and are subject to our standard conditions of sale. A re-stocking fee of 15% will apply to non-defective returns. Errors and omissions excepted.



# tech direct

unit 1, princess mews, horace road, kingston, surrey KT1 2SZ

0 1 8 1 2 8 6 2 2 2 2  
F A X L I N E S 0 1 8 1 2 8 6 0 2 0 0

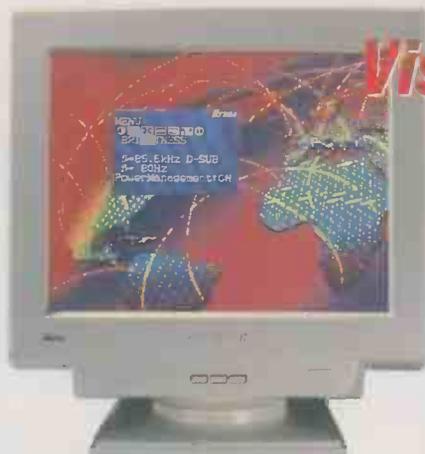
CALL 0171 316 9300

CLASSIFIED

## ADVERTISERS INDEX

A+P Computers.....	673
Argo Systems.....	672
Brent Communications.....	671
E Q Consultants.....	670
Dakota.....	673

Green Man Toner.....	671	Monitors Direct.....	670
Karlton.....	672	Shape Fayre .....	672
Linefeed .....	673	Snap Computers .....	671
Magnum .....	672	Squire International.....	672
Microtronics.....	671	Sunbelt.....	671



## Vision Master 17

The superb value liyama MF-8617E offers 17" FST, 0.26mm dot pitch, dual focus CRT. Up to 1280 x 1024 @ 80Hz with a 135MHz bandwidth. VESA DPMS, Energy Star compliance plus MPR-II. Our prices are unbeatable, so...

**£ call**

**MONITORS DIRECT**

## GRAPHICS CARDS



Tornado Media	2Mb PCI	£286
Tornado	4Mb PCI	£349
Tornado-VIP	4Mb PCI	£383
Orion 64	2Mb PCI	£131

## matrox

Millennium MGA-MIL/21	2Mb	£218
Millennium MGA-MIL/41	4Mb	£313
Memory Upgrade		£ call

## SONY PERIPHERALS

CSS-B100T	Speaker box	£ call
CDU-55	Dual Speed Intl CD-ROM	£98
CDU-76S SCSI-2	Quad Speed Intl CD-ROM	£135
CDU-76E IDE	Quad Speed Intl CD-ROM	£111
CDU-920S	Internal CD-Writer	£1,321
CDU-921S	External CD-Writer	£1,472
RMO-S580-K200	MO Drive 5.25" 1.3Gb	£1,464

## COLOUR MONITORS

### HITACHI

15MVX Value	£249
17MVX Value	£469
CM1711	£ call
CM2096	£890
CM2098M	£1,150
CM2111M	£1,349
CM2199MET	£1,895

### SONY

CPD-15SF1	£ call
CPD-17SF1	£ call
GDM-17SE1	£819
GDM-20SE1VT	£1,277
GDM-20SE1T	£1,426
GDM-20SHT	£1,833

### liyama

MF-8115	£279
MF-8617E	£ call
MF-9017E	£582
MF-8221E	£1,165
MT-9021E	£1,246
MT-9121 Diatron	£1,293

### MITSUBISHI

DiamondPro 15FS	£260
DiamondPro 17TX	£728
DiamondPro 20X	£947
DiamondPro 21TX	£1,225
29" and 37" presentation monitors	£ call

### TAXAN

£ call



Monitors Direct  
Alfreton Rd  
Derby, DE21 4AD

**Tel 01332 205552**  
**Fax 01332 290667**

All trademarks acknowledged. All orders are subject to our standard terms & conditions - available on request. All prices exclude delivery & VAT. Prices correct at time of going to press. E&OE.

# NETWORKING FOR NEXT TO NOTHING!

NETWORK UP TO 250 PCs FOR £79.99!  
**LITTLE BIG LAN**  
ONE GIANT LEAP FOR LANKIND!

Why waste money on expensive Network Operating System software full of complicated features you'll never use?



- True Peer-to-Peer (no dedicated server!)
- supports DOS V3.1 and above file locking
- connects PC/XT/AT/PS2/386/486/Pentium/100% compatibles via serial ports & ...
- via parallel ports... ARCnet cards... Ethernet cards... modem, and...
- CONNECTS VIA ANY COMBINATION OF THE ABOVE ON A SINGLE LAN!
- Uses only tiny amounts of RAM, and is simple to install
- PRICE IS PER NETWORK, NOT PER NODE!
- Allows full access to - & use of - any or all remote floppy, hard, CD-ROM, optical & RAM drives using standard DOS commands as if they were local devices.
- Allows spooled printing to local & remote printers and plotters
- Allows local control of remote PC - with text

- screen redirection!
- Lifetime hotline technical support
- Operates with MS-DOS/PC-DOS V2.11 - V6.2 (including DR-DOS). Versions may be mixed.
- Compatible with Windows/WWG 3.x, Stacker, SuperStor, & Doublespace
- Supplied on dual media (low density)
- "...UNBEATABLE VALUE FOR MONEY" - PC Magazine, November 1993
- "...LITTLE ON PRICE, BIG ON TALENT" - PCLAN, May 1994
- "...IT HAS NO RIVALS!" - PC Plus, July 1994

**NEW VERSION 2.0 WITH SUPPORT FOR NDIS, AND OPTIONAL PASSWORD PROTECTED ACCESS RIGHTS TO DIRECTORIES - THE BEST JUST GOT BETTER!**

**AND NOW... THE BIGGEST BARGAIN EVER:**  
LBL ARCNET STARTER KIT. CONTAINS 250-NODE SOFTWARE + TWO 8-BIT NOVELL APPROVED ARCNET CARDS AND A 12M CABLE:  
**£109.99**  
+ £12.00 DELIVERY + VAT (TOTAL £143.34) - LIMITED QUANTITY AVAILABLE

ADD A THIRD ARCNET NODE FOR £25.00 + CABLE COST AND VAT, OR THIRD AND FOURTH FOR £40.00 + CABLE COST AND VAT  
ARCnet offers excellent performance, but for those who require the very best, we have another bargain.

LBL ETHERNET STARTER KIT CONTAINS 250-NODE SOFTWARE + TWO 8/16-BIT NE 2000 AND WD/SMC80x3 COMPATIBLE ETHERNET CARDS, TERMINATORS, AND A 5M CABLE:  
**£184.99**  
+ £12.00 DELIVERY + VAT (TOTAL £231.46)

LBL SOFTWARE ONLY: £79.99 + £3.00 DELIVERY + VAT (TOTAL £97.51)  
CABLES DIAGRAM SUPPLIED - OR BUY FROM US:  
Serial or parallel 2m = £15.00 + VAT (total £17.63) including carriage. Lengths over 2m = £1.00 per additional metre, + VAT (e.g. 5m = £15.00 + £3.00 + VAT, total £21.15). For serial, please state 25-25pin, 25-9pin, or 9-9pin. NB: Maximum permissible parallel is 7m. ARCnet/Ethernet £9.00 + £0.70 per metre + VAT including carriage (e.g. 5m = £9.00 + £3.50 + VAT, total £14.69)  
SINGLE PARALLEL PORT CARDS (LPT1-3) £12.00 + £3.00 P&P + VAT (total £17.63)  
TWIN PARALLEL PORT CARDS (LPT1-3) £20.00 + £3.00 P&P + VAT (total £27.03)  
HIGH SPEED SERIAL CARDS (16550 UART, IRQ2-7 COM1-4) £29.99 + £3.00 P&P + VAT (total £38.77)  
ARCNET CARDS: 8-bit star £15.00 + delivery + VAT, 16-bit star/bus £59.95 + delivery (£9.00 per order) & VAT  
ETHERNET CARDS: 8/16-bit £49.00, MCA £125.00, parallel port £89.00; all + delivery (£9.00 per order) & VAT  
TERMINATORS: ARCnet/Ethernet £4.00 + £2.50 P&P + VAT (pair) (total £7.54)

**EQ CONSULTANTS,**  
ST FILLANS, CRIEFF,  
PERTSHIRE PH6 2NG  
SCOTLAND U.K.  
PHONE: (01764) 685220/685225  
FAX: (01764) 685241  
INTERNET: Biz@Cix.CompuLink.Co.Uk COMPUSERVE: 70611,2032



CLASSIFIED

Get started with Windows 95... Join the multimedia revolution ... Without buying a brand new PC

## High-speed upgrades for PS/1s

### Nova Pentium upgrade

• Intel Pentium processor 75-120MHz • 256k secondary cache exp 1MB • Up to 128MB 72-pin memory • 32-bit PCI local bus accelerated SVGA. 1MB video memory (exp 2MB), flicker-free 70 Hz refresh rate • High-speed EIDE disk controller • Easy upgrade flash Bios with power saving features • 3- or 5-slot riser with 1 or 2 PCI slots • 2 serial 16550 UART, 1 bi-directional parallel, mouse and keyboard ports

### Nova 486 upgrade

• 486 DX2-66 or DX4-100 processor • 128k secondary cache exp 256k • Up to 64MB 72-pin memory • 32-bit PCI local bus accelerated SVGA. 512k video memory (exp 2MB), flicker-free 70Hz refresh rate • High-speed EIDE disk controller • Easy upgrade flash Bios with power saving features • 3- or 5-slot riser with 1 or 2 PCI slots • 2 serial, 1 bi-directional parallel, mouse and keyboard ports

### for PS/1 & ValuePoint

PS/1 386SX

PS/1 with Nova DX4-100

PS/1 with Nova Pentium

Boost performance up to 400%!

• Low-cost upgrade path for IBM PS/1 and ValuePoint

• High-performance PCI technology

• Pentium or 486 processing power

• Simple to install • US manufacture

• 3 year warranty

• 100% compatible

**NOVA**  
PC enhancements



from £295

Wide range of compatible options

Memory • Hard disks • CD-ROM drives

Call us now on 0181 296 8878

The upgrade experts

**m e p**  
micro  
expansion  
products

All trademarks are properties of their respective owners. Prices exclude VAT, delivery - call for options.

### PRICE BUSTERS 486 £559



**£559.00**

#### SYSTEM INCLUDES

**486DX/2-66 SYSTEM**  
VL GREEN MOTHERBOARD 256K  
4MB FAST RAM  
540MB ENHANCED IDE HARD DRIVE  
3.5" FLOPPY DRIVE  
1MB SVGA DISPLAY CARD  
SVGA COLOUR MONITOR  
102 KEY KEYBOARD  
MOUSE + MOUSE MAT  
5 YEAR WARRANTY  
(1 YEAR RTB 4 YEARS LABOUR)

**8MB £669.00**  
**1 GIG UPGRADE £75.00**

**486DX4-100 £659.00**  
**PENTIUM 60 £799.00**  
**WITH CD ADD £149.00**

#### MULTIMEDIA OPTION WITH 8MB RAM £839.00

**PENTIUM 100 SYSTEM MULTIMEDIA 8MB RAM 540 HD SVGA MONITOR £1329.00**

**486 PCI DX2-66 4MB RAM 540MB HARD DRIVE SVGA MONITOR £599.00**

**2120 BACKUP TAPE £7.95**

**MULTIMEDIA 80W SPEAKERS £34.95**

### SPECIAL OFFERS

MICROSOFT ENCARTA 95	£24.95
MICROSOFT WORKS	£19.95
MICROSOFT DOS 8 5.25"	£14.95
14400 FAX MODEM INTERNAL *	£55.00
28800 FAX MODEM INTERNAL *	£130.00
3.5" 1.44MB FLOPPY DRIVE	£20.00
640MB ENHAN HARD DRIVE	£115.00
388X40 ISA MOTHERBOARD	£39.00
488SX50 ISA MOTHERBOARD	£84.95
488DX2-66 VL MOTHERBOARD	£116.00
PENTIUM 100 + INTEL MB	£575.00
PC MOUSE + MAT SERIAL	£7.95
SOUND MIDI INTERFACE	£27.00
80WATT MULTIMEDIA SPEAKERS	£35.00
MITSUBI QUAD SPEED CD	£115.00
HEATSYNC FAN 486	£5.95
SHARER SWITCHES FROM	£8.95
PC POWER SUPPLIES 200-250W	£25.00
1MB ISA SVGA CARD	£43.95
4MM HS-490x DAT 2 GIG	£8.95
HP INK CARTRIDGES BLACK	£17.95
HP INK CARTRIDGES COLOUR	£19.95
EPSON STYLUS INK CART	£14.95
EPSON STYLUS COLOUR	£14.95
DUST COVERS FROM	£8.50

### DISKS

QUANTITY	50	100	500
DSDD 3.5"	£15.00	£25.00	£120.00
DSHD 3.5" FORMATTED	£14.00	£24.00	£115.00

### SPECIAL OFFERS

100 DISKS 100 LABELS 100 CAP STORAGE BOX & A FREE MOUSE MAT  
WITH 3.5" DSDD DISKS £28.00  
WITH 3.5" DSHD DISKS FORMATTED £27.00

### CABLES

LAPLINK CABLES FROM	£7.95
SCSI 4/5/6 HEAD INT CABLES FROM	£7.50
SCSI TO 25M EXTERNAL CABLE	£9.50
SCSI 1/2/3 -> SCSI 1/2/3 EXT FROM	£11.50
SCSI 3 TO SCSI 3 68 PIN	£49.95
SCSI 1/2/3 TERMINATORS FROM	£2.50
SVGA EXTENSION 15F/15M FROM	£6.95
SVGA/VA MONITOR 9/15M/15M 2M	£7.95
SVGA 15M TO 5 BNC 2M	£24.95
MONITOR/MOUSE EXTEN 9M/9F 2M	£6.95
PRINTER CABLE 2-20M FROM	£3.25
SERIAL PRINTER CABLES 25M/25F 2-5M	£7.95
MODEM CABLE 25M/25M/F FROM	£7.95
NULL MODEM CABLE 9/25F/9/25F FROM	£7.95
EXTEN CABLE PC/PS2 2-5M FROM	£5.95
FLOPPY & DARD DRIVE CABLES	£3.95
ALL LINES 25W/25M/F 2-10M FROM	£6.95
CENTRONICS 39M/39M/F 3-10M FROM	£7.95
ETHERNET CABLES RG58 3-20M	£6.95
MONITOR ADAPTORS 15M TO 9FM	£4.25
ADAPTORS	£3.60
KEYBOARD ADAPTORS FROM	£4.75
MOUSE TO PS2 ADAPTOR	£4.25
SCSI 1/2 ADAPTORS FROM	£2.45
9/15/25M/F TO 9/15/25M/F	£3.95
100 CAPACITY 3.5" STORAGE BOX	£3.50
NE2000 NETWORK CARD JUMPERLESS	£25.00
T CONNECTOR	£2.25
TERMINATOR 50 ohm BNC	£1.95
CRIMP CONNECTOR BNC	£1.95
CD SOUND CABLES FROM	£7.95

### VISIT OUR SHOWROOM FOR 100'S OF BARGAINS

#### SCSI WIDE CABLES NOW IN STOCK

CARRIAGE £ 3.50 £ 6.00 £ 8.00  
ACCORDING TO PACKAGE SIZE

0181 509 9994 FAX: 0181 509 1430  
SHOWROOM MICROTRONICS LTD  
THE RED BUILDING 154/6 HOE STREET WALTHAMSTOW LONDON E17 4SD

ACCESS: VISA & SWITCH (NO SURCHARGE)  
E & OE. PRICES DO NOT INCLUDE CARRIAGE PLEASE ADD VAT @ 17.5%

### COMPATIBLE TONER CARTRIDGES

OKI, IBM, CANON, COMPAQ, H.P., EPSON,

RICOH, NEC, KYOCERA and much much more!!

FOR PRINTERS FAX AND PC.

FROM £26.00 SAVE 30%-60%

### NEW/ NEARLY NEW LASER PRINTERS

GOOD PRICING + GOOD QUALITY = GOOD VALUE

FULL GUARANTEE UNDERWRITTEN AT LLOYDS OF LONDON.

### GREENMAN TONER SERVICE LTD THE LASER PRINTER COMPANY

TEL: 01372 748550  
FAX: 01372 748540

0181 509 9994 FAX: 0181 509 1430

SHOWROOM MICROTRONICS LTD

THE RED BUILDING 154/6 HOE STREET WALTHAMSTOW LONDON E17 4SD

ACCESS: VISA & SWITCH (NO SURCHARGE)  
E & OE. PRICES DO NOT INCLUDE CARRIAGE PLEASE ADD VAT @ 17.5%

### BRENT

Communication and Telemetry Consultants

### BEWARE THE PIRATE'S PATCH



You sell your software. You don't give it away. It needs the kind of copy protection that only a top quality UNPATCHABLE dongle affords, but you don't want to pay the Earth for it, and you want to be sure that you'll not be making mistakes in incorporating it into your code. The MAXPRO system is for you. There are microprocessor based units at realistic prices which take care of complete .EXE files without access to source code. Set stop dates, tamper detection and many other facilities on a menu driven attachment program. MAXPRO encryption even copes with such as Clipper, QB and Clarion files with internal overlays. Neat trick. There are dongles available for Windows applications too! Call us for additional information at:

**NEW - NETWORKING CAPABILITY F.O.C.**  
Brent Communications  
Unit 2  
Dragon Industrial Estate  
Harrogate (UK) HG1 5DN  
Tel: (0) 1423 566972  
Fax: (0) 1423 501442



### SNAP COMPUTER

### SUPPLIES LTD

### HOTLINE

01703  
457111



### 3.5" DS/HD DISKS

	EX-SOFTWARE RECYCLED	PREMIUM PRE-FORMATTED
100	24.68	29.38
200	47.00	56.40
250	52.88	64.63
500	88.13	117.50
1000	164.50	223.25

All disks are covered by our one-for-one replacement guarantee. Free labels are included when ordering quantities of 100, 200 and 250 disks. Thereafter 500 labels = 3.53 1000 labels = 6.46

ALL PRICES INCLUSIVE OF VAT - PLEASE ADD DELIVERY - 4 DAYS 3.50 - 2 DAYS 4.50 - OVERNIGHT 5.00 E&O.E.

**SNAP COMPUTER SUPPLIES LTD**  
Unit 12, The Sidings, Hound Road, Netley Abbey, Southampton SO31 5QA  
FAX: 01703 457222

CLASSIFIED

## MAGNUM

Bring you the ...

# INTERNET

InfoBahn, Information Superhighway, Cyberspace! Call it What you will, but with Magnum you've got an Internet Access Provider that offers Fast Connect Times, Quality Service and Unrivalled Technical Support. We offer you ...

- Full Internet Access to 28.8
- Worldwide Electronic Mail
- Graphical Internet Access (WWW)
- UseNet - Discussion Groups
- FTP File transfer, Gopher, Archie
- Free Files and Software
- IRC - Internet Relay Chat
- Easy Menu or Shell Access
- Login, PPP or SLIP Accounts
- Your own World Wide Web space!
- In fact the complete service ...

So SURF THE NET with MAGNUM! Subscriptions from just £5 per month plus VAT. With no On-Line charges! If you have a Computer + Modem try our Demo login as "guest" with password "mag-net" Otherwise just Call, Fax, or Write for Magnum's FREE INTERNET INFORMATION PACK!

**Free Demo Modem: 01908 216677**  
 email: sales@mag-net.co.uk  
 http://www.mag-net.co.uk

**Voice Enquiries: 01908 216699**  
**Fax: 01908 218877**  
 Magnum Network Services Ltd, PO BOX 1609  
 Newport Pagnell, Bucks, MK16 8UG

## Karlton

# Special Offers

For a Limited Period

### Karlton's Top Twenty

Microsoft Office 95 V7	£259	Microsoft Office Pro V7	£359
Microsoft Word 7	£189	Lotus Smart Suite 4.0	£259
Microsoft Project 7	£249	Microsoft Excel 7	£189
Microsoft Access 7	£189	Microsoft Works V3/4	£69
MS Visual Basic Pro V3/4	£179	Lotus 123 V5	£189
WordPerfect	£159	Lotus AmiPro 3.1	£89
MS Visual C++ Pro V2	£199	MS PowerPoint 7	£189
Corel Draw V5 for Win95	£249	Borland Paradox v5	£189
MS FoxPro 2.6	£69	Corel Draw 5.0 (CD+3.5)	£259
Sage Payroll + 2	£99	MS Encarta 95	£34
MS Windows 3.11 (W/Groups)	£59	MS DOS 6.22 upgd	£19

Tel: 0181-778 0908 Fax: 0181-778 4886

### Other Specials

MS Windows 95.....	£69
4 Mb SIMMS Memory Chip.....	£99
540 Mb Hard drive.....	£129
CD ROM Drive - Quad Speed.....	£109

Prices exclude delivery and VAT (17.5%)  
 Delivery £7 + VAT

VISA - MasterCard - EuroCard - Amex - COD

E.&O.E. Availability, Prices and Specifications are subject to change without notice.  
 All sales are subject to Karlton's Standard Conditions of Contract. Copies available on request.

### Karlton Computers Limited

30 Metro Centre, Kangley Bridge Rd, London SE26 5BW  
 (Next to Lower Sydenham BR Station - 18 min from Charing Cross)

## Karlton

## ARGO SYSTEMS

For details on this month's special offers and how to claim a 5% discount on your first order. Please phone or fax us, and request our special offer bulletin. You'll also receive details of our range of scanners, monitors, networking products, CD-ROM drives, sound cards and speakers, motherboards, CPUs and memory, cases, keyboards, mice, trackballs, modems, software and orange mobiles. We will try to beat any advertised price. We aim to be 1st for price and service - if you don't see what you want, please ask.

### MOTHERBOARDS - all include 256Kb Cache

All 486 Motherboards are DX4 and Pentium Overdrive ready, and have deep green BIOS.	
486VL 3 VL, 4 ISA slots. Takes 4 x 30 pin, 2 x 72 pin SIMMS	65
486PC 3 PCI, 4 ISA slots. Takes 4 x 72 pin SIMMS, on board IDE	62
486VIP 4 PCI, 2 ISA, 2 VL/ISA Slots. 4 x 72 pin SIMMS	68
486PCI 3 PCI, 4 ISA slots. Takes 4 x 72 pin SIMMS, I/O and EIDE	99
Our Pentium Boards take at least 4 x 72 pin SIMMS, and have PCI and ISA slots. All Triton boards support up to 4 EIDE devices up to mode 4, including IDE CD-ROMS. MBP1 2 & 3 also have 2 x 16550 serial ports, 1 x ECP/EPP/SPP parallel and 1,442.88 floppy controller. MBP4 has built-in SoundBlaster audio, and pipelined cache.	
MBP1 75-133 MHz 4 PCI 4 ISA, Intel Triton Chipset	135
MBP2 75-200 MHz 4 PCI 4 ISA, VIA Chipset - 1/0 HDD FDD	145
MBP3 90-150 MHz 4 PCI 4 ISA, Intel Triton Chipset	169
MBP4 90-120 MHz 3 PCI 4 ISA, Intel Endeavour Triton	235

### CPUs and MEMORY - 70ns parity/non parity

Cyrix DX2 66 3v/5v	41	1MB	30pin	25**
Cyrix DX2 80 4v	46	4MB	30pin	89**
Cyrix DX4 100 3v	65	4MB	72pin	10090
AMD DX4 100 3v	70	8MB	72pin	210/180
Cyrix 586d 100 3v	129	16MB	72pin	345/325
Intel DX4 100 5v	145	32MB	72pin	***/645
Intel Pentium 75	135	4MB EDO	72pin	***/119
Intel Pentium 90	203	8MB EDO	72pin	***/235
Intel Pentium 100	230			
Intel Pentium 120	405			
Intel Pentium 133	490			

### EIDE DRIVES/CD-ROM DRIVES/FAST SCSI-2 DRIVES

210 MB		65	540 MB	Fujitsu	139
360 MB	WDC	85	730 MB	MB	155
425 MB	Conner	95	1 GB	Conner/Quantum	215
540 MB	Fujitsu	115	1 GB	Fujitsu	225
640 MB	Conner	125	2.1 GB	Fujitsu	495
850 MB	Conner	139	2.1 GB	Micropolis	605
1.09 GB	Fujitsu	165	4.3 GB	Fujitsu	745
1.2 GB	Conner	185	4.3 GB	Micropolis	785
Micropolis: AV models cost 55 extra. FAST/WIDE SCSI2 40 extra Fujitsu: 2.1 and 4.3 models are AV class. FAST/WIDE SCSI2 55 extra.					
Panasonic	AT	Dual	Speed	(CR562B)	45
Bluepoint	IDE	Dual	Speed		55
NEC	EIDE	Quad	Speed		105
Aztech	EIDE	Quad	Speed		110
Panasonic	EIDE	Quad	Speed		115
Teac	EIDE	Quad	Speed	+ 3.5" floppy	129
Panasonic	SCSI	Quad	Speed		145
Teac	EIDE	X6	Speed	*****NEW 6 Speed*****	225
MBR-7	SCSI	Dual	Speed	7-CD Jukebox	245
Nakamichi	SCSI	Quad	Speed	7-CD Jukebox	325

### TAPE BACKUP, REMOVABLE/PORTABLE and FLOPPY DRIVES

3.5in MITSUBISHI 1.44MB floppy drive	20
3.5in SONY 2.88/1.44MB floppy drive (white)	25
Omega tape drive internal 700MB drive/cartridge	125/15
>>>longer ZIP drive 100MB inc cartridge<<<<	144/14
up to 200MB with compression - specify parallel/SCSI	
HP DDS2 4-16GB Drive	**SPECIAL** 595
Syquest EZ135 Internal IDE	139
Holds 135MB per cartridge. 13.5ms avg. seek, 2.4MB/s sustained	
Syquest EZ135 External SCSI	169
Syquest EZ135 External parallel	TBA
Syquest EZ135 cartridge	12.50

CALL OR FAX US NOW ON (01203) 251622  
 Prices exclude VAT and delivery (typically £ to 10 pounds per order). EAOE  
 ARGO SYSTEMS - 8 Trenton Road, Coventry CV1 5BD  
 sales@argosys.demon.co.uk

## PC SOFTWARE FROM 10p!

Order our shareware menu disk and choose from over 10,000 titles arranged in 115 easy to select categories. Rather than charge a fee per disk we charge by the compressed megabyte, with a minimum fee of just £3 (fully inclusive). For that you could select up to 30 titles! We have everything you need from games to graphics, sounds to spreadsheets, desktop aids to databases, windows to word processors ... and more!

Graphics, font and sound files are catalogued individually so you can complete your personal collection without wading through hundreds of unwanted kilobytes of floppy bundles!

Send 4 first class stamps or 2 IRCs for our simple to use catalogue supplied on the format of your choice (3 1/2", or 5 1/4", DD or HD - hard disk required) to:

**SHARE FAYRE**  
 113 BREWERY ROAD  
 LONDON SE18 1NE

Shareware may require a separate payment to the author if found useful.

## DISKS, CD ROMS, HARD DISKS & RIBBONS + TONERS

**A Grade Disk Guaranteed 2 for 1** **FORMATTED DISKS** **High Density 3.5" HD's from 30p**  
**BUY FROM THE BEST! WHY RISK THE REST?**  
**QUALITY DISKS AT LOWEST PRICES**

A-GRADE Bulk. Professional Grade				
With Labels	50	100	200	300
3.5" DSHD FORMATTED	0.55	0.36	0.34	0.33
3.5" DSHD	0.55	0.36	0.34	0.33
3.5" DSDD	0.39	0.33	0.32	0.31
5.25 DSHD	0.39	0.35	0.33	0.31
These disks are the best quality available. Best choice for storing data and for backups.				
B-GRADE. Bulk Disks.				
With Labels	50	100	200	300
3.5" DSHD FORMATTED	0.50	0.33	0.31	0.30
3.5" DSHD	0.48	0.33	0.31	0.30
These disks are OK for general PC use.				

CD-ROMS - Lowest Prices	
Mitsumi Quad spd 4X	£109
Panasonic 562B dual spd	£59
External CD - Roms available	
CD ROM BUNDLE	
Mitsumi Quad Speed with 16 Bit Soundcard, 11 CDs incl. Encarta Encyclopaedia	£189 + VAT
HARD DISK DRIVES	
560MB.....	£110
850MB.....	£140
1GB.....	£155
1.27GB.....	£165
Laser Toners and Printer Ribbons Available	

**DISK PRICES INCLUDES VAT & FREE 48 HOURS DELIVERY. STORAGE BOX £3 WHEN ORDERING WITH 100 DISKS. NEXT DAY DELIVERY: £1 COLOURED DISKS AVAILABLE - CALL FOR DETAILS**

**DISK DUPLICATION SERVICES WITH 24HR TURNAROUND**  
**HOTLINE: 0181-886 3078**

WEEKDAYS: 9AM-9PM WEEKEND: 9AM-5PM Credit Cards: Cheque and PO's to:  
**SQUIRE INTERNATIONAL LTD.**  
 (DEPT SQ2), 129 POWYS LANE, LONDON N13 4HL. TEL: HOTLINE 0181-886 3078 FAX: 0181-882 8885  
 A-Grade disk guaranteed 2 for 1. No credit card surcharges. Prices are subject to change.

**A+P COMPUTERS LTD.**

QUALITY! RELIABILITY! GOOD SERVICE!

NOVELL - SCO UNIX - LANTASTIC NETWORK

Authorised Dealer

MODEL	AP386SX	AP486SX	AP486/66DX	AP586/75	AP586/90
CPU	80386SX	80486SX2	80486DX PENTIUM-75	PENTIUM-75	PENTIUM-90
SPEED	40MHz	50MHz	66MHz	PCI-75MHz	PCI-90MHz
RAM	2MB	4MB	4MB	8MB	8MB
MAX. RAM	16MB	64MB	64MB	128MB	128MB
CACHE		256KB	256KB	256KB	256KB
FLOPPY	1.44MB	1.44MB	1.44MB	1.44MB	1.44MB
HARD DISK	130MB	420MB	420MB	520MB	520MB
VIDEOCARD	1MB SVGA	VL 1MB	VL 1MB DS PCI 2MB	DS PCI 2MB	
SVGA MONO	£445	£615	£655	£985	£1,075
SVGA COL.	£525	£695	£735	£1,065	£1,155

ALL PC SYSTEMS INCLUDE KEYBOARD, MOUSE, TWD SERIAL, ONE PARALLEL, AND ONE GAMES PORT DS-DIAMOND STEALTH 64.

**BEST QUALITY MOTHERBOARDS (0 KB)**

80386SX-/33/40MHz	1-16 MB EMS Shadow RAM Half size	£85
80386DX/40MHz	(64/128KB CACHE) 1-32MB onboard	£95
80486SX/2/50MHz	(256KB CACHE) 1-64MB onboard	£150
80486DX/2/66MHz	(256KB CACHE) 1-64MB onboard	£175
80486DX/4/100MHz	(256KB CACHE) 1-128MB onboard	£255
Pentium 75	(256KB CACHE) 3-PCI, 5-ISA, 1-128MB onboard	£310
Pentium 90	(256KB CACHE) 3-PCI, 5-ISA, 1-128MB onboard	£415

**HARD DISK DRIVES**

420MB (13ms) IDE	£115	5.25" 360 KB or 1.2MB	£45
540MB (12ms) IDE	£125	3.5" 720KB/1.44MB	£30
730MB (11ms) IDE	£150	SCSI Toshiba CD ROM (3601)	£255
850MB (11ms) IDE	£165	Panasonic CD ROM (Dual Speed)	£75
1GB (10ms) IDE	£195	Nec/Sony Quad CD ROM	£130

**RAM UPGRADE/CO-PROCESSORS**

SIMM 1MB (30 Pins)	£30	1024T KEYBOARD	£20
SIMM 4MB (72 Pins) (No Parity)	£110	US ROBOTICS SPORTSTER 14,400 F/M	£150
SIMM 8MB (72 Pins) (No Parity)	£215	US ROBOTICS SPORTSTER 28,800 F/M	£195
387SX-33MHz	£49	TAPE STREAMER 420MB	£135
387DX-33/40MHz	£59	EXTERNAL KIT	£90

**CASES**

Slit Case + 200W PSU	£59	Trident 1mb svga Card	£59
Desktop + 200W PSU	£59	VL-Cirrus 1mb svga card	£65
Mini Tower + 200W PSU	£59	PCI-Cirrus 1mb svga card	£75
Mid Tower + 220W PSU	£69	VL-Diamond Stealth 64 1MB Dram	£105
Full Tower + 220W PSU	£89	VL-Diamond Stealth 64 2MB Dram	£155

**POWER SUPPLY**

150W PSU	£45	14" VGA MONO	£99
200W/220W PSU	£45	14" ADC SVGA NI LR COL	£179
220W IBM AT PSU	£75	17" ADC SVGA COL NON-INT	£525

**MEMORY EXPANSION, I/O & SOUND CARDS**

AT/IO 2S/1P/1G	£21	RS232 Dual Ports	£18
Multi-I/O Fdd/Hdd 2S/1P/1G (16550)£25		Dual Parallel Ports	£18
Sound Blaster Pro 16 Sound Card	£79	Sound Blaster AWE 32 (full kit)	£195

**PC NETWORKING & MULTI-USERS**

KINGSTON NE2000 COMBO	£50
WD/SMC 16 BIT ULTRA	£59
3COM ETHERNET III	£79
ETHERNET POCKET ADAPTER includes PRINTER PORT	£169
LANTASTIC/AVI version 6.0 DOS + WINDOWS per NODE	£79
LANTASTIC Starter Kit (2 x AE-2 cards, software & cabling)	£329
NOVELL 3.1-5 USERS	£479
NOVELL 3.12-10 USERS	£1059
NOVELL 4.01	POA
WINDOWS FOR WORKGROUPS 3.11	£59
MICROSOFT OFFICE - STANDARD	POA
MICROSOFT OFFICE - PROFESSIONAL	POA
LOTUS 123 v3.4 DOS	POA
LOTUS 123 WINDOWS	POA
WORDPERFECT FOR WINDOWS v6.0	£75
OTHER SOFTWARE AVAILABLE - PLEASE PHONE	

**PRINTERS/VIDEO EXPANDERS/NOTE BOOKS PC**

CANON BJ-30	£199	HP 4L Laser	£425
EPSON STYLUS COLOUR	£369	HP 4 PLUS	£995
HP 540	£229	HP 5P	£639
HP 650 C	£349	PANASONIC 6100 GBDI	£299

Monitor Tester for Mono CGA, EGA, VGA, TTL & ANALOG	POA
VOPEX to drive several monitors at the same time	POA
VDU & Keyboard Amplifier to drive VDU & Kbd. up to 500ft away	POA
Palm-Top & Note-Book Personal Computers	POA

OPEN: MONDAY-SATURDAY

ALL PRICES EXCLUDE VAT (at 17.5%) & CARRIAGE

Specification and prices may be changed without notice.

ALL PRODUCTS INCLUDE ONE YEAR WARRANTY. WE INSTALL NETWORK, CABLING AND BUILD COMPUTERS TO YOUR SPECIFICATIONS. WE ALSO REPAIR & UPGRADE PCs. PLEASE CALL FOR LATEST PRICE, SPECIFICATION AND OTHER UNLISTED PRODUCTS.

(OCT 1995)

**A+P COMPUTERS Ltd,**

35 WALNUT TREE CLOSE  
GUILDFORD, SURREY GU1 4UN

Tel: 01483 304118 (6 Lines)

Fax: 01483 304124

**Mode 4 Enhanced IDE drives**  
635Mb .....£122 + VAT .....£143.35  
850Mb .....£139 + VAT .....£163.33  
1GB .....£169 + VAT .....£198.58  
Micropoints, HP, Fujitsu & Conner  
Fast SCSI-2 Drives - Please call  
Mode 3, 4 & 5 Enhanced IDE  
Controller - PCI or VLB  
£30 + VAT = £35.25

**SIMM SWAPPER**  
Converts 4 x 30 pin  
SIMMs to one 72  
pin SIMM, for use on  
the new 486 and  
Pentium boards.  
90% of post 1989  
SIMMs are suitable!  
£28 + VAT = £32.90

**CD WRITERS**

• Sony CDU 920S Dual Speed Internal CD Writer  
with SCSI Interface & Corel CD Creator £1195 + VAT - £1404.13  
• Yamaha CDR 100 Quad Speed Internal CD Writer  
with SCSI Interface & Corel CD Creator £1645 + VAT - £1932.88  
• Plasmon RF1402 Dual Speed External CD Writer  
with SCSI Interface & Corel CD Creator £1345 + VAT - £1580.38  
**TDK 74 min Banded CDR Media NEW! HP40211 -**  
5 £27.25 + VAT .....£32.02 *Quad speed CD -*  
20 £98.00 + VAT .....£115.50 *ROM / Dual Speed*  
50 £235.00 + VAT .....£276.13 *CD Writer £825 +*  
Please call for quantity prices VAT - £969.38

**IOMEGA ZIP DRIVE** .....£154 + VAT - **£180.95**  
Fast external parallel / SCSI drive with 100Mb capacity!  
100Mb Disks £13 + VAT - **£15.28**

**FAX MODEMS** Cables + software included  
The fastest modem ever! Rockwell Technology V34  
28.8 bps Internal £105 + VAT .....£123.38  
External Version £129 + VAT .....£148.05  
14.4 RPI Fax Modem £52 + VAT .....£61.10  
19.2 Windows Modem £49 + VAT .....£57.58  
BABT Approved X-Link FAX/MODEM CARDS with Winfax  
Lite, Dosfax Lite and Comit Lite Fax & Comms Software.  
14.4k £75 + VAT = £88.13V34 £129 + VAT = £151.58  
If you're on the NET, visit our WWW Site:  
<http://www.linefeed.com/linefeed/home.html>

**CD-ROM DRIVES**

• NAKAMICHI MBR-7 7 disk CD-ROM £245 + VAT ... £287.88  
• Pioneer DR-UA124X The FASTEST and most reliable  
Quad Speed IDE CD-ROM £115 + VAT ... £135.13  
• Teac 6 speed IDE CD-ROM £235 + VAT ... £276.13  
• Panasonic CR563J Dual Speed £48 + VAT ... £56.40  
MS Encarta 95 with any drive £19 + VAT ... £22.33  
We stock Aztech, Gravis, Turtle Beach & AWE32 Soundcards

**QUAD SPEED MULTI MEDIA UPGRADE KIT** £205  
Pioneer Quad speed CD-ROM, 16 bit  
Aztech Labs soundcard, & Speakers. including VAT & Delivery

**MOTHERBOARDS**

• Supermicro P550CA Triton P75 to 150+ Motherboard  
If you are moving to Pentium this is THE advanced PCI board to buy  
• Intel Triton Chipset ZIF 7 & VRM • USA made • Modular cache  
With 256k asynchronous cache £185 + VAT .....£217.38  
With 256k pipeline burst cache £239 + VAT .....£280.83  
Call for Pentium CPU prices & other Pentium motherboards

• MDD 486 PCI Motherboard Probably the best 486 PCI  
EIDE board on the market £108 + VAT = £126.90  
With any CPU £103 + VAT = £121.03  
AMD DX4-100 CPU £75 + VAT = £88.13  
AMD DX4-120 CPU £95 + VAT = £111.63  
Cyrix DX2-66 CPU £45 + VAT = £52.88  
We stock a complete range of quality components - Call!

**PROFESSIONAL QUALITY BULK DISKS**  
High clip Sony / Dysan / Verbatim bulk.

The error-free, durable disks used by commercial software distributors  
(DISK PRICES INCLUDE VAT, LABELS AND UK DELIVERY.)

	20	50	100	200	500
DSDD 3.5"	£9.40	£18.50	£28.95	£54.35	£126.95
DSHD 3.5"	£10.95	£21.50	£34.50	£64.63	£152.75

5.25" Disks & Cheap DSHD 3.5" - Please Call  
SPECIAL OFFERS (including VAT & Delivery)  
100 DYSAN/VERBATIM BULK DSHD 3.5" Disks £34.50  
100 DYSAN BULK DSDD 3.5" (720K) Disks £28.95  
100 BRANDED preformatted DSHD 3.5" Disks £38.95  
ANY ONE WITH 100 CAPACITY LOCKABLE BOX - add £3.50

**Duplication Overruns**

Qty	Price	Carriage
50	£9.00 + VAT ..... £10.58	£3.50
100	£17.00 + VAT ..... £18.80	£3.50
200	£29.00 + VAT ..... £34.08	£3.50

Please call for quantity prices

COMPUTER TRADE DIRECTORY UK SUPPLIERS ... £6.50  
BUILD YOUR OWN PC New Edition ..... £5.00

ALL PRICES INCLUDE VAT at 17.5%  
Carriage DISKS - FREE CONSUMABLES - £3.50 HARDWARE £5

**LINEFEED 0171 474 1765 24 HOURS**  
Unit 7 Ashmead Business Centre North Crescent,  
Cody Road London E16 4TG  
Fax: 0171 474 3440  
E-mail Sales@linefeed.com  
NO CREDIT CARD SURCHARGES

**Printer Switching Devices**

**Manual Printer Sharing**  
No power needed - all female connections



2 PCs to 1 Printer  
2 Printers to 1 PC **£ 11**

4 PCs to 1 Printer  
4 Printers to 1 PC **£ 19**

2 PCs to 2 Printer **£ 22**

**Automatic Printer Sharing**  
No power supply needed - fully automatic  
low profile compact design - bidirectional  
and bi-tonics options available - all ports  
DB25 female



2 PCs to 1 Printer  
2 Printers to 1 PC **£ 29**

4 PCs to 1 Printer  
4 Printers to 1 PC **£ 49**

**Printing Solutions**

**Printer Net plus**  
Connect up to 32 PCs to a maximum of 8 printers  
- Works independently of all operating systems  
- Extend printers up to 400m  
- Uses inexpensive telephone type cable  
- Supplied with 7.1m cable as standard  
- Simultaneous Printing, File Transfer & CRC



**Transmitter & Hand Control** 1 per computer **£ 49**

**Receiver** 1 per Printer **£ 49**

**Printer Net plus Starter Kit** 2 Transmitters, 1 Receiver & 2 Hand Controls **£ 139**

**Modular Link**

As Printer Net plus, except works with 16 PCs and 1 printer.

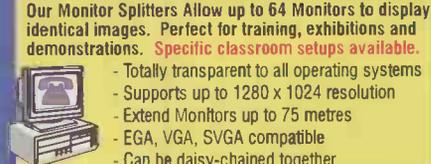
**Transmitter** 1 per computer **£ 39**

**Modular Link - Starter Kit** 2 Transmitters, 1 Receiver **£ 99**

**Monitor Splitters**

Our Monitor Splitters Allow up to 64 Monitors to display identical images. Perfect for training, exhibitions and demonstrations. Specific classroom setups available.

- Totally transparent to all operating systems  
- Supports up to 1280 x 1024 resolution  
- Extend Monitors up to 75 metres  
- EGA, VGA, SVGA compatible  
- Can be daisy-chained together



2 Monitors **£ 79** 4 Monitors **£149**

8 Monitors **£199** 16 Monitors **£299**

**Monitor Power Saver** Saves Money by turning off your monitor when not in use. **£ 24**

**Network Cables & Connectors**

**Ethernet Cards**  
BNC/UTP **£ 29**  
Combo **£ 69**  
Parallel - Pocket LAN

**UTP Cat 5**  
2 Metre **£ 6.79**  
3 Metre **£ 7.99**  
5 Metre **£ 17.99**  
10 Metre **£ 20.27**  
15 Metre **£ 27.35**

**UTP & BNC Cable** available in any length. All cables are tested prior to shipment.

**BNC - Accessories**  
Bulk Cable-305m **£ 89**  
UTP/RJ45 Plugs **£ 50**  
RJ45 Crimp Tool **£ 29**

**BNC - Accessories**  
Bulk Cable-100m **£ 59**  
Crimp Plugs **£ 1**  
Crimp Boots **£ .25**  
BNC - T-Piece **£ 4**  
BNC - Barrel **£ 4**  
BNC - Terminator **£ 3**  
Crimping Tool **£ 49**

**Cables, Cables, Cables**

All cables fully moulded - specify M-F, M-M or F-F

<b>Parallel Printer</b>	<b>25 way Extensions</b>	<b>Modem Extensions</b>
1.8 Metre <b>£ 2.95</b>	1.8 Metre <b>£ 7.50</b>	1.8 Metre <b>£ 6.50</b>
5 Metre <b>£ 5.95</b>	3 Metre <b>£ 8.50</b>	3 Metre <b>£ 7.50</b>
10 Metre <b>£ 11</b>	5 Metre <b>£ 9.50</b>	
<b>Serial Printer</b>	<b>SCSI-I, SCSI-II and SCSI-III cables in stock. Starting at £ 7.50</b>	<b>Monitor Extensions</b>
1.8 Metre <b>£ 7.50</b>		1.8 Metre <b>£ 7.50</b>
5 Metre <b>£ 15</b>		3 Metre <b>£ 9.50</b>
10 Metre <b>£ 19.50</b>		7 Metre <b>£ 34.50</b>
<b>Data Transfer Parallel Laplink™</b>	<b>Port Savers and Gender Changers</b> DB25, DB9, HD15 <b>£ 5.95</b>	15 Metre <b>£ 59.50</b>
3 Metre <b>£ 6.95</b>		30 Metre <b>£ 99.50</b>
5 Metre <b>£ 7.95</b>		75 Metre <b>£ 245</b>
		100m Bulk <b>£ 199</b>

**Dakota** Tel: 0181 452 8400  
Computer Solutions Ltd Fax: 0181 452 2400  
Unit C, 24 Lansdowne Grove sales@dakotaUK.com  
London NW10 1PR (all prices exclude VAT)

## Unbranded Ribbons

**GUARANTEED** - All these ribbons are the best quality compatible ribbons available. Should you have any problem with them at all, we refund or replace - your choice.

**THE CLP CHALLENGE** - This is only a small selection of the ribbons we STOCK and we reckon we can supply ANY printer ribbon - if you don't see yours listed phone for a price.

FN = FABRIC NYLON DN = HIGH DENSITY FABRIC  
MS = MULTISTRIKE SS = SINGLE STRIKE  
COLOURED = SINGLED COLOURED RIBBONS.

STOCK CODE	MACHINE	QUANTITY		
		1	5	10
<b>AMSTRAD</b>				
2741UMS	8512/8256	2.49	2.29	2.09
2741UFN	8512/8256/LQ3500	2.69	2.49	2.29
2420UFN	DMP 2000/3000	1.89	1.69	1.49
2425UFN	DMP 4000/512	2.59	2.39	2.19
2886UDN	LQ 5000	4.49	4.29	4.09
2746JMS	PCW 9512	2.09	1.89	1.69
<b>CITIZEN</b>				
2939UDN	120D/SWIFT80 COL	2.19	1.99	1.79
2965UDN	SWIFT 132COL	3.99	3.79	3.59
<b>EPSON</b>				
2273UFN	LX/FX800/850/40/80/85	2.39	2.19	1.99
2273UFN	COLOURED	4.39	4.19	3.99
2454UFN	LXLG80/86	1.99	1.79	1.59
2320UFN	MX/FX/RX100/5/100/50	2.69	2.49	2.29
2320UFN	COLOURED	6.69	6.49	6.29
2409UFN	LQ/LP 1500/1550	2.79	2.59	2.39
2477UDN	LQ5000/5070/200/800/5070	2.59	2.39	2.19
2273UFN	COLOURED	4.39	4.19	3.99
2477UDN	LQ1000/1050/70/70/70	2.79	2.59	2.39
2320UFN	COLOURED	6.69	6.49	6.29
1068UFN	TX80	1.39	1.19	.99
2877UDN	LQ2500/50/E8000/1000	2.89	2.69	2.49
2884UDN	DFX5000/8000	9.99	9.79	9.59
2898UDN	LO100	2.99	2.79	2.59
2274UFN	ERC 03	2.29	2.09	1.89
2785UFN	ERC 18	2.69	2.49	2.29
2999UFN	LX 100	2.99	2.79	2.59
<b>IBM</b>				
2847UFN	PROPRINT 132 COL	3.49	3.29	3.09
2848UFN	PROPRINT 80 COL	2.99	2.79	2.59
<b>MTALLY</b>				
2698UFN	MT80	3.99	3.79	3.59
2739UFN	MT85/87	3.09	2.89	2.69
2740UFN	MT86/88	4.19	3.99	3.79
2358UFN	MT140/280/290	4.09	3.89	3.69
<b>NEC</b>				
2254UFN	P1/P2/P6	2.99	2.79	2.59
2260UDN	P3/P7	3.99	3.79	3.59
2460UFN	P5	3.39	3.19	2.99
2870UFN	P6/P7/P8/P9/70/9	3.19	2.99	2.79
2830UFN	PC80/23	2.09	1.89	1.69
2844UFN	P2200/P2+	2.49	2.29	2.09

STOCK CODE	MACHINE	QUANTITY		
		1	5	10
<b>OKI</b>				
1266UFN	80/82/92/93	1.39	1.19	.99
2455UFN	182/192/193/320	2.69	2.49	2.29
2755UFN	292	4.89	4.69	4.49
2756UFN	283/4	5.59	5.39	5.19
2833UDN	393/395	9.79	9.59	9.29
<b>PANASONIC</b>				
2953UFN	KXP1540/1624/54/2624	3.29	3.09	2.89
2904UDN	KXP1232/4145	2.89	2.69	2.49
2984UDN	2123/4121/60	3.89	3.69	3.49
2737JUC	KXP190/191	1.99	1.79	1.59
<b>STAR</b>				
2781UDN	NL10/ND10/N10	3.19	2.99	2.79
2981UFN	LC10/LC20	1.89	1.69	1.49
2861UDN	COLOURED	5.69	5.49	5.29
2865UDN	LC15/FR10/FR15	2.29	2.09	1.89
2410UFN	RADIX 10SR 10	3.59	3.39	3.19
2415UFN	RADIX 15SR 15	4.49	4.29	4.09
2760UDN	NB24-15/NB15	4.19	3.99	3.79
2830UFN	NX15/NR15/ND15/NL15	3.59	3.39	3.19
2781UDN	NB24-10/NB10	3.19	2.99	2.79
2868UDN	LC/XB24-10/LX500/200	2.29	2.09	1.89
2868UDN	COLOURED	5.99	5.79	5.59
2466UFN	DELTA/SD10	3.99	3.79	3.59
2467UFN	DELTA/SD15	5.29	5.09	4.89
2954UFN	LC200	2.19	1.99	1.79

MULTI COLOURED				
STOCK CODE	MACHINE	QUANTITY		
		1	5	10
<b>CITIZEN</b>				
R2964JUC	GX140/200GX	7.99	7.79	7.59
<b>EPSON</b>				
R287JUC	LQ2500/25	7.99	7.79	7.59
<b>PANASONIC</b>				
R2985JUC	KXP2123/24/80	7.99	7.79	7.59
<b>STAR</b>				
R2869JUC	LC10/NX1000	4.99	4.79	4.59
R2952JUC	LCXB 24-10/15	7.99	7.79	7.59
R2954JUC	LC200/NX1020	7.99	7.79	7.59

## Cables

**USE PRICE BREAKS FOR TOTAL QUANTITY OF CABLES ORDERED**

CODE	LENGTH	QUANTITY		
		1	5	10
<b>PARALLEL PRINTER CABLES</b>				
D shaped 25 pin male to Centronic 36 male				
<b>STANDARD</b>				
18 Lines wired • Snap together hoods • Fully shielded				
CP2MM	1.8 MTR	2.99	2.59	1.99
CP3MM	3 MTR	4.99	4.59	3.99
CP5MM	5 MTR	5.99	5.59	4.99
CP7MM	7 MTR	7.99	7.59	6.99
CP7MM	10 MTR	10.99	10.59	9.99
<b>PREMIUM QUALITY - SUITABLE FOR WINDOWS '95</b>				
• ALL Lines wired • Moulded ends • Double shielded				
CP2MMP	2 MTR	7.99	7.59	6.99
CP3MMP	3 MTR	8.99	8.59	7.99
CP5MMP	5 MTR	9.99	9.59	8.99
CP7MMP	7 MTR	15.99	15.59	14.99
<b>CENTRONICS</b>				
Centronic 36 male to Centronic 36 male				
CC1MM	1 MTR	4.99	4.59	3.99
CC2MM	2 MTR	5.99	5.59	4.99
CC3MM	3 MTR	6.99	6.59	5.99
CC5MM	5 MTR	7.99	7.59	6.99
<b>SERIAL PRINTER/LOTTER/LASER</b>				
All lines wired straight through				
D shaped 25 Female to D shaped 25 Male				
CSX2M	2 MTR	5.95	5.59	4.99
D shaped 9 Female to D shaped 25 Male				
CSX2AT	2 MTR	6.95	6.59	5.99
<b>DATA TRANSFER</b>				
PARALLEL - D25M/D25M				
CDP3	3 MTR	9.99	8.99	7.99
SERIAL - DOUBLE HEAD D25F/D25F/D25F/D25F				
CSXLLS	2.5 MTR	15.99	13.99	11.99
<b>MODEM &amp; EXTENSION</b>				
All lines wired straight through				
D shaped 25 male to D shaped 25 male				
CS2MM	2 MTR	4.99	4.59	3.99
CS3MM	3 MTR	5.99	5.59	4.99
CS5MM	5 MTR	7.99	7.59	6.99
CS7MM	7 MTR	9.99	9.59	8.99
D shaped 25 male to D shaped 25 female				
CS2FM	2 MTR	4.99	4.59	3.99
CS3FM	3 MTR	5.99	5.59	4.99
CS5FM	5 MTR	7.99	7.59	6.99
CS7FM	7 MTR	9.99	9.59	8.99
D shaped 25 male to D shaped 9 female				
CS1AT	0.3 MTR	3.99	3.59	2.99
CS2AT	2 MTR	4.99	4.59	3.99
CS3AT	3 MTR	5.99	5.59	4.99
<b>MONITOR CABLES</b>				
15 pin to 5 x 8				
CMBC2	2 MTR	25.99	23.99	19.99
CMBC5	5 MTR	29.99	27.99	25.99
15 Pin high density				
CMV2	2 MTR	9.99	9.59	8.99
CMV5	2 MTR	12.99	11.99	10.99
<b>POWER</b>				
CPW2	2 MTR	5.99	5.59	4.99
CPW3	3 MTR	6.99	6.59	5.99

*This is just a small part of our cables range in stock 800, internal, Network. Call 0800 454 797 for a free catalogue*

## Extension Cables

CODE	LENGTH	QUANTITY		
		1	5	10
<b>KEYBOARD</b>				
8 PIN DIN				
CEK02T	2 MTR	4.99	4.59	3.99
CEK02T	5 MTR	6.99	6.59	5.99
<b>MINI 5 PIN</b>				
CEK5T	2 MTR	5.99	5.59	4.99
<b>MOUSE</b>				
O Shaped 9 pin				
CEMKT2	2 MTR	6.99	6.59	5.99
CEMKT2	2 MTR	8.99	8.59	7.99
<b>ROUND 6pin Mini</b>				
CEK6T	2 MTR	5.99	5.59	4.99
<b>MONITOR</b>				
15 Pin High Density				
CEMPS2	2 MTR	7.99	7.59	6.99
CEMPS2	5 MTR	10.99	10.59	9.99
<b>CEMKT5</b>				
CEMKT5	2 MTR	8.99	8.59	7.99
CEMKT5	5 MTR	8.99	8.59	7.99
<b>POWER</b>				
Extension				
CEP0W2	2 MTR	4.99	4.59	3.99
CEP0W3	3 MTR	5.99	5.59	4.99

## Laser & Inkjet Papers

**USE PRICE BREAKS FOR TOTAL QUANTITY OF PAPER ORDERED**

CODE	PRODUCT	QUANTITY		
		1	5	10
<b>DATACOPY ORIGINAL</b>				
A GUARANTEED UNIVERSAL 80GSM PAPER for copiers, lasers and inkjets				
OCDDW	Datacopy white	4.99	4.59	3.99
OCDC5	Datacopy A5	3.99	3.59	2.99
<b>TINTS 80 GSM</b>				
Pastel: Blue, Green, Pink, Yellow, Cream				
Mid: Salmon, Mauve, Emerald				
Strong: Canary or Sun Yellow, Aqua or Deep Blue, Deep Green				
OCDDT	Pastel	5.99	5.59	4.99
OCDDT	Mid	6.59	5.99	5.59
OCDDT	Strong	7.99	7.59	6.99
<b>REPORT 90 &amp; 100 GSM</b>				
CODE PRODUCT 1 5 10				
Z9980	90 gsm	5.59	4.99	4.59
ZPRHU	100 gsm	6.59	5.99	4.99
<b>LASER CARD</b>				
160GSM special card, 250 sheets/pack				
Pastel: Blue, Green, Pink, Yellow, Cream				
Strong: Canary or Sun Yellow, Aqua Blue				
ZPCW	White	6.99	6.59	5.99
ZPCC	Pastel Tint	7.59	6.99	6.59
ZPCS	Strong Tint	7.99	7.59	6.99
<b>CODE PRODUCT QUANTITY</b>				
<b>LETTERHEAD</b>				
Wave - even textured surface ORLaid - faint parallel line pattern				
Available: White, Blue, Grey, Cream				
ZPLHW	wave	11.99	9.99	
ZPLHL	laid	11.99	9.99	
<b>MELLOTEX</b>				
Ideal for proofing. Suitable for all printers. 95gsm				
ZPLMU		12.99	11.99	
<b>PRESENTATION</b>				
Extremely white, works on any printer				
ZPP90	90 GSM	7.99	6.99	
ZPP90	100 GSM	8.99	7.99	
<i>This is just a small part of our extensive range of papers for laser and inkjet printers, why not ask for a FREE copy of our catalogue? Call 0800 454 797</i>				

## Inkjet Refills

✓ Easy to follow instructions  
✓ Simple to use  
✓ Refills original cartridge twice

**THE MOST ECONOMIC SOLUTION**

OEM Code	Model	1	2
BC01/02	Canon Bx10	9.99	8.99
51626A	HP Deskjet	15.99	14.99

## Adapters

CODE	CONNECTIONS	QUANTITY		
		1	5	10
<b>SLIM LINE GENDER CHANGERS</b>				
CGM09MM	D9M / D9M	4.99	4.59	3.99
CGM09FF	D9F / D9F	4.99	4.59	3.99
CGM25MM	D25M / D25M	4.99	4.59	3.99
CGM25FF	D25F / D25F	4.99	4.59	3.99
<b>PORT SAVERS SLIM LINE</b>				
CGS25FM	D25F / D25M	4.99	4.59	3.99
CGS09FM	D9F / D9M	4.99	4.59	3.99
CGS15FM	D15FHD/D15MHD	4.99	4.59	3.99
CGS36FM	D36M/D36F	4.99	4.59	3.99
<b>ADAPTORS</b>				
<b>SERIAL PORT CONVERTERS</b>				
CAATMF	D25M / D9F	4.99	4.59	3.99
CAATFM	D25F / D9M	4.99	4.59	3.99
<b>SERIAL PORT CONVERTERS / GENDER CHANGERS</b>				
CAATMF	D25M / D9F	4.99	4.59	3.99
CAATFM	D25F / D9M	4.99	4.59	3.99
<b>PARALLEL TO CENTRONIC CONVERTER</b>				
CADM	D25M / C36F	5.99	5.59	4.99
<b>CABLE CONNECTOR</b>				
CGS25FM	D25F / D25M	4.99	4.59	3.99
<b>CONVERTS TO NULL MODEM</b>				
CAMFCM	D25F / D25M	4.99	4.59	3.99
<b>CGA/EGA TO VGA MONITOR</b>				
CAMFM	D9F / D15MHD	4.99	4.59</	

# DIRECT BUYERS WORLD ADVERTISERS INDEX

# Personal Computer World

<b>A</b>					
Adams Technology	367/371	Powermark plc - Microsoft Hardware Feature	557	Technomatic for Microsoft - Encarta 96, Cinemanla 96, 3D Movie Maker, Fury 3, Sidewinder 3D Pro, Works 4	651
AJP	362	Powermark plc - Microtek Scanners Feature	558	Technomatic for Market Plan Pro	652
Akhter	456/7	Powermark plc - Umux Scanners Feature	558	Technomatic for Business Plan Pro	652
Allgem Ltd	580	Powermark plc - Cyber OCR Feature	559	Technomatic for Decision Maker	652
Alternatives	451/3	Powermark plc - Kyocera Printer Feature	559	Technomatic for Symantec Windows 95 Products - Utilities	652
<b>B</b>		Powermark plc - Printer Accessories	559	Antivirus, Navigator, Employee Appraiser, Xerox	
Business Data Communications System	422/3	Powermark plc - HP Printer Feature	560	Textbridge OCR	652
Byte Computer Superstore Ltd	473/481	Powermark plc - Printer Accessories	560	Technomatic for Borland Delphi Special Offer	653
Bytewise Ltd	606/7	Powermark plc - Motorola Modem Feature	561	Technomatic for Borland Turbo C++	653
<b>C</b>		Powermark plc - DFI Modem Feature	561	Technomatic for Clans Impact	653
CAE Office Supplies Ltd	392/419	Powermark plc - Lasat Modem Feature	562	Technomatic for Filemaker Pro	653
C&T Group	454/5	Powermark plc - Dataflex Modem Feature	562	Technomatic for XCAD	653
Carrera	485/8	Powermark plc - Powermark Modem Feature	563	Technomatic for MathCAD	653
CD Choice (DataTrade)	604	Powermark plc - Zoom Modem Feature	563	Technomatic for M.Y.O.B.	653
CD Revolution	430/432	Powermark plc - Psion Modem Feature	564	Technomatic for Floorplan Plus 3D	653
Choice Systems	420/1	Powermark plc - WinFax PRO Feature	564	Technomatic All Clear	653
<b>Computers by Post</b>		Powermark plc - Multitech Modem Feature	564	Technomatic for Micrograph ABC Suite	653
CBP - Toshiba portables & Accessories PRICES DOWN & NEW	467	Powermark plc - US Robotics Modem Feature	565	Technomatic for Laser Printers	654
CBP - USR 28.8 Sportster Internet Special NEW MODELS	468	Powermark plc - Racal ISDN Feature	565	Technomatic for InkJet Printers	654
CBP - ADI Pro Vista 14 LOW PRICE	468	Powermark plc - Hayes Modem Feature	567	Technomatic for Dot Matrix Printers	655
CBP - Uninterruptable power supplies	468	Powermark plc - Artisoft Feature	567	Technomatic for RACAL ISDN Adapters	655
CBP - Cyberman CD PCMCIA CD ROM CM2 SX drive	468	Powermark plc - Xircrom Feature	567	Technomatic for Monitors	656
CBP - Epson LapCat GT-300 document Imaging	468	Powermark plc - Novell Feature	568	Technomatic for Storage Products	657
CBP - Aztech quad CD ROM drive NEW LOWER RRP	468	Powermark plc - 3COM Feature	568	Technomatic for Network Products	658
CBP - Sitos A4 Colour Page Scanner	468	Powermark plc - Powermark Combo Network Adapter Feature	569	Technomatic for Multimedia Hardware	659
CBP - Compaq Presario 7100 series	469	Powermark plc - SMC Networking Feature	569	Technomatic for Multimedia Software	660
CBP - AST Advantage multimedia desktops NEW MODELS	469	Powermark plc - Taxan Feature	570	Technomatic for Office Suites	661
CBP - Kypcera Ecosys page printers - NEW LOW PRICE	470	Powermark plc - Hitachi Monitor Feature	570	Technomatic for Accounting	661
CBP - Symanec Utilities for Windows 95	470	Powermark plc - Powermark Monitor Feature	571	Technomatic for Spreadsheets	661
CBP - CorelDRAW 6 & CD Office Companion VERY LATEST	470	Powermark plc - Nokia Monitor Feature	571	Technomatic for Databases	661
CBP - HP OfficeJet LX - multi-function peripheral	471	Powermark plc - GoldStar Monitor Feature	572	Technomatic for Integrated Packages	661
CBP - HP printers LATEST MODELS STOCKED	471	Powermark plc - Accent Feature	572	Technomatic for Business Tools	661
CBP - Microsoft Windows 95 Applications	472	Powermark plc - Europress Feature	572	Technomatic for Language Translators	661
CBP - Software line listings	472	Powermark plc - Dr Solomon's Feature	573	Technomatic for Charts & Diagrams	661
Computech	520/3	Powermark plc - Touchstone Feature	573	Technomatic for Desktop Publishing - Clipart images	661
Continuous Listing Paper	674	Powermark plc - Windows 95 Feature	574-5	Technomatic for Graphics & Design - Image editing, Animation/Video, Presentation, 3D	662
<b>D</b>		Powermark plc - Claris Software Feature	576	Technomatic for Maths & Stats	662
Dabs Direct	500/505	Powermark plc - Corel Feature	577	Technomatic for CAD	662
Dataplex	399	Powermark plc - Europress Feature	578	Technomatic for Special Offer - Photoshop, Omnipage	662
DataTrade	604	Powermark plc - IBM OS/2 Warp Feature	578	Direct OCR, Microtek Scanner	662
Digital	366	Powermark plc - Micrografx Feature	579	Technomatic for Development	662
<b>E</b>		Powermark plc - Software Feature	576-579	Technomatic for Language Translators	662
Euroasia Systems	510/11	Protek	514/5	Technomatic for Contact Management	662
Evesham Micros	524/537	<b>R</b>		Technomatic for Books/Training Videos	662
Express Micros	494/497	Richnight Ltd	440/1	Technomatic for Mouse, Keyboard, Joystick	662
<b>F</b>		Roldec Systems Ltd	433/5	Technomatic for Microsoft Visual Basic 4.0	662
Fox Computer Systems	424/5	Romtronics	374/5	Technomatic for Leisure - Entertainment, Reference/Exploration, Children's Software, Lifestyle	662
<b>G</b>		<b>S</b>		Technomatic for BT 2.4 Million UK Business Telephone Numbers on one CD-ROM	662
Graphics Direct	517/9	Semaphore Systems Ltd	406/7	Technomatic for Maps & Routes	662
Greymatter	677	Silica Systems	489/493	Technomatic for Utilities - File/Desktop, Antivirus, Uninstallers, Backup, Diagnostic Tools, Printing Utilities, Screen Savers	663
<b>H</b>		Simply Computers	379/391	Technomatic for Memory Management	663
Hi-grade Computers Ltd	408	SMC Computers	Bound-In between 484/485	Technomatic for Operating Systems - DOS, Windows, OS/2	663
<b>J</b>		SMC Computers for Custom built systems	2-5	Technomatic for Networking - Novell, Microsoft, Artisoft	663
Justmemory	482/3	SMC Computers for Processors	6	Technomatic for UNIX	663
<b>L</b>		SMC Computers for Motherboards	6	Technomatic for Electronic Mail - Microsoft, Lotus, Novell	663
Lantec Information Services Ltd	436/9	SMC Computers for Memory upgrades	7-11	Technomatic for OCR	663
<b>M</b>		SMC Computers for IDE hard disk drives	12-13	Technomatic for Project Management	663
Memory Bank	538-579	SMC Computers for SCSI hard disk drives	14-15	Technomatic for Communications - Online/File Transfer, Remote Access/Control, Terminal Emulation, Comms Fax, TCP/IP Internet	663
Micro Business Corp.	444/5	SMC Computers for Tape drives	17	Time Computer Systems Ltd	
Micro Card	450	SMC Computers for CD ROM software	18	Time Computers - Front Cover / OS2 Warp	581
Mitac Europe Ltd	409	SMC Computers for CD ROM drives	19	Time Computers - Mitac desktops	582/3
Mr PC - Omega Multimedia Systems	373	SMC Computers for Sound cards	20	Time Computers - Omega mini tower systems	584/5
Mr PC - Systems and Peripherals	410/411	SMC Computers for Multimedia kits	21	Time Computers - Colossus mid tower systems	586/7
Mr PC - Mr PC Software	412	SMC Computers for Video Imaging cards	21	Time Computers - Multimedia tower/Time machines	588/9
Mr PC - Compaq Presario	413	SMC Computers for Network cards	22	Time Computers - PowerStation / Perfect Office	590/1
Mr PC - Omega Business Systems	414	SMC Computers for UPS's	22	Time Computers - Compaq MM PowerStation/ MM Family PC	592/3
Mr PC - Hewlett Packard	415	SMC Computers for Monitors	23	Time Computers - Mitac Notebooks / Multimedia Office Apple Mobile Office	594/5
Mr PC - Multimedia Kits	416	SMC Computers for Graphic cards	24	Time Computers - Ultimate Time machine	596/7/8
Mr PC - Microsoft Windows	417	Solidisk	678	Time Direct	459-466
Mr PC - Lotus	418	Software Club	376/7	Time Direct Introduction/positioning page	459
<b>N</b>		<b>T</b>		Time Direct Toshiba	460/1
Netland (UK) Ltd	332/3	TAG PC Technology	512/3	Time Direct Desktops & Networks	462/3
Netland (UK) Ltd for Novell Netware	360	Tec Computers Ltd	516	Time Direct Texas Instruments	464
Netland (UK) Ltd for SMC	360	Tech Direct	665/9	Time Direct Kyocera printers	465
Netland (UK) Ltd for Sun NFS	360	Techno World	442/3	Time Direct Colossus notebooks	466
Netland (UK) Ltd for Instant Internet	360	Technomatic for Microsoft Windows '95, MS Windows 95 Special Offer, MS Plus!	630	Tiny Computers Ltd	484, 599-603, 605, 664
Netland (UK) Ltd for 100MBPS Networking Products	361	Technomatic for MS Windows '95 Special Offer	631	Trust Peripherals	431/429
Netland (UK) Ltd for 3COM Networking Products	361	Technomatic for MS Plus!	630	<b>U</b>	
Netland (UK) Ltd for APC UPS	361	Technomatic for Microsoft Office '95 Standard & Professional (MS Word, Excel, Powerpoint, Schedule+, Access)	631	Universal Control Systems	608/9
Netland (UK) Ltd for Web Networking Products	361	Technomatic for HP Printers	632	<b>V</b>	
Netland (UK) Ltd for Token Ring Products	361	Technomatic for HP Peripherals	633	Viglen	680/684
Netland (UK) Ltd	361	Technomatic for HP PCs, Servers and Networking	634	<b>W</b>	
Novatech	393/398	Technomatic for HP Computers & IBM Computers	635	Watford Electronics - Universa PCs	610
<b>P</b>		Technomatic for Compaq PCs	635	Watford Electronics - Universa PCs	611
P&P Micro Distributors plc	446/9	Technomatic for IBM PCs	635	Watford Electronics - Perfecta PCI + Pentium	612
Pico Direct t/a DIP Systems	426/7	Technomatic for Toshiba Notebooks	636	Watford Electronics - Perfecta PCI + Pentium	613
Powermark plc	538-579	Technomatic for Taxan Monitors	636	Watford Electronics - Notebook 7000	614
Powermark plc - Memory Feature	538-545	Technomatic for Genius Networking Products	636	Watford Electronics - Notebook offer/Canon	615
Powermark plc - Laserprinter Memory	544	Technomatic for US Robotics Modems	637	Watford Electronics - Networking	616
Powermark plc - Cyrix Feature	545	Technomatic for Seagate Drives	637	Watford Electronics - Xmas open day	617
Powermark plc - Intel OverDrive Feature	546	Technomatic for Hayes Modems	638	Watford Electronics - Novell	618
Powermark plc - Adaptec Adapter Feature	547	Technomatic for Epson Printers	638	Watford Electronics - Aries Scanners & Modems	619
Powermark plc - Conner Feature	547	Technomatic for NEC Monitors	638	Watford Electronics - Software Listing	620
Powermark plc - Conner Feature	548	Technomatic for Motorola Modems	639	Watford Electronics - Software Listing	621
Powermark plc - Maxtor Hard Disk Kit Feature	548	Technomatic for Conner Drives	640	Watford Electronics - Software Listing	622
Powermark plc - Hard Disk Drive Feature	549	Technomatic for Psion Dacom Modems	640	Watford Electronics - Software Listing	623
Powermark plc - Syquest Storage Feature	550	Technomatic for Fax & Scanner Utility	640	Watford Electronics - Kyocera + Motorola	624
Powermark plc - Iomega Tape Backup Feature	550	Technomatic for Kensington Mice	641	Watford Electronics - Printer Listing	625
Powermark plc - Panasonic Optical & CD ROM Drive Feature	550	Technomatic for Multitech Modems	641	Watford Electronics - Multimedia + Scanners + CD Software	626
Powermark plc - Diamond Multimedia Feature	551	Technomatic for Microsolutions Portable Drives	641	Watford Electronics - Creative Labs + CD Bundles	627
Powermark plc - Hauppauge Feature	551	Technomatic for Intel Overdrive Processor	642	Watford Electronics - Monitors/Video Listing	628
Powermark plc - Cyberman PCMCIA CD ROM Drive Feature	551	Technomatic for Workstation Processor Upgrade	642	Watford Electronics - Last page misc. Listing	629
Powermark plc - Creative Labs Feature	552	Technomatic for Computer and Printer Memory Upgrades	643	Western Systems (Europe) Ltd	400/403
Powermark plc - Creative Labs Feature	553	Technomatic for Creative Labs Multimedia Products	644	Westlakes	458
Powermark plc - DFI Multimedia Kit Feature	553	Technomatic for Accent	645	<b>X</b>	
Powermark plc - VideoLogic Feature	554	Technomatic for Vision 4	645	Xtite Elite Corporation Europe Limited	363/5
Powermark plc - Multimedia Accessories Feature	554	Technomatic for Lanistic Powersuite	645	<b>MICROMART INDEX</b>	<b>273</b>
Powermark plc - Key Tronic Keyboard Feature	554	Technomatic for Which - 100 Lists	645		
Powermark plc - Powermark Multimedia Feature	555	Technomatic for McAfee VirusScan	646		
Powermark plc - Powermark Keyboard Feature	555	Technomatic for Powersoft Portfolio	646		
Powermark plc - CD ROM Drives, Sound Cards and speakers Feature	556	Technomatic for Novelli Perfectoffice v3.0	647		
Powermark plc - Microsoft Feature	557	Technomatic for IBM PC DOS	648		
		Technomatic for OS/2 Warp Connect	648		
		Technomatic for OS/2 Warp 3.0	648		
		Technomatic for Lotus SmartSuite 96	649		
		Technomatic for Lotus Word Pro 96	649		
		Technomatic for Approach 96	649		
		Technomatic for Freelance Graphics 96	649		
		Technomatic for Lotus SmartSuite 4.0	649		
		Technomatic for 7th Level Games	650		
		Technomatic for Quicken 4	650		
		Technomatic for Quilckbooks 3	650		
		Technomatic for Softm 95	650		
		Technomatic for CorelDraw 6	650		

<b>A</b>							
Accent Software International	0097 22793723						
Acer (UK) Ltd	01753 23024	71					
Accurate Technology	01734 773889	208/9					
Aci Ltd	0161 929 9444	184					
Adams Technology	0161 877 8822	162					
ADI Systems (UK) Ltd	0181 236 0801	146,367/371					
Adobe		54					
AJP	0181 452 9090	63					
Akhter Computer Group	01282 831 931	362					
Allgem Ltd	0141 425 2000	456/7					
Alternatives	01925 700007	580					
American Power Conversion	01753 511022	451/3					
Amstrad Direct	0800 338844	107					
Apricot (UK) Ltd	0800 212422	133					
Asymetrix	0171 454 1061	79/81,279					
Atlantic Systems	01792 782999	115					
Autodesk	01433 303322	171/3					
Aztech (UK) Ltd	01734 814121	47/9					
		320					
<b>B</b>							
Bascrown Ltd	01704 895815	482/3					
Blackwell Science	01865 206206	304					
Borland International (UK) Ltd	01734 320022	205					
Budget Workstation	0181 871 4322	285					
Business Data Communications Systems	0181 795 0971	422/3					
Byte Computer Superstore Ltd	0121 766 5559	473-481					
Bytewise Ltd	0171 275 8853	606/7					
<b>C</b>							
CAE Office Systems Ltd	01923 210923	392/419					
Canon		158/9					
Carrera Technology Ltd	0171 830 0486	485-8					
C&T Group	0171 637 1767	454/5					
CD Revolution	01932 562000	428,430,432					
Choice Systems	0181 993 9003	420/1					
Collosus	01282 770088	193/8					
Compaq	0181 332 3000	84/5					
CompuServe	0800 289378	234					
Computers By Post	0181 982 6380	467/472					
Computers Unlimited	0181 200 8282	76					
Computing Plus	01993 881912	294					
CompuTech	01923 224440	520/3					
CLP	01258 459544	674					
Corel	0800 581 028	65					
<b>D</b>							
Dabs Direct	0800 558866	500-5					
Dakota Computer Solutions	0181 452 2400	290					
Dan Technology	0181 830 1100	15/16/17					
Data Encryption Systems Ltd	01823 352357	300					
Dataplex	01753 535557	399					
Datastorm Technologies Ltd	01223 421606	344					
Datatrade Marketing Ltd	0171 352 2127	604					
Datrotech Plc	01252 313155	137					
Dell Computer Corporation	01344 720000	IFC.5					
Digital Equipment Co Ltd	0800 227228	58/9, 366					
<b>E</b>							
Electrone Ltd	01494 511999	356					
Elonex	0181 452 4444	130					
Epson	0800 220546	68/9,51					
Euro Asia Systems	0171 498 7816	510/511					
Eurosell	01293 824024	215					
Evesham Micros	01386 765500	524-537					
Express Micro	01908530242	494-499					
Express Technology	01784 421123	238					
<b>F</b>							
Fast Trak	01923 246 427	221					
Fox Computer Systems	01621 744500	424/5					
<b>G</b>							
Gateway 2000 Europe	0800 342 000	101					
Global Internet Ltd	0181 957 1001	246,248,250					
GoldStar/LG Electronics Ltd	01753 500400	118/120					
Graphics Direct	01635 873 000	518/9					
Grey Matter	01364 654 100	677					
Guildsoft	01752 895 100	263,265					
<b>H</b>							
HCCS	0191 487 0760	294					
Hewlett Packard	01344 369 222	40					
Hi-grade Computers Ltd	0181 591 9040	312/3,408					
<b>I</b>							
Iiyama	01438 745 482	206					
Intuit Software Ltd	0800 585058	225,227					
Intel	01793 696000	52/3					
<b>J</b>							
Just Memory	01704 895815	482/3					
<b>K</b>							
Keyzone Computer Products Ltd	0181 500 1525	340					
Kyocera Electronics	01734 230700	OBC					
Kyodal	01279 416 888						
<b>L</b>							
Lantec Information Services Ltd	01753 777777	436/9					
Leonardo Computer Systems Ltd	01734 753477	334					
Loadplan Ltd	0181 200 7733	334					
Logitech	0171 794 5441	97					
<b>M</b>							
MPC International (UK) Ltd	01923 249898	404/5					
Marktec Systems Ltd	0181 841 6711	299,353					
Martignoni Electronics	00411 273 1111	215					
Megatech Software	0181 874 6511	216/7					
Micro Business Computers	0181 208 2333	444/5					
MicroCard	0181 208 2333	450					
Microsoft	01844 261 144	33/36/37,102/3					
Miro	0171 831 0467	42					
Mitac Europe Ltd	01952 207200	151/3, 373					
MJN Technology	01282 777555	140/1,148/9,154/5					
<b>Morgan</b>							
MPC International (UK) Ltd	0171 255 2115						25/27
Mr PC	01923 249898						404/5
Multimax Ltd	01282 777888						409/418
Multimedia Direct	01652 651651						60
	01635 873000						517
<b>N</b>							
Netland (UK) Ltd	01638 720999						67,360/1
Novatech	01705 664144						393/8
Number Nine Visual Technology	01256 381194						91
<b>O</b>							
Obodex	0181 841 3555						245
OKI Systems	01753 819819						168
Olivetti	0181 785 6666						113
Optimum Technology	0181 203 0220						228
Opti International Ltd	0181 507 1818						336/7
Opus Technology	01293 821555						322/3,333,354/5
Orchid (Europe) Ltd	01256 479 898						116
Orion Technology	01252 838393						289
<b>P</b>							
P&P Micro Distributors Plc	0171 265 4570						446/9
Panther	01442 253811						50
Paradigm Technology	01235 862400						259
PC Science	01423 323386						165
Pico Direct v/a DIP Systems	01483 202022						426/7
Pinstripe Software Ltd	01442 876601						88
Powermark Plc	0181 951 3355						538-579
Pro-Teknology	01438 361212						514/5
Psion Ltd	01908 261 688						48
<b>Q</b>							
Quarterdeck	01245 491190						44
<b>R</b>							
Raydream Europe	00331 69 41 97 22						92
Richnight Ltd	0181 668 4199						440/1
Rock Computer Corporation	01753 567899						306/7
Roderick Manhattan Group	0181 875 4400						222
Roldec Systems Ltd	01902 456464						433/5
Romtronics Peripherals Ltd	0181 863 9001						374/5
Rotring (UK) LTD	0181 908 2577						28
<b>S</b>							
S&S Data Recovery	0800 581263						294
S&S International Ltd	0129 6318700						294,213
Scanner Technologies Ltd	01734 770808						299
Semaphore Systems Ltd	0171 625 7744						406/7
Serif	0800 924925						14
Sharp	0161 205 2333						20
Silica Systems	0181 309 1111						489-493
Simply Computers	0181 523 4002						389/391
SMC Computers	01753 550333						Bound in insert
Software Publishing Corporation	01344 867100						73/5
Solidisk	01702 354674						678
Sony Europa	01784 466660						242
Solwise	01482 472899						294
Strategic Mapping	01753 621199						38
Symanlec	01628 592222						280
Syquest Technology	0990 115565						139
System Science	0171 833 1022						327
System Star Soft Tools Ltd	01707 278300						289
<b>T</b>							
10 out of 10	0113 239 4627						271
Tag PC Technology	0181 803 7770						512/3
Tandberg Data UK	01582 769071						144
Taxan (UK) Ltd	01344 484646						179/181
Tec Computers Ltd	01371 831 159						516
Tech Direct	0181 286 2222						665/9
Techno World	0181 830 5555						442/3
Technomatic Ltd	0181 205 9558						630-663
Tektronix (UK) Ltd							177
Texas Instruments	01932 780753						
The Electronic Frontier Ltd	01734 810600						301
The Software Club	01282 777333						376/7
Time Computer Systems Ltd	01282 777111						581-598
Time Direct	01282 770066						459-466
Tiny Computers Ltd	01737 779511484,599-603,605,664						
Toshiba Information Systems	01932 828828						10/11,35
Trust Peripherals	01376 500770						429/431
Toshiba GmbH	0049 213115801						

## VISUAL BASIC 3 ADD-ONS

These will still be available for some time to come.

<b>Comms - Async</b>	
Fax Plus for Win	£175
FaxMan SDK	£390

<b>Comms - Network</b>	
Apiary Dev Suite for NetWare	£156
Distinct TCP/IP - Visual Edition	£265
dsSocket 1.1 (Intro)	£65

<b>Database</b>	
ADE/VBX	£350
CodeBasic 5.1	£140
List & Labels for VB	£279
VB/ISAM MU	£150

<b>Graphics - Charting</b>	
Chart FX 3.0 (16-bit only)	£210
Charting Tools for Win - VB	£180
Real-Time Graphics Tools - VB	£300
VBGraphix	£270

<b>Graphics - Image Files</b>	
Image SDK Plus/VBX 2.0	£250
ImageKnife/VBX Std 2.0	£200
ImageMan/VBX 3.1	£239

<b>Grid Controls</b>	
Data Widgets	£99
Grid/VBX	£75
Spread/VBX	£171

<b>Multi-Function</b>	
Borland Visual Solutions Pack	£59
Designer Widgets 2.0	£99
Muscle (Win)	£125
VBlite 1.0	£130
VBTools 4.0	£115
Visual Developer's Suite	£216
WinWidgets/VBX	£160

<b>Sundry Components</b>	
CADControl	£365
d-Barcode VBX/DLL	£94
VB/Magic Controls	£120
Visual CAD Dev Kit	£520

## C & C++ FOR DOS

<b>Comms</b>	
Essential Comm 5.0	£265
MagnaComm/DOS	£205
SilverComm "C" Async 4.02	£195

<b>Database</b>	
c-tree Plus 6.4b	£565
D-ISAM	£495
SoftFocus Btree/ISAM	£75

<b>Graphics &amp; GUI</b>	
3D-Ware Prof	£99
Fastgraph 4.0 (Ted Gruber)	£195
GX Graphics 3.0	£155
MetaWINDOW-DOS 4.4	£199
Zinc Engine & DOS Key 4.1	£634

<b>Maths &amp; Scientific</b>	
C/Math Toolchest & Grafix	£45
Huge Virtual Array & NAT 3.0	£215
Science, Eng & Graphics Tools	£115

<b>Screen</b>	
C/Windows Toolchest	£45
Greenleaf Datawindows 3.0	£225
TCXL UI for DOS/Win 6.2	£135

<b>General &amp; Systems Libraries</b>	
GX Sounds	£200
MTASK	£215
TTSR Ram Res Dev Sys 2.03	£100

<b>Tools</b>	
C-DOC Pro 6.0	£275
C-Vision for C/C++ 4.0	£145
CodeCheck (Professional)	£475
PC-Lint for C/C++	£135
Source Print+ 5.5	£235

## PROGRAMMING TOOLS

Ada	Assemblers
Basic	C/C++
Comms	Cross Dev
Custom Controls	Database
Debuggers	Delphi
Editors	Fortran
Graphics	GUI
Linkers/Locaters	Lisp
Modula-2	Multi-tasking
Pascal	Prolog
Smalltalk	SQL
Version Control	Visual Programming
Windows	Xbase

We stock many items for which there is no space in these advertisements.

## Sundry Controls

3D Graphics Tools 4.0	£130
EDI-VBX 1.0	£705
Ganit/VBX	£195
MediaKnife/VBX	£290
VBX Artist	£240
Visual Instrument Panel Cntrl	£150
VSView/VBX	£105

## Text Editor Controls

HighEdit 3.0	£199
TX Text-Control Standard	£180

## Tools

JET Inspector 2.0	£475
SpyWorks-VB 2.0	£100
TMS Tools 1.1	£99
VB Compress	£99
VBAssist 3.5	£140
VB/DLL 2.05	£165
VERSIONS/VB 1.1	£135

## C & C++ FOR WINDOWS

<b>Comms</b>	
Async Pro for Win	£135
COMM-DRV/LIB 16.0	£105
Greenleaf CommLib 5.2	£235

## Compression

Crusher! Win DLL w/Source	£235
Greenleaf ArchiveLib	£210
PKWare Data Comp Lib for Win	£175
TCOMP/Multi-Platform 2.12	£105

## Database

Borland Database Engine 2.0	£205
CodeBase 5.1	£248
CXBase Pro	£500
DataBoss for Windows	£410
DBTools.h++ for ODBC	£340
Greenleaf Database Library 4.0	£180
List & Labels for Win (Pro)	£395
POET Personal SDK 3.0	£169
Raima Database Manager	£380
Spread/VBX++	£171
Velocis	£340

## Graphics - Charting

Charting Tools for Win 2.0	£180
Essential Chart for Win	£320
GraphicWin 7.0	£360
Graphics Server 4.0	£245
Real-Time Graphics Tools	£360

## Graphics - Image Files

AccuSoft Image Lib/Win 5.0	£610
Ad Oculus (Image Analysis) 2.0	£325
ImageKnife Pro 2.0	£280
ImageMan	£399
LEADTOOLS Prof 5.0	£675
Light Lib Images Pro	£315

## LOW PRICES FOR MICROSOFT & BORLAND PRODUCTS

MS Fortran PowerStation Pro 4	£443
MS Visual Basic Std 4.0	£72
MS Visual Basic Prof 4.0	£365
MS Visual Basic Ent 4.0	£715
Microsoft Visual C++ 4.0	£368
Borland C++ 4.5	£280
Borland Pascal with Objects 7.0	£250
Delphi	£279
Delphi Client/Server	£806
Paradox for Win 5.0	£280
Turbo C++ for Win 4.5	£68
Turbo Pascal 7.0	£94
Visual dBASE 5.5	£285

## WITH FULL TECHNICAL SUPPORT

## C++ COMPILERS

Borland C++ 4.5	£280
Microsoft Visual C++ 4.0	£368
Salford C/C++ Win Dev	£395
Symantec C++ 7.0	£199
Turbo C++ for Win 4.5	£68
Watcom C/C++ 10.5 (Intro)	£139
High C/C++ for Ext-DOS/Win	£620
Microsoft Visual C++ 1.52	£70
Salford C/C++ DOS Dev	£195
Turbo C++ 3.0	£66

## VISUAL BASIC FOR DOS

MS Visual Basic for DOS Std	£96
MS Visual Basic for DOS Prof	£230
NetPak Pro for DOS	£135
PDQComm 2.62	£65
db/Lib Prof 3.0	£195
VB/ISAM MU	£150
Graphics Workshop	£105
GraphPak Pro	£99
Compression Plus	£79
Printer Plus	£130
ProBas 7.1	£210
QuickPak Prof 4.19	£145

# GREY MATTER

Prigg Meadow, Ashburton  
Devon TQ13 7DF

Prices do not include VAT or other local taxes but do include delivery in mainland UK. Please check prices at time of order as ads are prepared some weeks before publication. This page lists some products - call us for a complete price list. ORDER BY PHONE WITH YOUR CREDIT CARD

**(01364) 654100**

FAX: (01364) 654200

## News & Views

### NEXT LEVEL RAD?

How would you like to generate an entire application at the touch of a button? Complete with Browse, Form & Report procedures for every selected file! Wouldn't it be nice if you could produce versions for Windows 3.x, Windows 95 & Windows NT, all using the same VBXs. It would be even better if all these versions were multi-threaded & fully compiled with small executables.

Can your present tool do all this? Of course not! Then you better call us to find out more about

### CLARION FOR WINDOWS 1.5

All you have to do is define the data dictionary containing file & relationship definitions, with optional pre-formatting preferences for window & report controls.

Then the Wizard of Wizards - the App Wizard - generates complex applications with no intervention, including multiple-order browse lists selectable by tab; synchronised parent-child dialogs with a form for the parent on one tab, and a listbox displaying related child records on another, etc.

Unlike most Wizards, changes in the data dictionary migrate via live links to the application file. You can concentrate on the data model and business rules, and let Clarion do the grunt work. This is real RAD!

The best news is that we are virtually giving it away at only £189 until the end of the year. Call us right now for further details.

### ODBC DRIVERS FOR WINDOWS 95 SPECIAL OFFER

The Visigenic ODBC DriverSet includes drivers for Windows 3.x, Windows 95 & Windows NT. Databases include Informix, Sybase, Oracle, Ingres & Microsoft SQL Server. Available for only £85 until the end of the year (on-line docs, limit of 5 copies per customer site).

### XY-QUERY FOR OS/2

is the fastest and easiest tool for accessing your DB2 data. It is object-based, using notebooks, toolbars, etc with Query Builder which hides the complexity of SQL. Too many features to cover here - suffice to say that if you use OS/2 and need to query DB2, call us now for full details. Only £140.

## VISUAL BASIC 4

Visual Basic Enterprise 4.0	£715
Visual Basic Professional 4.0	£365
Visual Basic Standard 4.0	£72
ButtonMaker	(Oct) £75
Designer Widgets 2.0	£99
Erwin/Desktop for VB4	£599
Spyworks-VB Prof 4.0	(Q4) £195
VB Assist 4	(Oct) £140
XRef 2.0	(Oct) £105

## BASIC LANGUAGE

CA-Realizer 2.0 (OS2&Win)	£179
GFA-BASIC for Windows	£80
PowerBASIC Pro (Win&DOS)	£210
BBC BASIC-86 Plus	£75
TrueBASIC Std 3.0	£88

## OLE CONTROLS

OLE Controls will be supported by most Windows tools over the next few months. We have the widest range available!

### Comms - Async

Comms Lib 3.0	(Oct) £115
PDQComm 3.0	(Oct) £145

### Comms - Network

Distinct TCP/IP Visual	(Nov) £265
NetPak 2.0	(Oct) £145

### Compression

Compression Plus 4.0	(Oct) £175
DynaZIP-32 3.0	(Oct) £210

### Database

Controls for Btrieve 3.0	£180
Crystal Reports Pro 4.5	(Oct) £295
MyData Control 1.0	(Oct) £115

### Graphics - Charting

Chart FX 3.0 (16&32-bit)	£315
First Impression 2.0	(Oct) £180
Graphics Server 4.02	(Sep) £235

### Graphics - Sundries

AccuSoft IFU/OCX 16	£415
d-Barcode/OCX	(Dec) £149
Dazzle/OCX	(Q4) £420
MetaDraw	(Oct) £240
Resource Manager/OCX	(Q4) £195
Schedule/OCX	(Nov) £195

### Grid Controls

Formula One OCX 3.0	£180
Grid/OCX	(Q4) £75
Spread/OCX	(Oct) £171
TrueGrid 4.0	(Q4) £155

### Maths & Scientific

ProMath OCX	(Q4) £130
QuickPak Scientific 3.0	(Oct) £145

### Multi-Function

Aware/OCX	(Q4) £110
OLETools 5.0	(Oct) £145
QuickPak Pro 4.0	(Oct) £180
VBlite OCX	(Q4) £130
VSView/OCX	(Oct) £145

### Multi-Media

FXTools/VB OCX	(Q4) £290
MediaKnife/OCX 1.0	(Q4) £299
VideoPlay/OCX 1.0	(Q4) £72

### Sundry Controls

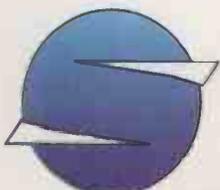
Calendar Widgets	£99
Custom Control Factory 4.0	(Q4) £40
Drag-IT/OCX	(Dec) £240
StorageWorks 1.0	(Q4) £100
Tab/OCX	(Oct) £75
Tlist 3/Pro	£195
VersionStamper 4.0	(Q4) £100
VisualSpeller OCX 2.0	(Oct) £115
VS-OCX	(Oct) £110
VSFlex/OCX	(Oct) £145

### Text Editor Controls

ALLText HT/Pro 4.0	(Oct) £335
VisualWriter 3.0	£180

### OS/2 WARP

Borland C++ 2.0 for OS/2	£329
High C/C++ for OS/2 3.3	£435
IBM C Set++ FirstStep for OS/2	£89
IBM VisualAge C++ 3.0 w/Docs	£364
Watcom C/C++ 10.5 (Intro)	£139

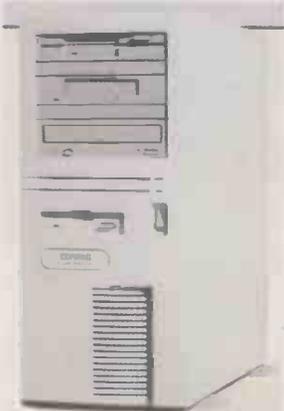


**SOLIDISK present  
Three Absolutely  
Fabulous NT SERVERS:**

**COMPAQ PROSIGNIA 300**

**£3,350 + VAT**

Special bundle price includes:  
COMPAQ PROSIGNIA PC with 75MHz Pentium CPU  
16MB Error Corrected RAM  
Triflex PCI SCSI controller  
1GB SCSI hard disc  
CD ROM  
15" ADI Microscan monitor  
Windows NT Server 3.5  
5 NT user licence  
3 years on-site warranty.



WE CAN MODIFY ANY ITEM TO SUIT YOUR REQUIREMENT.

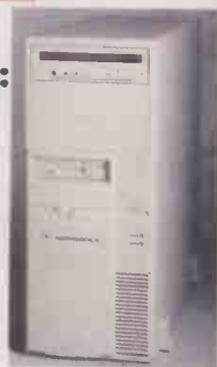
**SOLIDISK P90 SERVER:  
FROM £2,479 + VAT**

Flexible combination includes:  
90MHz Pentium CPU  
Intel ZP mainboard  
16MB RAM  
Future Domain SCSI controller  
1GB IDE mode 4 hard disc  
Quad speed CD ROM  
optional changer for 7 CDs  
Trident 64-bit 9660 PCI VGA  
15" ADI Microscan monitor  
Windows NT Server 3.5  
One year on-site warranty.



**MOTOROLA BASED SERVER:  
100MHz PC604 FR. £2,599 + VAT**

This barebone system from Motorola puts the superior performance of the new 100MHz 604 CPU in use where speed is critical. Basic features include: 2 fast 16550 serial, 1 parallel and 1 mouse ports, Cirrus 5434 PCI VGA, enhanced IDE, SCSI2 controller, 32-bit Ethernet and a Sound port. We add to this excellent system Windows NT Server 3.5 software, 16MB RAM, a quad speed CD ROM, 1GB mode 4 IDE disc drive and a 15" ADI



PLEASE CALL FOR FURTHER DETAILS.

**Transfer your hard disc onto CD for £10!**

We provide an efficient backup service to all our customers in the form of CD ROM. We can put as much as 600 megabytes of your DOS or WINDOWS hard disc onto a single CD in less than an hour!  
We also sell CD Recorders (Double Speeds from £1,100, Quad Speeds from £1,800) and blank media (£6 each).



**Transfer video tapes onto CD for £25!**

Using a MPEG video capture and compression system, we can transfer up to 1 hour of your video tape directly onto a CD which you can use on PCs equipped with VGA card with MPEG play function.

**Adobe Premiere 1.0**



Sheffield (01142) 441 855  
Nottingham (01159) 243 465  
London (0171) 700 0090  
Milton Keynes (01908) 694 500  
Southend (01702) 354 674  
Brighton (01273) 208 010

**P75 Multimedia**



SOLIDISK Proves you can get a quality Pentium multimedia PC for £1,200."

COMPUTER BUYER MAGAZINE JULY 1995

**Specifications:**

- Triton - Pentium AIO Mainboard
- INTEL 75MHz Pentium Processor
- Medium Tower Case with 200W PSU
- Teac 1.44 Floppy Disk Drive
- Seagate 545MB Mode 3 IDE Hard Disk Drive
- Creative Labs Sound Blaster 16 Value
- NEC CDR272 Quad Speed CD ROM
- Speakers
- Trident 9660 PCI Graphics Card
- ADI 4V 15" Non Interlaced Monitor
- 8MB RAM (2x 1MB-36 SIMM)
- WINDOWS 95
- Mitsumi 2 button MS compatible mouse

Buy this winner for only £1,200 + VAT

**ISDN MODEMS:**

**£490 MOTOROLA ISDN PC CARD:**  
Includes an analog adapter for phone or fax machines. Can also be used as a 56KB MODEM.

**£740 DIGIBOARD PC IMAC CARD:**  
Transparently connect two NOVELL networks- make/break calls on traffic; supports NT server RAS - full 128 KB/S.

**£790 SONIX ARPEGGIO PC CARD:**  
Transparently connect two NOVELL networks call on traffic; includes an analog adapter for phone / fax machine. Can be used as 56K MODEM.



**SCSI HARD DRIVES**

Seagate Hawk	
ST31230N (1Gb)	£368.00
ST32430N (2Gb)	£732.00
ST32430W (2Gb)	£790.00
ST115230N (4Gb)	£897.00
ST115230W (4Gb)	£1068.00

Seagate Elite	
ST418020N (2Gb)	£2075.00
ST418020W (2Gb)	£2188.00

Seagate Barracuda	
ST31250N (1Gb)	£680.00
ST32550N (2Gb)	£840.00
ST115150N (4Gb)	£1180.00
ST115150W (4Gb)	£1360.00

**IDE HARD DRIVES**

Seagate	
ST3491A (425Mb)	£112.50
ST3662A (545Mb)	£122.50
ST3850A (850Mb)	£174.00
ST31280A (1Gb)	£171.00
Western Digital	
AC2700 (700Mb)	£157.00
AC2850 (850Mb)	£174.00
AC31000 (1Gb)	£211.00
AC31200 (1.2Gb)	£259.00

Monitors	
Idtek 15" Vision Master	£275.00
Idtek 17" Vision Master	£336.00
Idtek 21" Vision Master	£1325.00
ADI MicroScan 15"	£270.00

**ETHERNET CARDS**

Surecom NE2000 BNC	£24.00
Surecom NE2000 UTP	24.00
Surecom NE2000 Combo	30.00
SMC Elite Combo	£75.00
SMC Etherpower PCI	£100.00
SVC 10/100 PCI	£131.00
10MHz 8-port hub	£75.00
100MHz 16-port hub	£75.00
	£ CALL

<b>MEMORY SIM'S</b>	
<b>78-pin SIM's w/parity</b>	
4Mb (1x35, 70ns)	£119.00
8Mb (2x35, 70ns)	£245.00
16Mb (4x35, 70ns)	£399.00
32Mb (8x35, 70ns)	£850.00
64Mb (16x35, 70ns)	£CALL
4Mb (1x35, 70ns) EDO	£125.00
8Mb (2x35, 70ns) EDO	£255.00

<b>FAX / MODEMS</b>	
DPI Passport 28.8 Internal	£180.00
DPI Passport 28.8 External	£180.00
US Robotics 14.4 External	£134.00
US Robotics 28.8 External	£210.00
MOTOROLA 28.8 Internet Solution	£210.00

<b>SCSI Controllers</b>	
Future Domain 850W	£30.00
Future Domain 3960 PCI	£95.00
Adaptec AHA 1505	£38.00
Adaptec AHA 2940	£218.00
Adaptec AHA 2940W	£266.00

**VIDEO CARDS**

<b>DIAMOND</b>	
Speedstar Pro SE 1Mb PCI	£87.50
Speedstar Pro SE 2MB PCI	£131.00
Stealth 1MB DRAM PCI	£110.00
Stealth 2MB VRAM PCI	£210.00
Stealth 4MB VRAM PCI	£340.00
<b>TRIDENT</b>	
9660 Chipset 1MB DRAM PCI	£70.00
9660 Chipset 2MB DRAM PCI	£104.00
<b>SPEA VIDEO 7</b>	
Mirage PCI 2MB with Microstation s/w	£132.50
<b>ORCHID</b>	
Orchid Helix 64 PCI 1Mb	£116.00
Orchid Helix 64 PCI 2Mb	£152.00
<b>CIRUS LOGIC</b>	
Cirrus Logic 5428/4 ISA 1Mb	£50.00
Cirrus Logic 5428 VL 1Mb	£70.00

<b>CD-ROM DRIVES</b>	
Toshiba 5301 B SCSI x4 Speed	£162.00
Mitsumi FX400 IDE x4 Speed	£125.00
NEC CDR275 IDE x4 Speed	£118.00
Nakamichi MBR-7 CD changer	£308.00
Yamaha CD Recorder x4 Speed	£1,699.00
Pioneer CD Recorder x2 Speed	£1,199.00

**MAINBOARDS**

486 (PPI0) 256Kb Cache SPIDE, without CPU (53-99MHz)	£110.00
Pentium PPI0 256Kb Cache SPIDE, No CPU (75/90/100MHz)	£147.00
<b>INTEL</b>	
Intel Zappa with TRITON chip Pentium 75-120MHz, EIDE & VO, no CPU	£160.00
Intel Endeavour Pentium 75-120MHz, EIDE & VO, Sound Blaster, no CPU	£220.00
<b>MOTOROLA</b>	
Motorola Pitax PowerPC 604 100MHz, EIDE & VO, SCSI 2, Crystal Sound	£800.00

**BACKUP SYSTEMS**

Conner or Colorado 250MB Internal	from £99.00
Trakker 250MB Parallel port system	£189.00
Exabyte SCSI all models	£CALL
Sony DAT SCSI 4GB	£718.00
LIANGDAT SCSI all models	£CALL
Yamaha CD Recorder x4 Speed	£1,699.00
Pioneer CD Recorder x2 Speed	£1,199.00

**SETTING UP INTERNET WEB SITES?**  
We can supply complete hardware + software solutions based on WINDOWS NT systems. We can also offer short term rental solutions.

Prices exclude VAT @ 17.5 % Carriage at Standard courier rates ACCESS/VISA/ Accounts facilities.

From chips to systems, maintenance and software support, one call does it all!

**Congratulations to: E Chambers of London, JM Rickard of Ashford, EJ Saunders of Romford, Chris Branch of Ilford, Richard Parnham of London and Mr I McIntosh of London. They all won prizes in our October Live 95 competition.**

Every computer journalist in the world is giving you a hard time because you haven't launched Windows 95. Manufacturers have just launched a zillion new CD-ROM drives, sound cards, software packages and the rest. What do you do, and how do you decide which products to test? For senior Microsoft vice president, Brad Silverberg, the solution was to send someone down to Egghead, the local PC dealer in Redmond, and order one of everything. The next guy in line apparently wasn't too happy waiting for \$15,000 worth of kit to be rung up on the till...

Communications giant Motorola sent out a pamphlet called "Prepared for the future". In the accompanying copyright, the company insists that "No part of this publication may be transmitted in any form, or by any means electronic", with all the usual American copyright riders on electronic storage.

This is only to be expected, but the pamphlet states that the report can also be found on the World Wide Web. A neat trick if it can't be transmitted electronically...

Next time an Office 95 user loads up Excel, you might want to make sure that they're really working. For with the right keystrokes, the application can be turned into a copy of the best-selling shoot-em-up game, Doom. Well, almost. The Excel programmers decided to hide a picture of themselves inside, along with a small 3D game called Hall of Tortured Souls.



Obviously the code for the spreadsheet didn't take up enough hard disk space for a Microsoft product...

## If Operating Systems Were Beers...

### DOS Beer

Requires you to use your own can opener, and that you read the directions carefully before opening the can. Originally only came in an 8oz can, but now comes in a 16oz can. The can is divided into eight compartments of 2oz each, which have to be accessed separately. Soon to be discontinued, although a lot of people are going to keep drinking it after it's no longer available.

### Mac Beer

At first came only in a 16oz can, but now comes in a 32oz can. Considered by many to be a "light" beer. All the cans look identical. When you take one from the fridge, it opens itself. The ingredients list is not on the can. If you call to ask about the ingredients, you are told that "you don't need to know." A notice on the side reminds you to drag your empties to the trashcan.

### Windows 3.1 Beer

The world's most popular beer. Comes in a 16oz can that looks a lot like Mac Beer's. Requires that you already own a DOS Beer. Claims that it allows you to drink several DOS Beers simultaneously, but in reality you can only drink a few of them, very slowly, especially slowly if you are drinking the Windows Beer at the same time. Sometimes, for no apparent reason, a can of Windows Beer will explode when you open it.

### OS/2 Beer

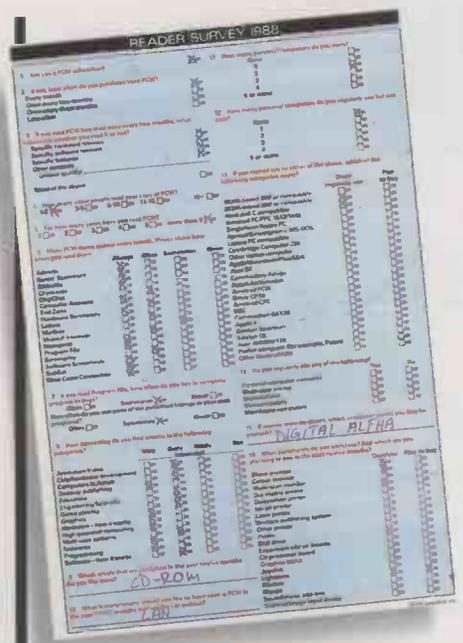
Comes in a 32oz can. Does allow you to drink several DOS Beers simultaneously. Allows you to drink Windows 3.1 Beer simultaneously too, but somewhat slower. Advertises that the cans won't explode when you open them, even if you shake them up. You never see anyone drinking OS/2 Beer, but the manufacturer (International Beer Manufacturing) claims that 9 million six-packs have been sold.

### Windows 95 Beer

Only just out, Windows 95 Beer looks a lot like Mac Beer but tastes more like Windows 3.1 Beer. It comes in 32oz cans, but when you look inside, the cans only have 16oz of beer in them. Most people will probably keep drinking Windows 3.1 Beer until their friends try Windows 95 Beer and say they like it. The ingredients list, when you look at the small print, has some of the same ingredients that come in DOS beer, even though the manufacturer claims that this is an entirely new brew.

### Windows NT Beer

Comes in 32oz cans, but you can only buy it by the truckload. This causes most people to have to go out and buy bigger refrigerators. The can looks just like Windows 3.1 Beer's, but the company promises to change the can to look just like Windows 95 Beer's. Touted as an "industrial strength" beer, and suggested only for use in bars.



We all know that the postal service can be a bit slow, but even we were surprised at the late arrival of a Readers Survey form. Admittedly it had come all the way from Sweden, but seven years is a bit much...

# A powerful business partner for when you're on the move.



The Viglen Dossier<sup>®</sup> ADVANCED Sound is a range of portable notebook sized PCs that offer flexibility and power for people on the move. This range provides many advanced features that rival even the most powerful desktops. It is available in two main processor ranges, the

Dossier<sup>®</sup> 486 for processors up to 486DX4 100MHz and the Dossier<sup>®</sup> P5 for Pentium<sup>®</sup> processors from 75MHz to the powerful 90MHz. There is a choice of exceptional colour screen types for each range, Dual Scan or a high contrast fast TFT and also a Mono screen for 486 models. In addition to the features shown below, the Dossier<sup>®</sup> ADVANCED Sound also includes sound hardware compatible with SoundBlaster and Microsoft Sound system allowing you to manipulate sound and music to enhance your productivity. Plus there is a whole range of accessories and upgrades making the Dossier<sup>®</sup> ADVANCED Sound a notebook that needs to be seen and heard to be believed!

Designed for



## SPECIFICATION

### Dossier<sup>®</sup> 486:

- Intel SL enhanced 486DX4 75MHz, and 486DX4 100MHz.
- 4MB RAM, upgradeable to 20MB.
- 260MB HD upgradeable to 720MB.
- Choice of Mono (9.5" STN), Colour DSTN (10.3" Dual Scan STN), or Colour TFT (9.5" TFT) screen.
- Battery Life: 5.5 hours on 486DX mono with full power management, 4 hours without, 4 hours on 486DX colour with full power management, 2 hours without. (High processor speeds will reduce battery life).

### Dossier<sup>®</sup> P5:

- Intel Pentium<sup>®</sup> processor 75MHz and 90MHz.
- 8MB RAM, upgradeable to 40MB.
- 540MB IDE HD, upgradeable to 720MB.
- Choice of Colour DSTN (10.3" Dual Scan STN), or Colour TFT (10.4" TFT).
- Battery Life: 2 hours on Pentium<sup>®</sup> 75MHz colour with full power management, 1.5 hours without. (High processor speeds will reduce battery life).
- Infra red wireless link control Windows.

### For both the Dossier<sup>®</sup> 486 & P5:

- Dimensions (mm): 279W x 43H x 216D closed
- Weight with battery: 2.7kg (6lb) for mono, 2.9kg (6.5lb) for colour Dossier 486 and 3.09kg (6.8lb) for colour Dossier P5
- 3.3 volt technology.
- Comprehensive power management with doze, sleep, suspend and resume.
- 8K internal cache. (486) and 16K (Pentium<sup>®</sup> processor).
- 3.5", internal 1.44MB floppy drive.
- Local bus accelerated Super VGA Graphics with 1MB Video DRAM (PCI local bus graphics for Dossier<sup>®</sup> P5).
- 1 Serial, 1 Parallel, 1 PS/2 port, 2 PCMCIA type 2 or 1 type 3, 1 expansion socket for docking station.
- 85/86 key keyboard.
- Ergonomic large tracker ball with arm rest to reduce wrist fatigue.
- NIMH battery.
- Audio with built in speaker and microphone and socket for external speakers and line in (16-bit stereo for Dossier<sup>®</sup> P5).
- Ability to record, compress, store and playback voice, sound and music.
- LCD Status Icon display.
- Microsoft<sup>®</sup> Windows<sup>®</sup> 95 supplied as standard - option for Windows 3.11 and MS-DOS<sup>®</sup> 6.22 (please specify).
- Microsoft<sup>®</sup> Works for Windows<sup>®</sup> 95 pre-installed and ready to run and Lotus Organizer.
- User-friendly manuals.
- 12 Months parts and labour collect and return warranty. Low cost on-site option up to 5 years.
- Free lifetime hotline technical support.
- Option for competitive application software bundles.



## THE PRICE YOU PAY

NEW LOWER PRICES

DOSSIER 486		INTEL 486DX4 75MHz		PRICE
MODEL NAME	DISPLAY	HARD DISK	RAM	
DOSSIER 486 SM	MONO 9.5" LCD	260MB	4MB	£999
DOSSIER 486 SD	COLOUR 10.3" DUAL SCAN	260MB	4MB	£1399
DOSSIER 486 ST	COLOUR 9.5" TFT	260MB	4MB	£1899

DOSSIER P5		INTEL PENTIUM <sup>®</sup> PROCESSOR 75MHz		PRICE
MODEL NAME	DISPLAY	HARD DISK	RAM	
DOSSIER P5 SD	COLOUR 10.3" DUAL SCAN	540MB	8MB	£1899
DOSSIER P5 ST	COLOUR 10.4" TFT	540MB	8MB	£2349

### 486 UPGRADE OPTIONS

486 CPU UPGRADE TO: 486DX4 100MHz	£69	486 HARD DISK UPGRADE TO: 540MB Hard Disk	£79	486 MEMORY UPGRADE TO: 8MB RAM	£149
		720MB Hard Disk	£199	12MB RAM	£299
				20MB RAM	£639

### P5 UPGRADE OPTIONS

P5 CPU UPGRADE TO: Pentium <sup>®</sup> Processor 90MHz	£99	P5 HARD DISK UPGRADE TO: 720MB Hard Disk	£129	P5 MEMORY UPGRADE TO: 16MB RAM	£309
				24MB RAM	£679
				40MB RAM	£1359

ALL PRICES EXCLUDE VAT AT 17.5%



WHAT TO BUY FOR BUSINESS  
February 1995  
Dossier 486



WHAT TO BUY FOR BUSINESS  
February 1995  
Dossier P5



March 1995  
Dossier 486 Highly Recommended



May 1995  
Dossier P5/90



June 1995  
Dossier 486

Personal Computer World

"...the Viglen is a 'no nonsense' machine at a competitive price."

March 1995 Viglen Dossier 486 ADVANCED Sound

"...this hot-rod: it's very, very quick."

March 1995 Viglen Dossier P90



LCD Status Icon display panel including battery charge gauge.



Easy to upgrade CPU. Up to DX4 100MHz for Dossier 486 and up to Pentium<sup>®</sup> 90MHz for Dossier P5. Also easy to upgrade RAM and hard disk.



Two separate PCMCIA type 2 slots or one type 3 allowing a host of PCMCIA cards (for modems, networks, storage and more) to be used.



Docking station accessory option. Just slip the Dossier ADVANCED Sound into the docking station to transform it into an instant desktop system.

## OPTIONS

The following are only some of the options available specifically to the Dossier range. For a full list of other items look at the 'Viglen Upgrades and Options page' or for a free copy of the Direct Guide please call our sales department.

N4ADXDK0	Docking station for Dossier486	£309
N4XDELUX	Deluxe padded carrying case	£49
N4XP5XDC	Universal car battery adaptor	£69
CMDP0T3F	14400/14400 PCMCIA Fax/Modem	£185
PAMMP503	External amplified speakers	£10



Tel 0181 758 7000  
Fax 0181 758 7080

Viglen<sup>®</sup>

## A value range of PCs giving you leading edge technology.

### SPECIFICATION

#### Contender® PCI:

- Choice of processor, memory and enhanced IDE drives.
- 16K Cache RAM built into CPU plus 256K second level external cache.
- 3 ISA, 2 PCI and for Professional and Medium Tower models an additional PCI/ISA shared slot.
- Now with Triton Chipset.
- One 3.5" floppy drive.
- 2 Serial, 1 Parallel printer port (EPP).
- Choice of case styles, **Executive** (slimline) or **Professional** for desktop use or **Medium Tower** for desktop or floor standing use.
- Executive: Dimensions (mm):**  
350W x 110H x 385D  
One free 5.25" drive bay.
- Professional: Dimensions (mm):**  
380W x 150H x 415D  
Two free 5.25" drive bays.
- Medium Tower: Dimensions (mm):**  
170W x 380H x 420D  
Three free 5.25" drive bays and two free (one internal) 3.5" drive bays.
- High Performance PCI bus Windows accelerated Super VGA card with 1MB (upgradeable to 2MB) video DRAM option for even faster performance.
- Viglen ENVY 14PE, 14" Super VGA Colour Monitor.
- 102 Key compact ergonomic keyboard.
- Genuine Microsoft Mouse.
- Microsoft® Windows® 95 supplied as standard - option for Windows 3.11 and MS-DOS® 6.22 (please specify).
- Microsoft® Works for Windows® 95 pre-installed and ready-to-run.
- User friendly manuals.
- 12 months **parts and labour** collect and return warranty. Low cost on-site option up to **5 years** available.
- **Free lifetime hotline technical support.**
- Extensive range of application software.



Executive

Professional

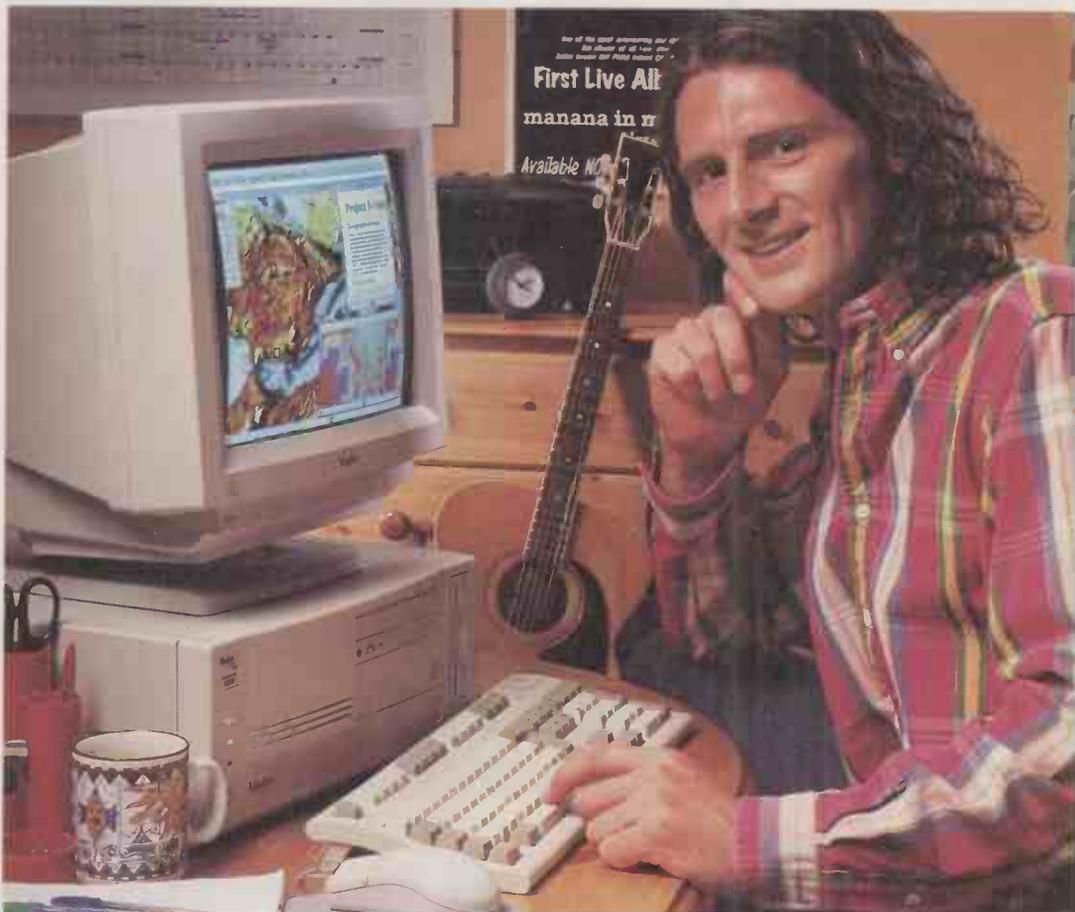
Medium Tower

The Contender® PCI is a value range of personal computers providing the performance edge and future proofing of PCI local bus technology as well as the ease of use of Plug and Play software. It is one of

the lowest cost PC investments you can make without compromising quality, reliability or support. And you won't be disappointed when it comes to performance either.

The Contender® PCI is available in a choice of three case styles (Executive, Professional and Medium Tower) and in a 486 and Pentium® processor range. It offers amazing value for money and is ideal for most home and office applications such as word processing, accounts and spreadsheets.

With a host of options including multimedia, the Contender® PCI makes the perfect PC for everyday use.



### OPTIONS

For a list of some of the options available with all Viglen PCs, refer to the 'Viglen Upgrades and Options' Page or for a free copy of the Direct Guide please call our Sales Department. The following are some of the options you can choose specific to the Contender PCI.

**PDDXPST2 High Performance Diamond Stealth 64 DRAM SVGA card**  
(1MB upgradeable to 2MB as used in the Genie range) instead of the standard Contender SVGA card **£29**

**PDDXPAT4 High Performance ATI Mach 64 SVGA card** with 2MB of VRAM instead of the standard Contender SVGA card **£149**

**PDDXPST5 Highest Performance Diamond Stealth 64 Video SVGA card** with 2MB of VRAM instead of the standard Contender SVGA card. This card allows the fitting of an optional high performance MPEG module for full motion video applications **£179**

For the optional MPEG module providing CD-i and Video CD compatibility (when a CD ROM is fitted) please add a further **£29**



#### THE PRICE YOU PAY

COLOUR SUPER VGA HARD DISK	RAM	P5/75	P5/90	P5/100	P5/120
		Pentium® processor 75MHz	Pentium® processor 90MHz	Pentium® processor 100MHz	Pentium® processor 120MHz
540MB	8MB	<b>£1099</b>	<b>£1199</b>	<b>£1239</b>	<b>£1289</b>
1GB	16MB	<b>£1369</b>	<b>£1449</b>	<b>£1489</b>	<b>£1539</b>
1.6GB	32MB	<b>£1999</b>	<b>£2089</b>	<b>£2139</b>	<b>£2179</b>

The prices above are for complete Contender PCI Executive, Professional and Medium Tower systems ready to run with Microsoft® Windows® 95. To order please quote the relevant model along with the hard disk and RAM capacity required and PLEASE DO NOT FORGET to specify the case style required. **ALL PRICES EXCLUDE VAT AT 17.5%**

**For 486 Processor Models - Please Call**



SEE 'VIGLEN UPGRADES & OPTIONS' PAGE

Tel **0181 758 7000**  
Fax **0181 758 7080**

**Viglen®**

## Now you can lead the race with next generation performance.



Executive

Professional

Medium Tower

The Genie<sup>®</sup> PCI is the flagship of the Viglen range of personal computers, providing the highest performance systems which are in the

forefront of leading edge technology. The Genie<sup>®</sup> PCI was one of the very first systems to incorporate the new PCI local bus architecture with all its performance advantages as well as the easy to configure plug and play software—thus eliminating the guesswork of yesterday's technology. PCI local bus has now become the industry standard for PCs. The Genie<sup>®</sup> PCI has carried on incorporating the advances of new technology such as the Triton Chipset, EDO RAM, Pipeline Burst Cache and currently provides one of the fastest PCs yet. Available with incredibly fast PCI graphics cards, enhanced IDE hard disks and the highest specification 15" Monitor. If performance is your requirement, then the Genie<sup>®</sup> PCI is the choice for you.

Designed for



### SPECIFICATION

#### Genie PCI:

- Choice of processor, memory and hard disk capacity.
  - 2 ISA, 3 PCI, and for Professional and Medium Tower models an additional PC/ISA shared slot.
  - 256K Pipeline Burst Cache.
  - One 1.44MB floppy drive.
  - Triton Chipset.
  - Capable of Mode 4 Enhanced IDE.
  - EDO DRAM as standard.
  - Socket 7 as standard upgradeable to Pentium Processors up to 133MHz and above.
  - On board sound system.
  - 2 serial, 1 parallel printer port (EPP).
  - Choice of case styles, **Executive, Professional or Medium Tower.**
- Executive:** Dimensions (mm):  
350W x 110D x 385H  
One free 5.25" drive bay.
- Professional:** Dimensions (mm):  
380W x 150D x 415H  
Two free 5.25" drive bays.
- Medium Tower:** Dimensions (mm):  
170W x 380D x 420H  
Three free 5.25" drive bays and two free (one internal) 3.5" drive bays.
- CPU upgradeable to future **Intel Pentium<sup>®</sup> Overdrive processors.**
  - High Performance PCI bus Windows accelerated Super VGA card with 1MB (upgradeable to 2MB) video DRAM option for even faster performance.
  - Viglen ENVY 15P Super VGA 15" FST colour monitor.
  - 102 key compact ergonomical keyboard.
  - Microsoft mouse with Microsoft Mouse Manager software utilities.
  - Microsoft<sup>®</sup> Windows<sup>®</sup> 95 supplied as standard - option for Windows 3.11 and MS-DOS<sup>®</sup> 6.22 (please specify).
  - Microsoft<sup>®</sup> Works for Windows<sup>®</sup> 95 pre-installed and ready-to-run.
  - User friendly manuals.
  - 12 months **parts and labour** warranty with option for low cost parts and labour maintenance for up to **5 years.**
  - **Free lifetime hotline technical support.**
  - Extensive range of application software

### OPTIONS

For a list of some of the options available with all Viglen PCs, refer to the 'Viglen Upgrades and Options' page or for a free copy of the Direct Guide please call our Sales Department. For the Genie range may we suggest a larger 17" monitor, a multimedia upgrade and perhaps a Microsoft<sup>®</sup> Office for Windows<sup>®</sup> 95 application suite as an ideal option. The following are some of the options you can choose specific to the Genie PCI Pentium<sup>®</sup> processor based range:

**PDDXPAT4 High Performance ATI Mach 64 SVGA card** with 2MB of VRAM instead of the standard Genie SVGA card **£139**

**PDDXPST5 Highest Performance Diamond Stealth 64 Video SVGA card** with 2MB of VRAM instead of the standard Genie SVGA card. This card allows the fitting of an optional high performance MPEG module for full motion video applications **£169**  
For the optional **MPEG module** providing CD-i and Video CD compatibility (when a CD ROM is fitted) please add a further **£229**

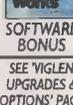
**PAMMPS03 Stereo amplified speakers** to connect to Genie PCI (includes mains adaptor) **£15**

### THE PRICE YOU PAY

THE GENIE PCI PENTIUM <sup>®</sup> PROCESSOR BASED RANGE						
COLOUR SUPER VGA HARD DISK	RAM (EDO)	P5/75 75MHz	P5/90 90MHz	P5/100 100MHz	P5/120 120MHz	P5/133 133MHz
540MB IDE	8MB	<b>£1279</b>	<b>£1359</b>	<b>£1399</b>	<b>£1449</b>	<b>£1579</b>
1GB IDE	16MB	<b>£1559</b>	<b>£1639</b>	<b>£1669</b>	<b>£1719</b>	<b>£1849</b>
1.6GB IDE	32MB	<b>£2239</b>	<b>£2299</b>	<b>£2359</b>	<b>£2399</b>	<b>£2539</b>
2GB SCSI-2	32MB	<b>£2489</b>	<b>£2559</b>	<b>£2599</b>	<b>£2649</b>	<b>£2789</b>

Includes Pipeline Burst Cache and EDO RAM as standard

The prices above are for complete Genie PCI Executive, Professional and Medium Tower systems ready to run with Microsoft<sup>®</sup> Windows 95. To order please quote the relevant model along with the Hard Disk and RAM capacity required and PLEASE DO NOT FORGET to specify the case style required. ALL PRICES EXCLUDE VAT AT 17.5%



June 1995  
Viglen Genie Pentium  
PCI 120MHz  
(fitted with FB Cache)

Feb 1995  
PC Today

April 1995  
Genie PCI P5/90

June 1995  
Genie PCI P5/90

January 1995  
Genie PCI P5/60

August 1995  
"...the best benchmark scores  
Computer Buyer has seen."  
Viglen Genie PCI 133MHz

682 Tel **0181 758 7000**  
Fax **0181 758 7080**

# Viglen<sup>®</sup>

Viglen Limited, Viglen House, Alpertons Lane, Alpertons, Middlesex HA0 1DX.

TURN OVER FOR MORE

# Viglen Upgrades and options . . .

## TAKE ADVANTAGE OF THE SOFTWARE BONUS...



In addition to Windows 95, all Viglen systems are now supplied with Microsoft® Works for Windows® 95 an easy to use integrated package comprising a word processor, spreadsheet, database and electronic communication software; the ideal tool to run a small business.

Works for Windows® 95 manuals and disks are not included but these can be provided at small additional cost. Please quote the following Order code **WAPCMD95** Works for Windows® 95 Manual and disks **£9.99+VAT**

## ...AND SOFTWARE BONUS UPGRADE

The additional software bonus obtained from Viglen gives you a choice of upgrading to further powerful applications from Microsoft® at very competitive bonus upgrade prices. These bonus upgrade prices are only available when ordered with a Viglen PC at the time of purchase. The following applications are available. Please add the relevant order code when ordering.

### Microsoft® Office for Windows® 95



This is the latest version of the most popular and powerful integrated software package from Microsoft featuring the technology of Intellisense. The package includes Word for Windows® 95, Excel for Windows® 95 and Powerpoint for Windows® 95 and Microsoft Schedule+. Supplied pre-installed with full manuals and disks.

Order code **WAPMMX9A** Bonus Upgrade price (Floppy Disk version) **£169+VAT** or **WAPMMY9A** Bonus Upgrade Price for CD version) **£159+VAT**.

### Microsoft® Office for Windows® 95 Professional



This is the same as Microsoft® Office for Windows® 95 with the addition of the latest version of Access for Windows® 95 (new version TBA) - the powerful yet simple to use Windows based database. Supplied pre-installed with full manuals and disks.

Order code **WAPMMX9B** Bonus Upgrade price (Floppy Disk version) **£249+VAT** or **WAPMMY9B** Bonus Upgrade price (CD version) **£229+VAT**.

### Viglen Consumer Bundle



Microsoft® Publisher 2.0, the easy to use desktop publishing package, plus Microsoft® Money 3.0 for money management made simple. Both these packages are fully pre-installed and supplied with full manuals and disks.

Order Code **WAPMMX60** **£39+VAT**

Software may be supplied in Viglen OEM packaging

## CD ROM DRIVE OPTION

Take advantage of the ability to use all the new software that is being supplied on CD ROM format and add an IDE CD ROM double speed photo CD compatible drive to your system for only

**£39+VAT**

Please quote order code **DCDDNP01** when ordering.



## MULTIMEDIA OPTION

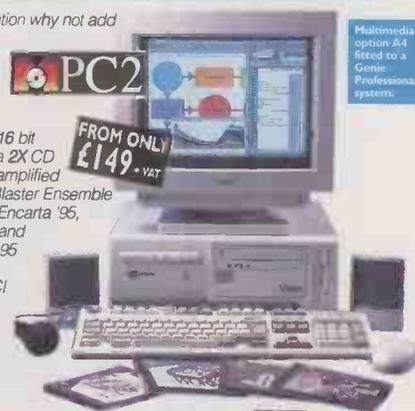
For a complete multimedia solution why not add one of our multimedia options to your system.

For a Contender PCI system choose Option 1/2.

Option 1/2 includes a genuine 16 bit SoundBlaster card, along with a 2X CD ROM drive as well as a pair of amplified speakers, microphone, SoundBlaster Ensemble software, 3 Microsoft CD titles (Encarta '95, Musical Instruments, and Golf) and Microsoft® Works for Windows® 95 and Money. To order this option fully fitted to your Contender PCI system quote order code **UMMCDN12** and add **£149+VAT** to your order.

For a Genie PCI Pentium® Processor Based system choose Option A4.

Option A4 is only for the Genie PCI Pentium® processor based system as it does not include a sound card (Genie PCI Pentium® processor based systems now have sound as standard on the motherboard). This option is supplied with a 4X CD ROM drive, a pair of amplified speakers, microphone, Voyetra Audiostation software, 3 Microsoft CD titles (Encarta '95, Musical Instruments, and Golf) and Microsoft® Works for Windows® 95 and Money. To order this option fully fitted to your Genie PCI Pentium® processor based system quote order code **UMMCDNA4** and add **£169+VAT** to your order.



Multimedia option A4 fitted to a Genie Professional systems.

## JOIN THE SUPERHIGHWAY



Why not add a voice fax/modem to your system and join the information superhighway. The Viglen/DATAFLEX VFM14 Voice Fax modem

provides you with 14,400 baud fax and data facility with Internet, CompuServe, and MSN (if using Windows® 95) access software as well as a free starter pack. All this and the ability to receive and send faxes within Windows for only **£99+VAT**

Order code **CMDNVCFF** when ordering.

msn.

NOW INCLUDES VOICE WITH ANSWER PHONE FACILITY



## UPGRADE YOUR MONITOR

The Viglen desktop and tower systems are supplied with either a 14" or 15" Colour Monitor as standard. To enhance your viewing further, you can upgrade to one of our superb 17" Colour Monitors the ENVY 17P or the even more enhanced ENVY 17PE.

Upgrade from:  
Contender Range  
Contender Range  
Genie Range  
Genie Range

Upgrade to:  
ENVY 17P  
ENVY 17PE  
ENVY 17P  
ENVY 17PE

Price to add:  
**£330+VAT**  
**£410+VAT**  
**£240+VAT**  
**£320+VAT**



## NEW PCMCIA ON YOUR DESKTOP



You can now add a PCMCIA facility on all Viglen desktop and tower systems. This allows you not only to use PCMCIA cards on your desktop but also to transfer cards and information from your notebook PC to your desktop. There are

three choices. If you require any one of these, please add the relevant product code to your order and we will factory fit it for you.

**PDCKPX10** Single PCMCIA (Type 1,2 or 3) slot at the back of the System. **£134+VAT**

**PDCKPX20** Two PCMCIA slots (each type 1,2 or 3), one at the back and one at the front fitted to a 3.5" drive bay (this is not suitable for an Executive case style). **£159+VAT**

**PDCKPF20** Two PCMCIA slots (each type 1,2 or 3), one at the back and one at the front fitted in a 3.5" floppy and PCMCIA drive combination thus not requiring an additional drive bay. **£254+VAT**

## FIRST CLASS SUPPORT FROM VIGLEN

Unlike many PC manufacturers, Viglen puts equal emphasis on its after-sales service - that means not only a comprehensive standard warranty on every product but a choice of service packages that offer total cover for up to five years.

**12 MONTHS**  
COLLECT AND RETURN  
WARRANTY

All Viglen PCs are supplied with a 12 months' collect and return warranty (UK only). This covers your Viglen PC and any other options that are factory fitted, covering parts and labour.

In addition to these standard warranty terms, we provide a better and quicker response than some of our competitors, Viglen offer a choice of additional low-cost on-site options to meet specific user requirements - See to the right.

Do not forget, when you compare our services with our competitors, please read their small print. With Viglen, you have a choice and your choice is clear.

## Additional On-site Options

For complete peace of mind choose one of the additional low-cost on-site warranty options.

**THE STANDARD**  
ON-SITE  
NEXT DAY  
RESPONSE

This option converts the standard Viglen warranty into a next business day on-site response for 12 months covering parts and labour. Order code **ZSM12NBD** **£39-** for all desktop and Tower models. Order code **ZSM12DSS** **£149-** for Dossier portable range.

**THE PREMIUM**  
ON-SITE  
4 HOUR  
RESPONSE

This option converts the standard Viglen warranty into a 4 hour on-site response for 12 months covering parts and labour. Please call for details of this individually tailored package.

Tel **0181 758 7000**  
Fax **0181 758 7080**

**Viglen®**

Viglen Limited. Viglen House, Alperton Lane, Alperton, Middlesex HA0 1DX.

# Special Configurations for Christmas direct to you . . . .

Viglen produce a wide range of PCs and options to give you the ultimate choice. We have also designed a number of special configuration packages offering an abundance of software applications to suit specific needs and budgets.

For education, entertainment, personal accounting, business management or high performance computing, we have the package to fit your needs. We also have the latest multimedia systems combining sound, text, animation and video into one easy to use system. There is a Viglen Special Configuration that's just right for you.

Designed for



**CRT Multimedia**

A comprehensive interactive tutorial guide to learn Windows® 95.



We will do our utmost to despatch the special configuration models shown here within 3 working days from clearance of payment. Any upgrades or additional options will require extra time up to 10 working days.



## 1 HOME MULTIMEDIA PC NEW EXTRA VALUE

The Home Multimedia PC provides everything you need for a good performance Multimedia system including an abundance of software to get you started.



only **£43.50** per month  
APR 19.9%  
**EASY DOWN**  
monthly payment scheme

**£999**  
+ Delivery and VAT = £1191.45

**8MB RAM**  
**540MB HD**  
**14" SVGA Colour Monitor**  
**Double speed CD ROM Drive**

### PENTIUM® PROCESSOR 75MHZ

- Viglen Contender® Executive ES System
- Fast PCI Local Bus Accelerated Graphics
- 1MB Video DRAM
- 2 serial, 1 parallel, 1 PS/2 port,
- 1 games port
- 3.5" Floppy Drive
- Ergonomic Compact Keyboard
- Genuine Microsoft® Ergonomic Mouse
- Microsoft® for Windows® 95 Ready To Run Plus
- Multimedia Sound
- 4W Stereo Amplified Speakers
- Microphone
- Microsoft® Works for Windows® 95
- Microsoft® Money
- Multimedia CD Titles from Microsoft®: Encarta® 95, Musical Instruments and Golf
- CRT Easy Tutor for Windows® 95



**ORDER CODE: SXHM1075**

## 1a HOME MULTIMEDIA PLUS PC NEW

Same as above but in addition includes: 256K cache, QUAD SPEED CD-ROM. **ORDER CODE: SXHMA075**

**£1199** + VAT + Delivery = £1426.45

only **£52.08** per month  
APR 19.9%  
**EASY DOWN**  
monthly payment scheme

## 2 PERFORMANCE 90 MULTIMEDIA PC NEW

The Performance Multimedia PC brings together the fast 90MHz Pentium® processor, along with a fast VGA card and 14" monitor to provide one of the best price/performance systems available and is ideally suited for business and home.



only **£55.23** per month  
APR 19.9%  
**EASY DOWN**  
monthly payment scheme

**£1349**  
+ Delivery and VAT = £1602.70

**8MB RAM**  
**540MB HD**  
**14" SVGA Colour Monitor**  
**Fast 64 bit PCI Graphics card**  
**Quad speed CD ROM Drive**

### PENTIUM® PROCESSOR 90MHZ

- Viglen Contender® PCI Professional with Intel Pentium® 90MHz Processor
- 256k cache
- 2 serial, 1 parallel, 1 games port
- 3.5" Floppy Drive
- Ergonomic Compact Keyboard
- Genuine Microsoft® Ergonomic Mouse
- Microsoft® Windows 95 Ready To Run Plus
- Genuine 16 Bit SoundBlaster Card
- 4W Stereo Amplified Speakers
- Microphone
- Microsoft® Works for Windows® 95
- Microsoft® Publisher
- Microsoft® Money
- Multimedia CD Titles from Microsoft®: Encarta® 95, Musical Instruments and Golf
- CRT Easy Tutor for Windows® 95



**ORDER CODE: SXPER090**

Tel **0181 758 7000**  
Fax **0181 758 7080**

**Viglen®**

Viglen (UK) Ltd, 100 House, Alperton Lane, Alperton, Middlesex HA0 1DX.

684  
TURN OVER FOR MORE

# Software packages

The Viglen Special Configurations are each supplied with a different variety of software packages which are pre-loaded, include full user manuals and disks and are ready to use. Here, we have briefly outlined each package to help you decide which Special Configuration is right for you.



## Microsoft® Works for Windows® 95

Five essential tools for easier everyday computing. Word processing, spreadsheet, database, graphics and communications tools.



## Microsoft® Money

A complete set of financial management and planning tools to manage your investments and expenditure.



## Microsoft® Publisher

This desktop publishing software is the key to producing professional quality output, layouts and clip art.

## MULTIMEDIA TITLES



### Musical Instruments

Features 200 instruments – many rare and exotic – from around the world. Hear and play 1,500 authentic sound samples of instruments and jazz, classical and rock ensembles.



### ENCARTA® '95

The complete interactive Multimedia Encyclopedia. This best selling and award winning title condenses 28 volumes into one CD. Maps, charts, sound and pictures bring information to life!



### GOLF

Rise to the true-to-life challenge of Microsoft® Golf. Realistic graphics and sounds combine with true golf ball flight paths, accurate swing control and a choice of courses.

## SOFTWARE BONUS UPGRADES

All the special configurations shown can be further upgraded to include one of the following professional integrated software applications from Microsoft at a very special bonus upgrade price. If you require pre-installation please specify and allow extra delivery time for these options.



### Microsoft® Office for Windows® 95

A popular and powerful integrated software package from Microsoft featuring the technology of

Intellisense and including Word for Windows® 95, Excel for Windows® 95 and PowerPoint for Windows® 95 and Schedule+. Supplied pre-installed with full manuals and disks. Order code **WAPMMY9A Bonus Upgrade Price £159 + VAT (CD version with full manuals)**



### Microsoft® Office Professional for Windows® 95

This is the same as Microsoft® Office

for Windows® 95 with the addition of the latest version of Access for Windows® 95 (new version TBA) the powerful yet simple to use Windows based database. Supplied pre-installed with full manuals and disks. Order code **WAPMMY9B Bonus Upgrade Price £229 + VAT (for CD version with full manuals).**

Please note some software may be supplied in Viglen OEM packaging

## MONITOR UPGRADES

You can upgrade your special configuration monitor to an even higher specification.

### 1, 1a and 2 Home and Performance 90

Upgrade to: ENVY 15P, 15" Monitor

Price to add: £90 + VAT

Upgrade to: ENVY 17P, 17" Monitor

Price to add: £330 + VAT

### 3 and 4 Power 100 and Ultimate 120

Upgrade to: ENVY 17P, 17" Monitor

Price to add: £240 + VAT

Upgrade to: ENVY 17PE, 17" High spec Monitor

Price to add: £320 + VAT

### 5 Ultimate 133

Upgrade to: ENVY 17PE, 17" High Spec Monitor

Price to add: £80 + VAT

## 3 POWER 100 MULTIMEDIA PC

The Power Multimedia PC takes the Performance Business Multimedia PC a stage further, with a faster processor, higher Hard Disk capacity and a 15" monitor, providing increased performance capabilities.

**8MB EDO RAM**  
**1GB HD**  
**15" SVGA Colour Monitor**  
**Fast 64 bit PCI Graphics card**  
**Quad speed CD ROM Drive**  
**256K Pipeline Burst Cache**

### PENTIUM® PROCESSOR 100MHZ

- Viglen Genie® PCI Medium Tower with Intel Pentium® 100MHz Processor
- 2 serial, 1 parallel, 1 games port
- 3.5" Floppy Drive
- Ergonomic Compact Keyboard
- Genuine Microsoft® Ergonomic Mouse
- Microsoft® Windows® 95 Ready To Run Plus
- Genuine 16 Bit SoundBlaster Chip
- 15W Stereo Amplified Speakers
- Microphone
- Microsoft® Works for Windows® 95
- Microsoft® Publisher
- Microsoft® Money
- Microsoft® Multimedia CD Titles from Microsoft®, Encarta® 95, Musical Instruments and Golf
- CRT Easy Tutor for Windows® 95

**ORDER CODE: SXPWR100**

only **£63.32** per month  
APR 14.9%  
EASY 2 OWN  
monthly payment scheme

**£1549**  
+ Delivery and VAT =  
£1837.70



Professional case option available, please allow extra delivery time.

## 5 ULTIMATE 133 MULTIMEDIA PC

If the Ultimate 120 system was not powerful enough, Viglen offer you even more power and specification with this ultimate 133 configuration. This system provides more memory, higher capacity hard drive, a 17" monitor and the most powerful Pentium® processor yet.

only **£113.94** per month  
APR 14.9%  
EASY 2 OWN  
monthly payment scheme

**£2799**  
+ Delivery and VAT =  
£3306.45



### PENTIUM® PROCESSOR 133MHZ

- Viglen Genie® PCI Medium Tower with Intel Pentium® 133MHz Processor
- 2 serial, 1 parallel, 1 games port
- 3.5" Floppy Drive
- Ergonomic Compact Keyboard
- Genuine Microsoft® Ergonomic Mouse
- Microsoft® Windows® 95 Ready To Run Plus
- Genuine 16 Bit SoundBlaster Chip
- Stereo Amplified Speakers
- Microphone
- Microsoft® Works for Windows® 95
- Microsoft® Publisher
- Microsoft® Money
- Multimedia CD Titles from Microsoft®, Encarta® 95, Musical Instruments and Golf
- CRT Easy Tutor for Windows® 95

**ORDER CODE: SXULT133**

**NOW INCLUDES VOICE FAX MODEM**

**32MB EDO RAM**  
**1.6GB HD**  
**17" ENVY 17 Colour Monitor**  
**Stealth 64 Video VRAM with 2MB**  
**Six speed CD ROM Drive**  
**14400/14400 Voice Fax Modem**  
**Internet Access Software**  
**256K Pipeline Burst Cache**

## 4 ULTIMATE 120 MULTIMEDIA PC

This configuration is 'the hottest PC money can buy' according to PC magazine which after reviewing 24 other top of the range systems awarded the Genie its Editors' Choice for the Ultimate PC. We have configured this system to be similar to the reviewed PC except that we have added a fast modem, and reduced the price. You will also need to add a 17" monitor option (see '17" monitor upgrades' above) to obtain the reviewed specification.

**16MB EDO RAM**  
**1GB HD**  
**15" SVGA Colour Monitor**  
**Stealth 64 Video VRAM with 2MB**  
**Six speed CD ROM Drive**  
**14400/14400 Voice Fax Modem**  
**Internet Access Software**  
**256K Pipeline Burst Cache**

### PENTIUM® PROCESSOR 120MHZ

- Viglen Genie® PCI Medium Tower with Intel Pentium® 120MHz Processor
- 2 serial, 1 parallel, 1 games port
- 3.5" Floppy Drive
- Ergonomic Compact Keyboard
- Genuine Microsoft® Ergonomic Mouse
- Microsoft® Windows® 95 Ready To Run Plus
- Genuine 16 Bit SoundBlaster Chip
- Stereo Amplified Speakers
- Microphone
- Microsoft® Works for Windows® 95
- Microsoft® Publisher
- Microsoft® Money
- Multimedia CD Titles from Microsoft®, Encarta® 95, Musical Instruments and Golf
- CRT Easy Tutor for Windows® 95

**ORDER CODE: SXULT120**

only **£81.35** per month  
APR 14.9%  
EASY 2 OWN  
monthly payment scheme

**£1999**  
+ Delivery and VAT =  
£2366.45



Professional case option available, please allow extra delivery time.

## 6 PROFESSIONAL BUSINESS PORTABLE PC

This configuration combines the fast 486DX4 75MHz with a large memory and Hard Disk capacity along with a fast modem and large colour screen to make it one of the most powerful and flexible notebook PCs for the Professionals on the move.

only **£67.37** per month  
APR 14.9%  
EASY 2 OWN  
monthly payment scheme

**£1649**  
+ Delivery and VAT =  
£1955.20



**8MB RAM**  
**540MB HD**  
**10.3" Dual Scan Colour LCD Screen**  
**14400/14400 Fax/Modem**

### 486DX4 75MHZ

- Viglen Dossier® ADVANCED Sound notebook sized (6.5lb) portable PC with 486DX4 75MHz Processor
- 1 serial, 1 parallel, 1 PS/2 port
- 2 PCMCIA ports, socket for docking station option
- CPU Upgradeable
- 3.5" Floppy Drive
- Built in speaker and microphone for multimedia sound
- Built in large tracker ball
- Microsoft® Windows® 95 Ready To Run
- Lotus Organizer
- Plus
- Microsoft® Works for Windows® 95
- Microsoft® Money

For Multimedia why not add an external PCMCIA dual speed CD-ROM?  
**ORDER CODE: DCDDXC01 £239 + VAT**

**ORDER CODE: SXPBP075**

June 1995  
Viglen Genie  
Pentium PCI  
120MHz

Viglen use only the best British made modems by Dataflex

**ORDER CODE: SXPBP075**

# At Viglen we believe in putting you first.



## At Viglen, PC also means Pleased Customers.

Our customer first philosophy ensures every aspect of our business is geared to customer satisfaction. In recognition of this the 1993/4 Computer Weekly Datapro Survey consistently rated Viglen first for reliability, sales support and overall satisfaction. Viglen were also highly commended in The Daily Telegraph and First Direct Customer First Awards 1994.



The entire Viglen product range provides the best value for money available. Viglen topped the price performance ratings in the 1993/4 Computer Weekly Datapro Survey.



Widely regarded as the best support in the industry, each Viglen product purchased gives **FREE lifetime access to our technical support** telephone service and bulletin board.



Our sales staff will gladly guide you through the jungle of computer jargon with help on the ideal system for you.



Technical specialists are always available for more specialised advice.

Each Viglen system has a **12 months parts and labour warranty**, including collection from and return to you at our expense (mainland UK only). For complete peace of mind there is also a further choice of low-cost on-site service packages for up to 5 years. With mission critical systems, such as file servers, our 4 hour response premium on-site service is available.



Our pedigree is impeccable, with over 19 years experience in providing quality manufacture and support services.



Don't worry about compatibility. Viglen's PCs are guaranteed to run all software that operates on equivalent IBM PC/AT. Viglen is licensed under the relevant IBM patents.



Viglen's desktop systems are made in the UK to exacting quality control procedures to give you added confidence in our products.



Extremely competitive repair and upgrade services are always available from our service department.



NetWare Tested and Approved



As a Novell authorised OEM Viglen take the work out of networking by providing the very best in network solutions and support - for 2 to 250+ users. In-house Novell certification labs and the availability of more than two Certified Novell Engineers at all times mean that Viglen are a networks supplier to rely on.



Our quality and reliability standards are second to none, thanks to the latest design and manufacturing processes approved to BS5750 quality standard. The Datapro survey rated Viglen first for reliability.

Remember to carefully read the small print of our competitors when comparing services. At Viglen we believe in giving you a choice and making that choice crystal clear.



**COMPUTERWEEKLY** Datapro IT SYSTEMS USER SATISFACTION SURVEY 1993/4  
**Viglen** - Once again, Viglen PCs take the hardware honors in the U.K. User Survey, with the highest ratings for Overall Satisfaction, Price/ Performance, Expansion Capability, and Ergonomics.

## Ordering direct couldn't be easier *phone, post, or fax.*

If you require any help or advice on choosing a system to suit your requirements please call our Sales Department. To help us identify your requirements please state the product code (where applicable), description and price of items required.

When you have decided on your system please fax or phone your orders. You will need to add £15.00 per system for courier delivery, add 17.5% VAT on top. Collections may be made by prior arrangement. Please allow 7-10 working days for delivery, except for Viglen special configuration models which we will do our utmost to despatch within 3 working days from clearance of payment.

### BY PHONE

Credit card, Switch, Connect or American Express card holders can order by telephone. Just call us and ask for our Sales Department.



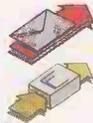
Official orders from educational establishments, government departments and PLCs accepted.

Very competitive Lease Rental arrangements are available for bona fide businesses, educational and government establishments.



### BY POST OR FAX

You can place your order with our Sales Department by post or fax to the address or number shown below. We will require a cheque for the full amount by return post. Credit card, Switch, Connect or American Express card holders may authorise payment by quoting the credit card number and expiry date.



**BAS2OWN** monthly payment scheme is available to private purchasers subject to status. Typical example of payment calculation of PC costing £799 + VAT: £799 + £15 (delivery) + 17.5% VAT = £956.45 total cash price. 10% deposit of £95.65 required followed by 36 monthly payments of £31.27 (APR=19.9%). For finance over £1499 + VAT, APR drops to 14.9%. Additional payment protection insurance is available. Viglen Ltd is a licensed credit broker.

EDI. Purchase orders via electronic data interchange accepted using INS Tradanet service.

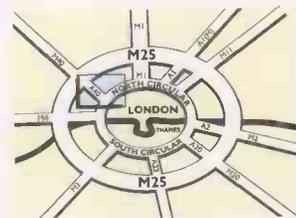
Public sector customers may also purchase at special prices through the HMSO.

Please ring 01603 694153



## See, Touch and Feel our products . . . Come and visit us in the showroom area.

Viglen Limited, Viglen House, Alpertons Lane, Alpertons, Middlesex HA0 1DX.



**Showroom open**  
 Monday-Friday 9.00 - 5.30  
 Saturdays 9.00 - 1.00  
**Showroom closed**  
 Public and Bank Holidays

### PHONE NOW FOR YOUR FREE COPY OF THE VIGLEN DIRECT GUIDE

Viglen systems are exclusively distributed in Eire by Lendac Data Systems, Unit 6, IDA Enterprise Centre, Pearse St., Dublin 2, Ireland. Tel No: Dublin 710796 Fax No: Dublin 710135. Prices in Eire differ from those quoted in this advertisement.

Prices correct at time of going to press and subject to availability. Specification may be subject to change without notice. ENVY is a trademark of Viglen Ltd. Dossier, Contender, Genie and Viglen are registered trademarks of Viglen Ltd. IBM and OS/2 are trademarks of International Business Machines Corporation. Microsoft, MS-DOS, Windows and Windows 95 are registered trademarks of Microsoft Corporation. Intel, Intel 486, Pentium and the Intel Inside Logo are trademarks of Intel Corporation. Novell, Netware and the Netware Logos are trademarks of Novell Inc. The Energy Star emblem does not represent EPA endorsement of any product and service. All other trademarks are acknowledged. Subject to Viglen terms and conditions available on request.

Tel **0181 758 7000**  
 Fax **0181 758 7080**

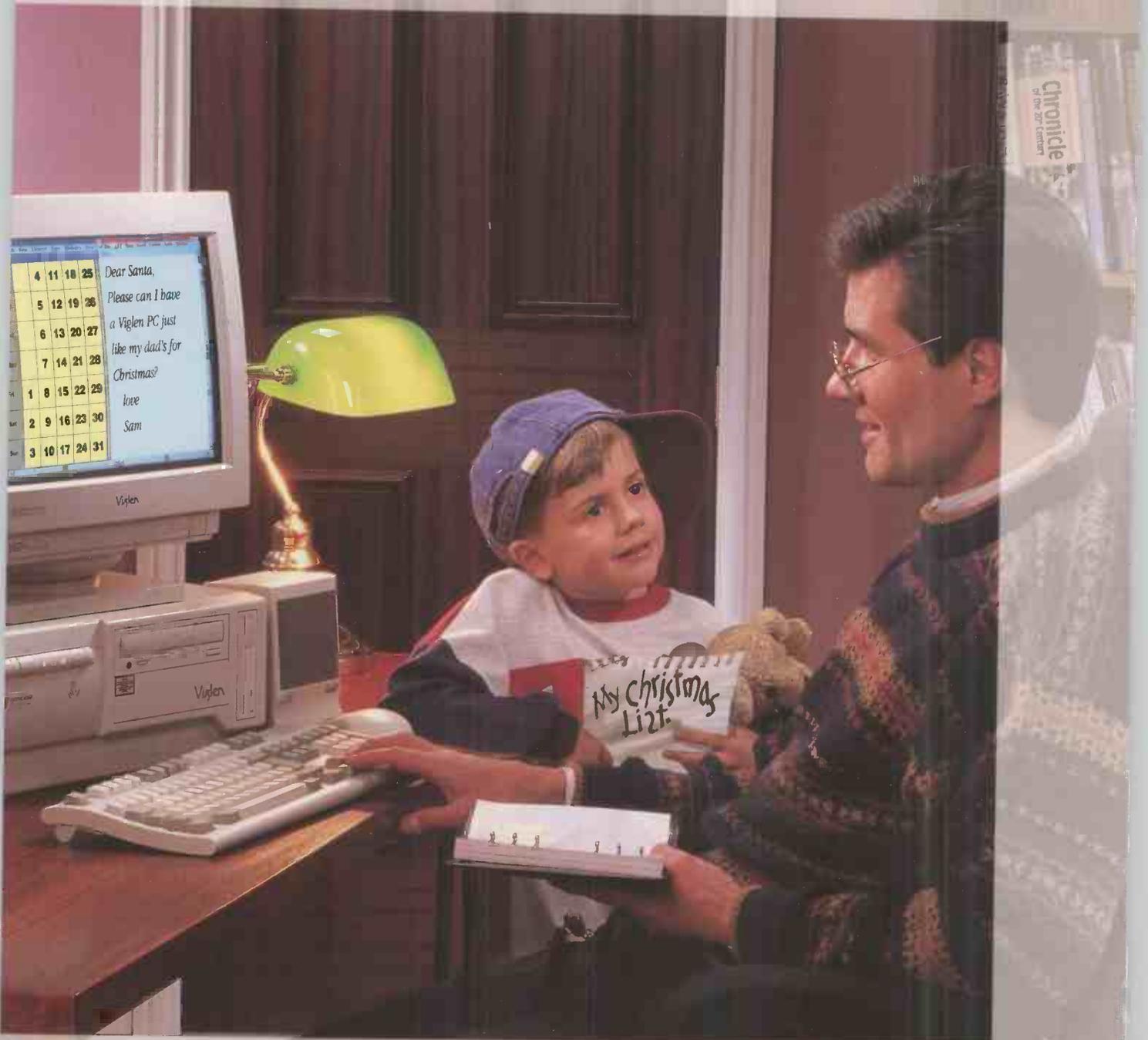
**Viglen**

Viglen Limited, Viglen House, Alpertons Lane, Alpertons, Middlesex HA0 1DX.



**Viglen**<sup>®</sup>  
YOU'LL NEVER LOOK BACK

# *Personal Computers* **ready for Christmas**



*Setting the standards*  
**in Personal Computing.**

687

► **Direct to you.**

# LASER PRINTING COSTS BRITISH BUSINESS £294 MILLION A YEAR.



## KYOCERA THINKS YOU SHOULDN'T BUY INTO IT.

Money doesn't simply fall from the sky. But how many laser printer manufacturers realise that?

After all, last year they persuaded British business to spend a staggering £294 million on printer consumables.\*

Kyocera believes you've better things on which to spend your money.

Which is why the only consumable used by our ECOSYS

**ECOSYS**

printers is toner. The resulting savings mean you can save your company a fortune.

The ECOSYS range offers 4, 10 and 18 ppm speeds, an A3 model, and SNMP compliance. And because they're modular, they can all grow with the needs of your network.

Of course, you could keep waiting for pennies from heaven. But doesn't it make more sense to ask your IT supplier about ECOSYS?



**KYOCERA**

**PRINTING COSTS. STOP PAYING THE PRICE.**