SOUND ON SOUND™

EUROPE'S NO.1 HI-TECH MUSIC RECORDING MAGAZINE

Emagic Audiowerk8

Quality Digital Audio for the Masses

Yamaha A3000 Sampler

Flood: Producing U2's *Pop*

Multi-Effects Explained

& much, much more...

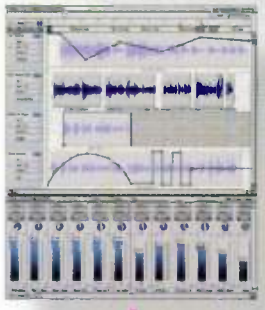
WIN • QUASIMIDI RAVE-O-LUTION 309 • SONY PORTABLE DAT MACHINE

EMU CARNAVAL SYNTH • TV JINGLE WRITING • PC SPEC CHECK
AKAI S20 SAMPLER • ALESIS NANOPIANO • MAC MIDI INTERFACES
WALDORF MICROWAVE II SYNTH • KORG 1212 I/O PCI CARD
DIGIDESIGN PRO TOOLS VERSION 4.0 • PC • APPLE • ATARI NEWS

VOLUME 12
ISSUE 8
JULY 1997
£3.25

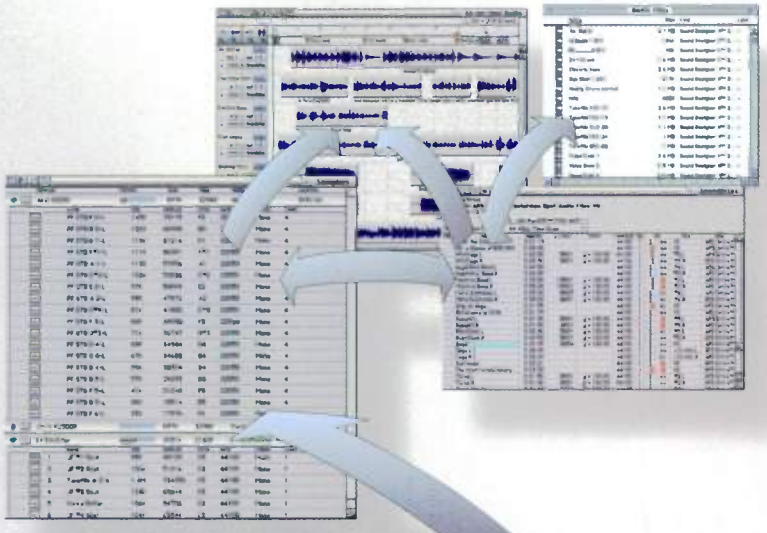
How would you like to ---------> do all of this

up to 40 or more tracks of digital audio recording, mixing, busing, EQ and effects processing — all non-destructively in real time



on this

any Power Macintosh



Introducing the Samplers window. Connect your sampler to your Mac and drag and drop samples between them. Store all of your samples directly on your Mac. Apply powerful audio processing and DSP to your samples. Digital Performer unites the worlds of sampler-based audio and hard disk recording.

Digital Performer 2.1 provides unparalleled integration between your Macintosh hard disk recording capabilities and today's hottest samplers, like the E4 series from E-mu Systems and many others.

and this!

and also get this

Real time audio effects, including reverb, dynamics processing (compressor, limiter, expander and gate), chorus, echo and more. Real time means non-destructive — you can change them or remove them at any time.

without this

expensive extra hardware inside your Mac

DigitalPerformer™ 2.1

Macintosh midi sequencing & digital audio recording/editing/mixing/effects with music notation printing

MOTU

©1997 Mark of the Unicorn, Inc. All trademarks are property of their respective holders.

musictrack

19a HIGH STREET SHEFFORD BEDFORDSHIRE SG17 5DD TEL: 01462 812010 FAX: 01462 814010

Authorised Reseller

serious macintosh for serious music

purchase a cw mac from tsc & save £100 on cubase, vision or logic.

New York PowerPC
- ~ 200MHz PowerPC 604e processor
- ~ 256k Level 2 Cache
- ~ 32MB RAM (expandable to 160MB)
- ~ Fast 1.2GB Hard Drive
- ~ x16 speed CD-ROM drive
- ~ 2MB on-board video SGRAM
- ~ Supports up to 21" SVGA monitors
- ~ 3 PCI expansion slots
- ~ Extended Keyboard and Mouse

£1499.00 EX VAT £1761 inc

purchase a cw mac from tsc & save £100 on cubase, vision or logic.

Manhattan PowerPC
- ~ 200MHz PowerPC 604e processor
- ~ 256k Level 2 Cache
- ~ 64MB RAM (expandable to 160MB)
- ~ Fast 3.8GB Hard Drive
- ~ x16 speed CD-ROM drive
- ~ 2MB on-board video SGRAM
- ~ Supports up to 21" SVGA monitors
- ~ 5 PCI expansion slots
- ~ Keyboard and Mouse

£1699.00 EX VAT £1996 inc

when it comes to sequencing, digital audio and video on mac os systems, nobody, but nobody can offer the level of service, competitive prices and total solutions offered by TSC. After all we are backed by the one of the largest mac dealerships in the uk. Call tsc today for serious mac solutions.

9600 series

4400 series

8600 series

3400 series

akai roland yamaha korg digidesign steinberg emu emagic opcode

the new tsc team

professional musicians, producers, engineers, programmers & jo are all welcome to call in and speak to a team of fresh, enthusiastic, informed & unbiased tsc people.

have you called recently?

TSC

voice: 0171 258 3454 fax: 0171 262 8215 email: tsc@mcm.co.uk

have you called recently?

leader

In what we affectionately refer to as the good old days, when the studio was made up of a more or less infinite number of interconnected bits, upgrading was a fairly simple process. If you needed more channels, you bought a bigger mixer or an expander; if you needed more tracks, you bought a bigger multitrack recorder, and if you wanted more effects or processors, you bought more boxes. With the possible exception of the multitrack recorder and mixer, you never had to sell anything unless you got tired of it, because, as any studio owner knows, you can never have too much 'stuff'. Manufacturers of rack systems flourished, jack-plug designers bought villas in the Bahamas, and everybody was happy. Then came the revolution.

Progress has now brought us the tapeless, integrated recording system based around the inexpensive home computer. You no longer need all that hardware — one computer, a couple of cards and a CD-ROM will do everything your old studio did, and more. However, progress doesn't move at a linear rate: it accelerates, sweeping along all before it. It's taken over 100 million years for man to evolve to the stage where he can program a VCR and actually record the film he intended to rather than ending up with the last half of yesterday's *News At Ten* plus the first 20 minutes of a documentary on restoring garden gnomes. Yet this triumph may be short-lived, because the computers upon which we rely so heavily are often obsolete before the software upgrade that we bought them to run is even available in a useable form.

In the early days of computer audio, expensive hardware did all the tough work, leaving the computer the job of looking after the mouse, updating the screen and composing the odd interesting but meaningless error message. Then, as computers got faster, it became possible to make them record audio, manipulate MIDI, mix audio and generate digital effects, all at the same time. (They also learnt how to generate more frequent and more convoluted error messages.) The concept is obviously very appealing because, with no additional hardware other than, possibly, a multi-channel breakout box and a MIDI interface, the user can have a complete automated MIDI studio. MIDI instruments and samplers are also computers of sorts, so why not give the computer that job to do as well?

Very soon you get to the state where even the fastest computer is falling over through overwork. So you consider upgrading, but it's not like buying another synth or a second effects unit: this time you need a bigger, faster computer. In theory you can upgrade the processor, but then you find that you need more memory, a bigger, faster hard drive, more cache, a different type of motherboard, more slots ... and before you know it, a brand-new computer is easily the cheapest option.

But you know you'll have to pay through the nose for a state-of-the-art computer, and even Intel are saying a Pentium Pro MMX200 will be the entry-level machine before Christmas, with a street price of £700, so you decide to wait. By next spring, anything less than a 166Mhz Pentium MMXs will be destined for the car boot sale, to sit alongside those Sinclair Spectrums and Commodore Vic 20s. Unfortunately, the software writers don't wait — they carry on competing by adding more and more features to their programs so that the lucky few with 400MHz HyperPentiums and 20Gb drives will be able to do even more improbable things at the same time. I don't pretend to know the answer, but to come from an era where a good 24-track recorder could be made to last 15 years to a situation where your entire setup needs replacing every six to nine months doesn't seem all that much like progress to me. And remember, the process is still accelerating: by this time next year (maybe the year after), your *SOS* dropping through the door may double as a reminder that it's time to pop out for a new computer and an updated suite of software.

Paul White *Editor*

SOUND ON SOUND

Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ.
Telephone: 01954 789888
Fax: 01954 789895
Email: CompuServe 100517,1113
Internet: 100517.1113@compuserve.com

Editor Paul White
Assistant Editor Matt Bell
Production Editor Debbie Poyser
Sub-editor Beck Laxton
News & Letters Editor Derek Johnson
Editorial Assistant Tom Flint
Editorial Director Dave Lockwood
Publisher Ian Gilby

Group Sales Manager Robert Cottee
Classified Sales Manager Patrick Shelley

Production Manager Shaun Barrett
Ad Production & Design Andy Brookes
Senior Designer Clare Holland
Classified Production Andy Baldwin

Managing Director Ian Gilby
Financial Manager Patricia Urwin
Mail Order Manager Sally Thompson

Photography Ewing-Reeson
Colour Scanning CL Enterprises Ltd
Colour Origination Spectrum Print Ltd
Colour Planning WYSIWIG
Printing Warners Midlands plc
Newstrade Distribution Warners Group Distribution Ltd, The Maltings, Manor Lane, Bourne, Lincolnshire PE10 9PH

Subscriptions Hotline 0181 861 0690

UK £35 Europe £55 World £65
Payable in sterling through UK bank

ISSN 0951 - 6816

A Member of the SOS Publications Group

The contents of this publication are subject to worldwide copyright protection and reproduction in whole or part, whether mechanical or electronic, is expressly forbidden without the prior written consent of the Publishers. Every care is taken to ensure accuracy in the preparation of this publication but neither Sound On Sound Limited nor the Editor can be held responsible for its contents. The views expressed are those of the contributors and not necessarily those of the Publishers or Editor. The Publishers accept no responsibility for the return of unsolicited manuscripts, photographs, or artwork.

Copyright 1997 Sound On Sound Limited, incorporating Music Software magazine & Recording Musician magazine. All rights reserved.

REVIEWS

34 **Retrospec Juice Box Tube DI Unit**
36 **Amek System 9098 Dual Mic Preamp**
38 **Korg Pandora PX2 Multi-Effects Unit**
40 **Bellari RP562 Tube Enhancer**
42 **Alesis NanoPiano Module**
44 **Quested VS2205 Studio Monitors**
50 **Kawai K5000S & K5000R Additive Synths**
61 **Emu Carnaval Latin Sound Module**
80 **Akai S20 Digital Phrase Sampler**
86 **Focusrite Green 4 & 5 Processors**
142 **Roland VK7 Digital Tonewheel Organ**
150 **Creative Labs AWE64 Gold Soundcard**
156 **Korg 1212 PCI I/O Card**
162 **Digidesign Pro Tools 4.0 Software**
176 **Emagic Audiowerk8 PCI I/O Card**
184 **Waldorf Microwave II Wavetable Synth Module**
206 **Yamaha A3000 Sampler**
228 **Syntrillium *Cool Edit* Editing Software**

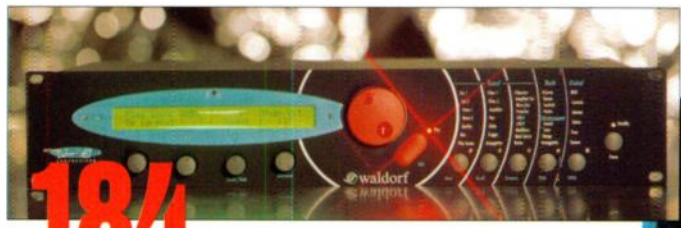
WIN QUASIMIDI RAVE-O-LUTION 309 p284

Volume 12 Issue 9 July 1997

in this issue

Computer notes

Apple Notes.....248
PC Notes.....252
Atari Notes.....256



184 Waldorf Microwave II

FEATURES

46 Morphonic Productions & Studio

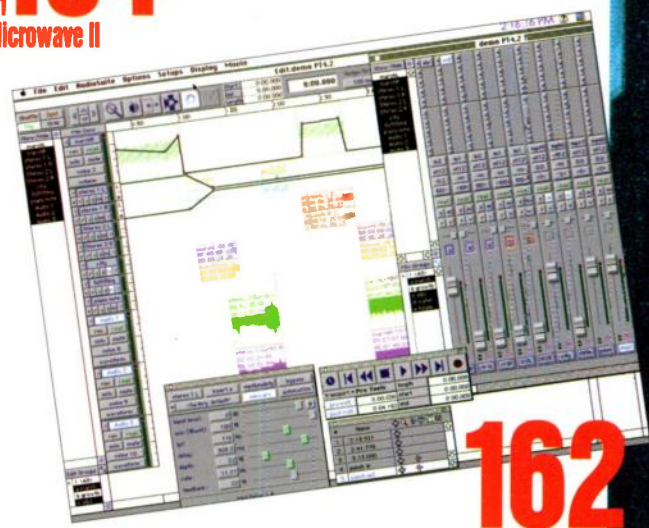
132 Ron Berry: Acoustic Modelling With An Analogue Modular Synth

188 Flood: Producing U2's *Pop*

214 Have I Got Jingles For You: A Personal View of the Commercial Music Industry

236 MIDI Interfaces For The Macintosh

264 Retrozone: Roland D50



162 Digidesign Pro Tools 4.0

SOUND WORKSHOPS

66 Multi-Effects Programming Part 1

96 Soft Focus: Opcode Software

226 Snapshot Mixing On A Budget

WIN FX RENTALS DAT MACHINE p282

REGULARS

4 Crosstalk

12 Shape Of Things To Come

222 Sample Shop

260 Demo Doctor

268 Free Ads

272 SOS Mail Order: Books, Videos, CDs

285 Classified Ads

304 Sounding Off

188 Flood & U2

PC MUSICIAN

Interactive Composition Software p104
Checking The Full Spec Of Your PC p114
Spring-Cleaning Your PC p116

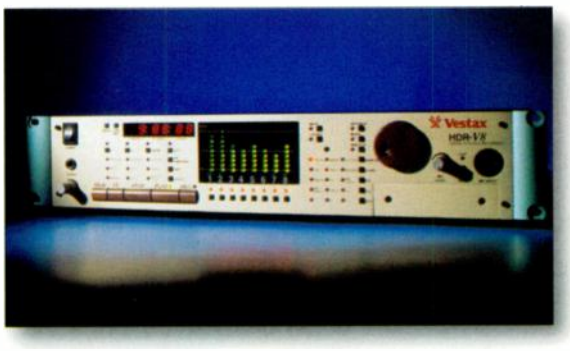
61 Emu Carnaval

Crosstalk

Life's Hard

I am sure Paul Wiffen knows more about hard disk recording than I do, but I could not help feeling led up the garden path by his review of the Vestax HDRV8 (*SOS* March 1997). As someone who upgraded to hard disk recording last year — with a Fostex DMT8 — I was surprised to read his glowing appraisal of a piece of hardware which costs £2300 in its basic form, yet does not appear to have a significant number of hardware functions when compared to other machines at almost half the price.

Although it only records on four tracks at once, my Fostex DMT8 also supports non-destructive edits with instant undo, pipes the master mix (or any other combination of tracks) through the digital out for true digital mastering, allows for five separate songs on the hard disk, and, yes, it feels just like a tape recorder. It can't bounce in the digital domain, but it is equipped with a solid hands-on mixer, which may be a bit easier to use than a finger and jog wheel job for each individual function of each track for the HDRV8 (though some



might prefer the parameter memory that gives you). No arguments about sound quality in either case, since having no data compression means that it can sound as good as you let it.

The point is that my machine now costs £1199 retail, with a somewhat scaled-down version available for £1099, or a rackmount for £1499. Yet, reading Mr Wiffen's review, it appears that £2300 is a steal; virtually no negative points are listed, and we only find in the small print that the optional SCSI card would cost another £440. Don't get me wrong: I'm not denouncing or promoting either product. I'm sure the HDRV8 is a good machine, and the DMT8 is not perfect. This letter is about unbiased reviewing.

Thomas Kunze
Monmouthshire

Paul Wiffen replies: *Mr Kunze says that the HDRV8 "does not appear to have a significant number of additions to machines at almost half the price" and then immediately admits that his DMT8 is unable to record all eight tracks at once or bounce in the digital domain, and has no SCSI option (although Fostex have just launched a £199 SCSI board for the DMT8). On top of this, although I have never examined the DMT8 in detail, I believe its mixer is analogue and has no automation facility and therefore cannot be used in automated all-digital productions, as can the HDRV8. I also believe its recording time is unexpandable (unless you add the optional SCSI card). Other expansions, like the ADAT interface, are also unavailable. We obviously disagree on the meaning of the word "significant". Are these not significant additional features? I would have thought so.*

I am not criticising the DMT8 (I certainly would want to investigate its facilities more before venturing an evaluation) but merely trying to point to reasons why the Vestax is higher priced. When reviewing the HDRV8, I had in mind machines with much higher price tags which provided the same or fewer facilities. No letters in defence of such machines have been forwarded to me, so I must still conclude that in the ranks of true 8-track hard disk recorders with an all-digital pathway for bouncing/mixing, the HDRV8 is good value for money. I am especially impressed by its expandability and I wanted to draw attention to the excellent work of one designer whose valiant attempts to produce high-quality tools at reasonable prices have impressed me personally. If Mr Kunze is happy with his DMT8, that's excellent: I congratulate him on his wise buying decision.

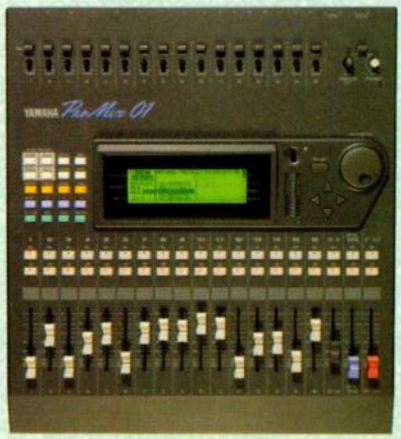
All I was trying to do in the HDRV8 review was alert those with that sort of budget that the machine stacks up well against more expensive models with the same spec. If they then choose to buy something else, I have at least brought the unit to their attention, which is part of a reviewer's job. All I try to do is get people to look past their preconceptions about certain manufacturers' brand names and examine more carefully what they can get for their money. If Mr Kunze has done that, he should be in his studio making music with his purchase, not pointing the finger at me for recommending something else for consideration.

Divide & Conquer

I am in the process of updating my home studio setup with a Fostex D80 hard disk recorder, but before I go ahead and spend all the cash I need to know whether there is a way of hooking it up to my Yamaha ProMix 01 using a patchbay. As you may know, the ProMix 01 doesn't have any tape outs, but I'd (understandably) like to hang on to it. Your help would be greatly appreciated.

Cameron
London

Paul White replies: *This isn't an easy thing to do, as the ProMix 01 isn't designed as a multitrack mixer and isn't*



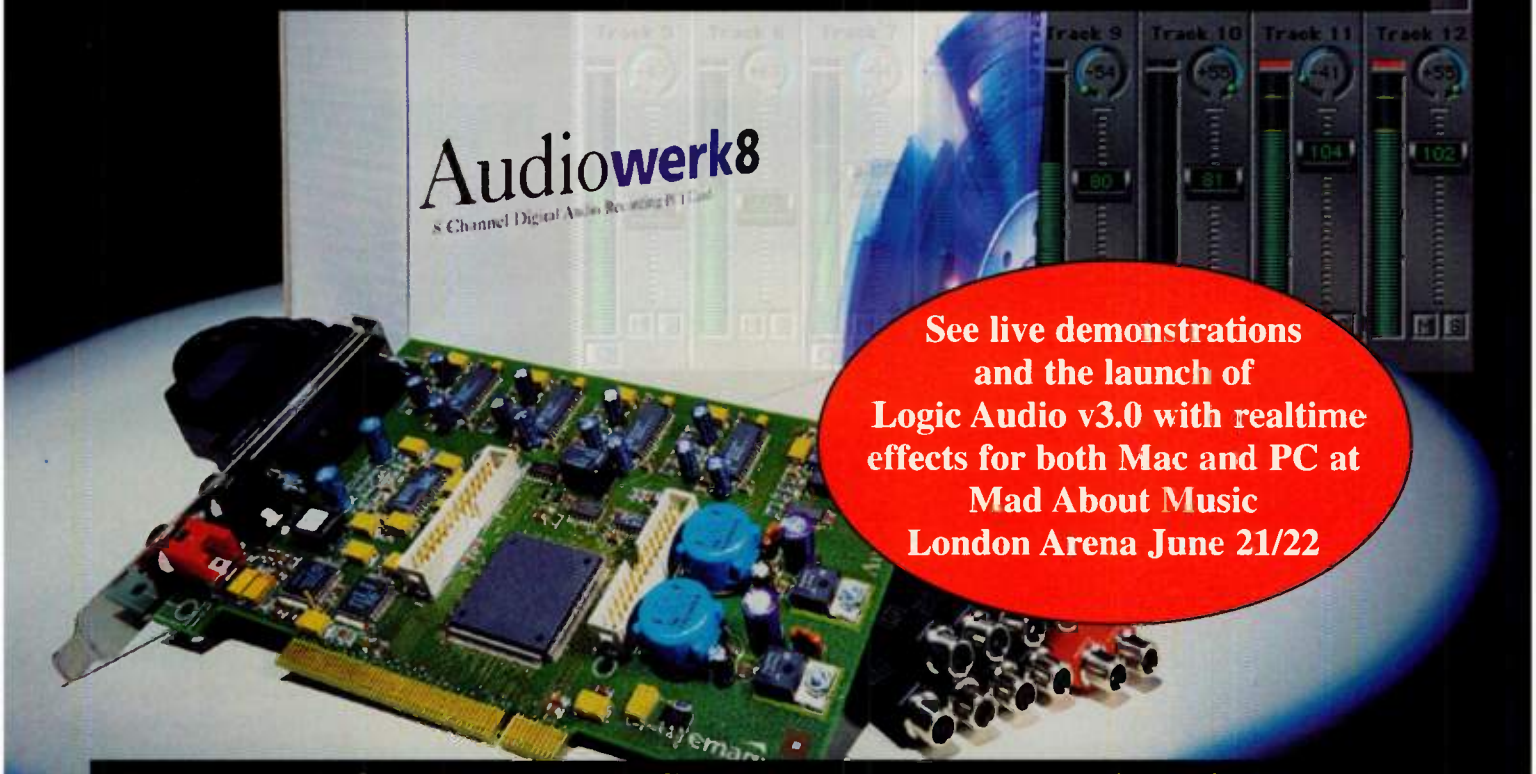
over-generous with its ins and outs. However, I've often thought that it would be nice to have an 01 permanently connected to the multitrack outs, and use a good-quality channel or small mixer to feed signals into the recorder. For example, you could use a little Mackie 12:2 or Spirit Folio to feed in two groups, plus as many insert sends (direct outs) feeding individual tracks as you like. With a setup like this, you get the simplicity of analogue for recording, and the flexibility of digital for mixing. What could be better?

Send your letters, queries, tips and comments to: Crosstalk, Sound On Sound, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ.

Our email address is 100517,1113 — or, from outside CompuServe, on 100517.1113@compuserve.com

Real Studio Technology

Emagic Audiowerk8 with Emagic Logic Audio v3.0



See live demonstrations and the launch of Logic Audio v3.0 with realtime effects for both Mac and PC at Mad About Music London Arena June 21/22

For more information call Sound Technology on 01462 480000

Sound Technology plc

emagic

Sound Technology plc, Letchworth Point, Letchworth, Hertfordshire. SG6 1ND Fax: 01462 480800 http://www.soundtech.co.uk

Crosstalk

Voice of Reason

We use our recording booth purely for voice-overs, but we cannot seem to get very good levels to DAT. The mic is a Neumann TLM193 which hangs in front of the speaker; this is sent to a Symetrix 528E voice processor, which then feeds the processed signal to a Sony PCM2600 DAT recorder via the analogue XLR inputs. Even without any processing (compression and so on) we cannot seem to get a maximum signal of more than 12dB to the DAT without distortion from the Symetrix preamp or output stage. Even in these situations the levels are scarcely any higher. Is there something we've missed, or is this just the best level possible from our mic?
Dave Morgan
via email

Hugh Robjohns replies: *This sounds like a simple line-up problem, which I believe is caused by the poor output capability of the 528E. The Symetrix*

provides 60dB of microphone gain, which should be more than enough for a sensibly placed condenser mic in a voice booth. However, Gary Ashton, the technical director at Fuzion (01392 882222), the UK distributor of Symetrix products, tells me that the 528E runs on 15V rails internally, so its maximum audio output level will be lower than most professional gear. The Symetrix is calibrated at the factory so that a reading of 0dB VU on its meter produces an audio output signal of +4dBu, but there's only another 6dB of headroom above this before the 528E starts to clip, giving a maximum clean output level of about +10dBu; most pro gear doesn't clip until +18dBu or 22dBu.

The Sony PCM2600 is set up at the factory for +4dBu to equate to -20dBFS (dB Full Scale, a digital audio measurement reference) on its digital meters, so I can quite believe that the Symetrix is sounding nasty while you only see peaks of -12dBFS on the DAT. You will be pleased to know that there is an easy solution to your problem. The PCM2600 has adjustable input sensitivity on its analogue inputs, via a pair of trimmers above the XLR sockets. These offer a 16dB gain range and will allow the +4dBu reference output of the Symetrix to be aligned anywhere you like between -20dBFS and -4dBFS. In your case, I would suggest turning the trimmers almost all the way up so that suitably controlled speech from the Symetrix approaches a level on the DAT that you feel comfortable with (peaks in the range of -10dBFS to -6dBFS). Be careful not to make the DAT input too sensitive, or you will risk digital overloads, and take care to balance the gain of the two channels accurately (the PCM2600's display provides 0.1dB accuracy).

Just for your information, EBU-standard DAT line-up levels equates +4dBu to -14dBFS (the Sony is aligned to the American standard of -20dBFS) and you may find that just having the machine professionally re-aligned to this format produces DAT tapes at a more acceptable level. Talk to Dan Page at HHB Communications (0181 962 5000) about having the PCM2600 tweaked.

For further information on recording speech, see my article 'Speech Therapy: Recording the Spoken Voice' in the January 1997 issue.

Balanced Approach

I might be stating the unbelievably obvious, but I seem to have hit upon a simple way of exploiting my mixing console's balanced inputs, even when running unbalanced equipment into it. This is provided the sound source in question has multiple outputs, such as a sampler whose four outs are configured as stereo pairs.

Recently, upon connecting such a unit, I found there to be a small amount of operating noise, plus a little unavoidable earth hum which refused to be cured. This wasn't a problem for general use, but when a lot of gain was required at the mixer end, it became a little more noticeable. The console — a Behringer Eurodesk — has a normal balanced TRS configuration on its inputs. By connecting the first stereo pair to the tip and the sleeve and the second pair to the ring and the sleeve, any noise which appears in both pairs is cancelled out in the mix. This is, of course, provided that both pairs of channels are at roughly the same gain and fader position, although the effect is still achievable to a lesser degree if they aren't. Obviously, if the same actual sample appears at both pairs of outs, it too will be cancelled out!

When committing samples to tape, or when only one pair of outs is actually carrying sounds, I've found that the effect can be fine-tuned by boosting the offending frequencies on the second pair of outs, and increasing their level in the mix until the noise from the first pair disappears. This offers the bonus of eliminating the small, but inevitable, increase in channel hiss from the second pair.

As far as I'm aware, reversing the phase of the signal doesn't alter the sound quality.

Many thanks for the only consistently good hi-tech music mag.
Gary White
Herefordshire

Paul White replies: *It sounds like you've hit on a perfectly sensible and valid way to cancel noise — but only providing you're dealing with uncorrelated sources. If you try to do this with two halves of a stereo signal, or two sounds sharing the same effect, something is likely to get cancelled out that you'd rather not lose, but when the two signals are truly independent, it should work fine. Thanks for the tip.*

Clunk Click

I have recently noticed that each time I start my MIDI sequencer, I get annoying clicks through my monitors. The clicks are heard each time MIDI information is sent either from my sequencer (Atari ST with *Breakthru* v2), or when I hit a key on my Cheetah MK5V master keyboard. The clicks are most noticeable with my Yamaha TG100 sound module turned down and my amp turned up. I recently changed my keyboard to a Korg DSS1, but the clicks remain, and even moving the mod and pitchbend wheels produces clicks. How can I remedy the situation?
Paul Lennon
Northampton

Paul White replies: *I've only heard something like this once before, and on that occasion it was caused by a mutual dislike between a Kawai K1 and an Alesis mixer. Placing a DI box between the offending synth and the mixer cured it. Other things to suspect are MIDI interfaces and expander ports that don't have proper opto-isolators, and equipment with missing earths or inadvertently swapped live and neutral wires. Unfortunately, sorting these things out always tends to be a bit of a detective job, so try unplugging things from your system to find out what the common element is. By the way, you didn't say what kind of mixer you were using! Noises will always be worst with modules turned down and amps turned up, but it's a good way to track down gremlins.*

true 4-bus design • AFL/PFL • swept mid eq • 16 mic preamps

MORE BUSES, MORE PREAMPS, MORE EQ, MORE FEATURES. INTRODUCING THE NEW CR1604-VLZ.

Five years of user input, new materials, new technologies and the soul of our 8•Bus...at a super-low price.

TRIM *control on the channel strip! 60dB total mic gain; –10dB "virtual pad" for line inputs.*

6 AUX SENDS *per ch. Aux 1 & 2 switch-able pre/post. Post-fader Aux 3-4 /5-6 selectable via Shift switch.*

HI EQ. *±15dB shelving at 12kHz.*

SWEEPABLE MIDRANGE. *Wide, musical peaking EQ with 100Hz to 8kHz range. ±15dB range.*

LO EQ. *±15dB shelving at 80Hz.*

LOW CUT FILTER *is a must for live sound and acoustic (microphone) recording. Sharp, 18dB/octave @ 75Hz high-pass filter lets you add Lo shelving EQ to vocals without boosting undesirable mic thumps, stage rumble, wind noise, P-pops, etc.*

PAN *control with constant loudness to maintain stereo perspective.*

MUTE *switch.*

MUTE & OVERLOAD *LED.*

–20dB SIGNAL PRESENT & SOLO *LED.*

SOLO. *In-place AFL or PFL.*

BUS ASSIGN *for Subs 1-2, 3-4 & Main L/R.*

60MM FADERS *with 8•Bus log taper, special lip seal & long-life wiper material.*

The original CR-1604 defined the modern compact mixer. Now we've "raised the standard" by adding over 20 new features like true 4-bus design, our famous mic preamps on every channel, flexible routing and monitoring, and swept mid EQ — for just scarcely more than the original CR-1604. Call for a free 40-page brochure.

16 STUDIO-GRADE MIC PREAMPS *means the new CR1604-VLZ actually costs less than our classic CR-1604 & XLR10 expander combination!*

VLZ (Very Low Impedance) CIRCUITRY *developed for our 8•Bus consoles, further reduces noise and crosstalk in critical signal path areas.*

SOLID STEEL *main chassis.*

SEALED *rotary controls.*

5-WAY PHYSICAL CONFIGURATION *via our famous rotating input/output "pod." In minutes you can switch the CR1604-VLZ between ultra-compact 8-rack space configuration with pod to back ❶, rackmount jacks-to-top ❷ or tabletop/ jacks-to-back ❸. Optional RotoPod-VLZ bracket places input/ output jacks on same plane as the controls (tabletop ❹ or rackmount ❺).*

AUX SEND 1 & 2 MASTERS.

Stereo **AUX RETURNS 1 & 2** *with 20dB gain above Unity for boosting weak effects.*

EFFECTS TO MONITORS *controls fold Aux Return 1 & 2 back into Aux Sends 1 & 2 so that on-stage performers can hear effects.*

AUX SEND 1 & 2 SOLO *switches with LEDs.*

Stereo **AUX RETURNS 3 & 4.**

Aux Return 3 **ASSIGN SWITCHES** *to Main Mix, Subs 1 & 2 or Subs 3 & 4.*

Aux Return 4 **ASSIGN** *to Control Rm/Phones.*

CONTROL ROOM/PHONES *level control.*

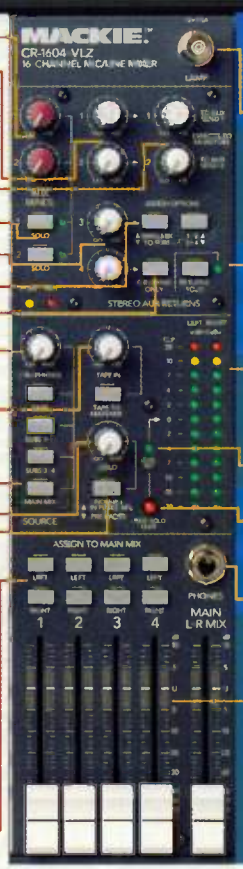
TAPE INPUT LEVEL *control and* **TAPE TO MAIN MIX** *switch.*

SWITCHING MATRIX. *This fantastic creative feature lets you route any combination of Tape, Subs 1 & 2, Subs 3 & 4 or Main Mix to Control Room/Phones bus. Lets you create custom headphone or broadcast mixes, monitor 2-track output or route a cue/click track to phones, create a second stereo main output with its own level control & more (covered in the extensive manual).*

Global **SOLO** *level control.*

Global **AFL/PFL SOLO** *switch.*

SUB ASSIGN *to Left or Right Main Mix.*



MAIN MIX FADER.

BNC *lamp socket.*

Global **AUX RETURN SOLO** *with LED.*

LED **METERS** *with –30 to +28 range &* **LEVEL SET** *LED.*

RUDE SOLO *LED.*

HEADPHONE *output.*

60mm **SUB-MASTER** *log-taper faders.*

MONO OUTPUT *(bal./unbal.) has separate level control.*

RCA TAPE *inputs and outputs- (unbalanced).*

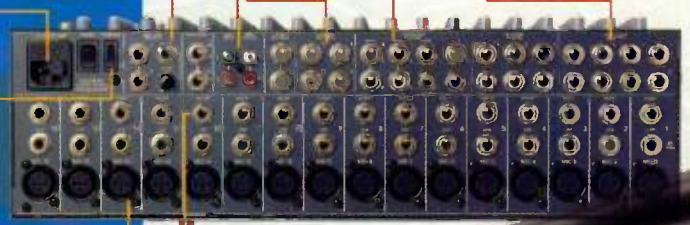
Separate **CONTROL ROOM OUTPUT** *(bal./unbal.).*

DIRECT OUTPUTS *(bal./unbal.) channels 1-8.*

SUBMASTER OUTPUTS *(bal./unbal.).*

BUILT-IN *power supply.*

PHANTOM POWER *switch.*



Studio-quality **DISCRETE MIC PREAMP** *on every channel.*

Pre-fader **INSERT** *on every ch.*

©1996 MACKIE DESIGNS INC.
ALL RIGHTS RESERVED

MACKIE.™

Mackie Designs Inc. • USA • Represented in the UK by Key Audio Systems Ltd.
Robjohns Road • Chelmsford • CM1 3AG • Essex • 01245 344001 • 01245 344002

WRH

Crosstalk

Super Modal

I am writing concerning a comment made by Andrew Parry in his 'Better by Design' article on control room acoustics in January's *Sound On Sound*. While I found the article both articulate and informative, I have to disagree with an assumption he makes with regard to the modal distribution in rooms conforming to ratios such as the Bolt ratios he mentions. I understood (from a section on room acoustics in *Handbook for Sound Engineers: The New Audio Cyclopedia*, published by Sams, and my own calculations) that although these ratios do offer a logical way of starting a design for a room from scratch, they are also not to be relied upon without first calculating the third-octave band modal distributions for the 'actual' dimensions, and therefore the volume, of the room.

It would seem unfortunate if people constructing their own studios were to use these ratios without first understanding their great fallibility. Generally speaking, the larger a room, the better the modal distribution is likely to be with regard to sounds in the musical spectrum of frequencies — about 40Hz to 20kHz. It is possible to calculate modal distributions for a room with dimensions quite dissimilar to those by Bolt, either large or small, and still get results. It is also possible, however, to calculate modal distribution for a large room based on these ratios and get a bad result. I felt that this should be pointed out, as I can see hundreds of DIY studio designers rushing out to their local DIY store to buy breeze block, cement, timber and gypsum board for their Bolt ratio room designs, only to find, upon completion, that an extremely irritating 'honk' accompanies the music played back over monitors costing a couple of grand that are flat down to 35Hz.

I would like to end on a less critical note by agreeing that ESS (Early Sound Scattering) in general does seem to be a logical way forward with regard to studio design, especially given its practical and financial accessibility when compared to other solutions. Indeed, if you consider that nearfield or closefield monitors are often, nowadays, a studio's sole monitoring source, it would seem a good idea to implement large amounts of diffusion in such studios — firstly to counteract room characteristics that are present even when listening to nearfields, and secondly to increase the perceived 'size' of the soundfield that such monitors produce when being used for tracking, checking the mix with the band, and so on.

Mark Easton
Marky's Music
Dorset

Andrew Parry replies: *Mr Easton makes a valid point — that there is rather more to getting the bottom end right than simply making it fit an ideal ratio. However, the method he describes for predicting the third-octave modal distribution doesn't go very far towards solving the problem. The method was first propounded by Oscar Bonello in 1979's* A New Criterion for the Distribution of Normal Room Modes *at a time when computing was in its infancy. In order to save on computing time, Bonello made a simplifying assumption — namely that all modes would exhibit similar decay times and so be equally damped, with uniform bandwidth and intensity, and that it would be sufficient to know only the number of modes falling within any third-octave band to know the steady-state response in that band.*

For this assumption to hold true in practice, a control room would need to be uniformly treated on all surfaces, which, for practical reasons, isn't possible. For the method to have any real value, it therefore becomes necessary to calculate the decay time of each individual mode. It is then possible to plot the individual mode, in order to extract its level and bandwidth. The spectral density of the response can then be plotted and examined for holes and peaks. Even this extended evaluation is far from perfect, as account ought to be taken of the relative phases in any overlapping regions, and this will vary from point to point in space.

The formula for the frequencies of individual modes was given in the article, although those for one- and two-dimensional reverb times were omitted, as was the relationship between modal decay time, level and bandwidth. Algorithms for computing these values are quite complicated, and in many cases it is sufficient to estimate the density by eye from a plot of decay times versus log frequency.

The article was never intended as a full course in studio design, and I didn't feel that it would hold readers' attention sufficiently if this area were discussed in such detail. My main intention was to inform the reader of the role of the acoustical designer, and in particular to throw some light on the sums that need to be done even on projects where the budget is limited. I do concede, however, that, for a few readers, the section on room shape may have been over-simplified.

SPIRIT DEALER LIST

ABERDEEN	RnB Music	01224-210 121
ALTRINCHAM	Concert Systems	0161-927 7700
BARNET	Digital Village	0181-440 3440
BARNSTAPLE	Soundpad	01271-23686
BELFAST	Marcus Music	01232-322871
BINGLEY	Spectre Sound	01274-568843
BIRMINGHAM	Musical Exchanges	0121-236 7544
BIRMINGHAM	Q Music	0121-643 4655
BIRMINGHAM	London Microphone Centre (LMC)	0121-359 4535
BLACKPOOL	Tower Music	01253-27359
BOURNEMOUTH	Eddie Moor's Music Ltd	01202-395135
BRIGHTON	Rainbow Sound	01273-624048
BRISTOL	X Music	0117-9734 734
BURNLEY	Dawsons Music	01282-425829
CAMBRIDGE	Music Village	01223-316091
CARDIFF	Gamlins Music Centre	01222-220828
CARLISLE	AVI	01228-45599
CHESTER	Dawsons Music	01244-348606
COLCHESTER	Axe Music	01206-765 652
CORK	Russell's Music	00353-21 273 912
COVENTRY	Musical Exchanges	01203-635766
CREWE	Music Control	01270-883779
DERBY	Play It Again Sam	01332-348156
DONCASTER	Electro Music Services (EMS)	01302-369999
DOUGLAS	Ken Mitchell Music	01624-611919
DUBLIN	Control Techniques Ireland (CTI)	003531-4545400
DUNDEE	Sound Control	01382-225619
DUNFERMLINE	Sound Control	01383-732273
EASTBOURNE	Bonners Ltd.	01323-639335
EDINBURGH	Sound Control	0131-557 3986
EDINBURGH	The Warehouse	0131-555 6900
FAREHAM	The Audio Connection	01329-235566
GLASGOW	The Warehouse	0141-950 1757
GLASGOW	Sound Control	0141-204 0322
GRIMSBY	PSS Music	01472-343211
GUILDFORD	Andertons Music Co.	01483-38212
HEYWOOD	Wigwam Acoustics Ltd.	01706-368766
HIGH WYCOMBE	Percy Priors	01494-528733
INVERNESS	The Music Station	01463-255523
KINGSTON	Barth Music	0181-546 9877
KIRKCALDY	Sound Control	01592-260293
LANCASTER	Low Fold Audio	01524-847 943
LEEDS	Carlsbro	0113-2405077
LEICESTER	Carlsbro	0116-2624183
LIVERPOOL	Ad Lib	0151-486 2214
LONDON	Turnkey	0171-379 5148
LONDON	London Microphone Centre (LMC)	0181-743 4680
LONDON	The Synthesizer Company (TSC)	0171-258 3454
LONDON	Gradav Theatre Services	0181-886 1300
LONDON	Raper and Wayman	0181-800 8288
LONDON	HHB Communications Ltd	0181-962 5000
LONDON	Studio Spares	0171-482 1692
LONDON	Soundvision	0171-609 3939
LONDON	Music Lab	0171-388 5392
LONDON COLNEY	DM Music	01727-821 242
MANCHESTER	A1 Music Centre	0161-236 0340
MANCHESTER	Sound Control	0161-877 6262
MANSFIELD	Carlsbro Academy of Sound	01623-651633
NEWCASTLE-UPON-TYNE	Sound Control	0191-232 4175
NORTHAMPTON	Willow Communications	01604-21525
NORWICH	Carlsbro Academy of Sound	01603-666891
NOTTINGHAM	Carlsbro	0115-9581888
PETERBOROUGH	B&H Sound Services	01733 223 535
PETERBOROUGH	The Live Music Shop	01733 555505
PORTSMOUTH	Nevada Music	01705-660036
PRESTON	A1 Music Centre	01772-204567
RINGWOOD	The M Corporation (TMC)	01425-470007
RINGWOOD	AJS Theatre & Lighting Supplies	01425-480 698
ROMFORD	Music Village (Chadwell Heath)	0181-598 9506
SHEFFIELD	Carlsbro Academy of Sound	0114-2640000
SHEPPERTON	Marquee Audio	01932-566777
SOUTHEND-ON-SEA	Honky Tonk	01702-619615
STEVENAGE	Music Solutions	01438-750751
ST.HELENS	Dawsons Music	01744-730424
ST. HELIER	East Coast Music (ECM)	01534-80575
STOCKPORT	Axis Audio Systems	0161-474 7626
STOCKPORT	Dawsons Music	0161-477 1210
STOKE-ON-TRENT	Carlsbro Academy of Sound	01782-205100
STOKE-ON-TRENT	Music Control	01270-883779
SWANSEA	The Music Station	01792-775751
TUNBRIDGE WELLS	JB's Music Stores	01892 515 007
WAKEFIELD	KGM Studio Specialists	01924-371766
WARRINGTON	Vamps	01925-632591
WASHINGTON	Dawsons Music	0191-416 2385
WATFORD	Active Sound	01923-246 282
WIGAN	Dawsons Music	01942-244680
WIGAN	M A Amplification	01257-426923
WINCHESTER	Whitwams	01962 865 253

There used to be a choice: quality or price.

Your heart wanted a Spirit but your budget may have forced you to compromise on a cheaper, lower quality mixer.

That was until we decided to make our Folio Range even more cost effective.

So now you can take home a mixer that's conceived by one of the world's most respected designers and built

GAME OVER

in Britain using 21st century manufacturing techniques and the highest quality components, for the same price as a cheap imitation.

Wallow in the combination of digital audio quality, thoughtful design, attention to detail and value for money that's made Spirit mixers so sought after.

All of which leaves you with just one choice.

Mix it with Spirit. Game Over*.

Spirit products have won countless awards, many of them voted by the people who actually use them. If after you've read through the main feature lists below you still need convincing, visit your Spirit dealer and compare them for yourself. You'll soon discover there's no contest.

FOLIO Notepad

£149 UK RRP inc VAT

Spirit's Classic "Personal" 10 Input Mixer

- 4 Mono Mic/Line Channels with 2-band EQ and Phantom Power available
- 2 Stereo Inputs, RIAA switchable to to take turntables
- Post-Fade Aux Send on every input
- Dedicated Stereo Effects Return and 2-Track Return

FOLIO F1 FADER 100

14/2: £299 UK RRP inc VAT

16/2: £349 UK RRP inc VAT

Multipurpose Mixer in 14/2 and 16/2 Frame Sizes

- 6 or 8 Mono Inputs with Inserts and Ultramic™ Preamps providing 60dB of gain range, plus 4 Stereo Inputs
- British 3-band EQ on mono inputs with Swept Mid, plus steep 18dB/Octave High Pass Filters
- 100mm Faders throughout
- 3 Auxes allowing 2 Pre-Fader + 1 Post-Fader or 2 Post-Fader + 1 Pre-Fader
- Rackmount Option

FOLIO SX

20 Input 4-Bus Mixer for Live or Studio Work

- 12 Mono Inputs with with Inserts and Ultramic™ Preamps giving 60dB of gain range
- British 3-band EQ on mono inputs with Swept Mid, plus steep 18dB/Octave High Pass Filters
- Pre/Post Switchable Direct Outs on inputs 1-8
- Up to 18 Outputs
- 2 Subgroup Outputs
- 3 Auxes allowing 2 Pre-Fader + 1 Post-Fader or 2 Post-Fader + 1 Pre-Fader
- 100mm Faders throughout
- 4 Stereo Inputs
- Rackmount Option

£479 UK RRP inc VAT

* Bar the shouting

SPIRIT

By Soundcraft

Please send me full information on the Folio Range of Mixers ☐

Name: .....

Address: .....

.....

I will use a Spirit Mixer for: .....

.....

I already own (please state mixer name/model): .....

I read the following magazines: .....

Please send me a FREE copy of the Spirit Guide to Mixing on how to get the best from my mixer ☐

Spirit by Soundcraft™, Harman International Industries Ltd., Cranborne House, Cranborne Industrial Estate, Cranborne Rd, Potters Bar, Herts EN6 3JN, England.
Tel: +44 (0)1707 665000
Fax: +44 (0)1707 665161

Crosstalk

Chips with Everything

I've just read the article on upgrading PCs in April's *Sound On Sound*, and I feel that it contained one or two misleading suggestions. I recently constructed a budget PC hard disk recording system using *SAW Plus* v3.3, *Sound Forge* 4.0a and *Cubase Audio*. The card is a borrowed Turtle Beach Tropez, although I'm aiming for an Event Electronic Darla PCI card when it's released.

The points I want to pick up regard the Cyrix P166+ CPU and the disk drive choice of Quantum Fireball. I've spoken to many manufacturers about using this processor, and it is definitely not recommended for hard disk recording or effects processing, for just the reason mentioned in the article — its floating-point calculation performance. Sonic Foundry have tested it and were of the opinion that whilst it would be fine to use with *Sound Forge*, its performance would be roughly equivalent to an Intel Pentium 100. Steinberg were of the same opinion. In nine out of ten situations the Cyrix chip outperforms Intel equivalents, but unfortunately most modern music software is the one in ten that doesn't like Cyrix-style architecture.

Secondly, the Quantum Fireball drive is no longer a good choice for audio, due to a change in spec which has resulted in a reduction of the spindle speed.

David Puttick
London

Having bought a PC to stand alongside my Mac, I was interested to read Martin Walker's recent article on PC upgrades. I also decided to get a Cyrix P166+ as a cost-effective option, upgrading my cheap SB16 sound card to a AWE64 at the same time — the spec claims compatibility with a Pentium 90 or better. And then my problems started. The Cyrix P166+ is higher than a P90 isn't it? In a word, no. The AWE64 needs an Intel processor or you will only get 32 voices and not the expected 64. As far as the AWE64 software installer is concerned, a Cyrix P166+ is a fast 486, not a Pentium. Please tell any unsuspecting PC upgraders that maybe Cyrix isn't such a bargain after all with some of the more popular soundcards. I was lucky, since my dealer gave me a good deal on an Intel processor swap, but some may not.

Steve Bell
via email

Martin Walker replies: *I made further comments about the Cyrix P166+ processor in May's PC Notes, but its floating point performance is a drawback. However, I've never heard of comparisons with a Pentium 100 before. The* Cubase Audio *performance test shows that my machine is capable of the maximum eight stereo audio tracks.* Sound Forge *runs several of the Waves plug-ins quite easily in real time (apart from the* Trueverb, *which needs a more powerful processor altogether), and* WaveLab *1.5 will run three or four simultaneous effects blocks. In general, I am happy with its performance. The point I was trying to make in the upgrade feature was that an equivalent Pentium processor will cost more than double the price of a P166+, and an MMX version three times as much. I would not like people to go away with the impression that the Cyrix P166+ is a cheap equivalent to a Pentium in all cases.*

Regarding the Quantum Fireball hard drives, you've found the Achilles heel of all monthly magazines — by the time they are published, the information may already be slightly out of date. In this case, Quantum have recently replaced their Fireball range with an identically named series with a lower spindle speed (4500rpm). I won't discuss any other drives here, as they may be obsolete by the time you read this!

And now to the second Cyrix P166+ query. I really seem to have stirred up a hornet's nest with this one. Although I mentioned the AWE64 problem in May's PC Notes, it is worth reiterating that there are several issues at stake here. When any software checks for a Pentium processor, it normally does so by looking for certain combinations of internal bytes, or the result of a specific internal function. If this isn't found, then unless specific checks are made for a Cyrix chip the software assumes that a 486 processor is present. This doesn't mean that the Cyrix chip is equivalent to a 486, just that the software assumes that anything but an Intel Pentium must be an Intel 486.

The fact that the AWE64 only gives 32 voices with a Cyrix processor is a totally different problem. After trying to achieve acceptable performance with Cyrix processors and the WaveSynth/WaveGuide feature of the AWE64 (which uses a lot of real-time floating-point arithmetic), Creative Labs decided that the Cyrix would just not run their software fast enough without slowing down overall system performance, so if the AWE64 software specifically detects a Cyrix processor it will not run. Nearly all other software (including Cubase *and* Logic Audio*) should run quite happily with a Cyrix.*

Since the whole Cyrix question has turned into a bit of a minefield, I am going to try to produce some actual figures. I currently use a Cyrix P166+ processor, and my local PC supplier has kindly loaned me a Pentium 166MHz and a Pentium MMX 166MHz processor. Look out for a forthcoming feature where I will be highlighting components that potentially cause bottlenecks in PC hard disk recording, including rough-and-ready performance comparisons for these three processors running a selection of music software. I hope this will resolve once and for all the question of whether a Cyrix P166+ is equivalent to a 90/100MHz Pentium — or not, as the case may be!

Remember **our email address is 100517,1113 — or, from outside CompuServe, 100517.1113@compuserve.com**

Non-Standard Standard

With reference to Bob Townley's letter in May's *Crosstalk*, the reason he is having problems dumping samples from an Akai S950 to his Yamaha SY85 is that the S950's sample dump format is slightly different from MIDI Sample Dump Standard in a number of minor ways. All of Akai's samplers up to the S1000 use this older pre-SDS format, which originated (I think) on the Prophet 2000. If you used a generic software sample editor which understands the Akai format (such as Microdeal's *Replay 16* on the Atari) to get the sample, you would be able to re-transmit it in correct MIDI SDS format to the SY85.

I hope this sheds some light on the problem.

Tom Newton
via email

Our customers' comments

"Ghost is Killer! Classic fat British EQ like you've always dreamed of. And the faders are awesome...the taper on them is as smooth as anything I've ever used. Incredible. Ghost has just about everything I look for in a quality console; great tone....great feel...looks...even the name! I'd swear you custom made this for me. I could not have picked a better console for sound, features and feel."

Geno Porfido, Boulevard Recording Co. New Milford, NJ

"Other consoles I've worked with in the past just couldn't deliver the levels of punch and clarity I felt the music deserved. I never have this problem with my Soundcraft Ghost. The Ghost gives me the flexibility I need over a wide range of frequencies and has the body and warmth to really bring my music to life."

Johnathan Moffett, Drummer with Michael Jackson and Madonna

"After the first mix I did, I realised I was in a whole new league. This thing sounds beautiful. Very silky in the high end and full in the lows. The EQ is totally cool and the board has a quality feel to it. I know of nothing that touches it in its price range and I have been recommending Ghost for months to anybody who's looking for a console."

Garth Webber, Red Rooster Studio, Berkeley CA

"I've worked on many competing 8 bus consoles and none can compare to the Ghost in features, ergonomics and, most importantly, sound. The Ghost, simply put, sounds warm and musical - you don't have to work hard to get great sounding mixes on this board. The EQ is very flexible and we compared the mic preamps (using a Neumann U-47) to the Neve 1066s in our studio. We were very surprised at how favourably they compared to these megabuck classics."

Peter Thorn, What If? Productions.

Just about the only sound as sweet as our EQ!

Let us know what you think about the Soundcraft Ghost by visiting our web site at http://www.soundcraft.com or via e-mail to info@soundcraft.co.uk

Ghost

Soundcraft

H A Harman International Company

SOUNDCRAFT, HARMAN INTERNATIONAL INDUSTRIES LTD., CRANBORNE HOUSE, CRANBORNE RD., POTTERS BAR, HERTFORDSHIRE, EN6 3JN, UK. TEL: +44 (0)1707 665000 FAX: +44 (0)1707 660742
SOUNDCRAFT US, HARMAN PRO NORTH AMERICA, INC., AIR PARK BUSINESS CENTER 12, 1449 DONELSON PIKE, NASHVILLE, TN 37217, USA. TEL: 1-615-399-2199 FAX: 1-615-367-9046

All trademarks acknowledged

shape of things to come

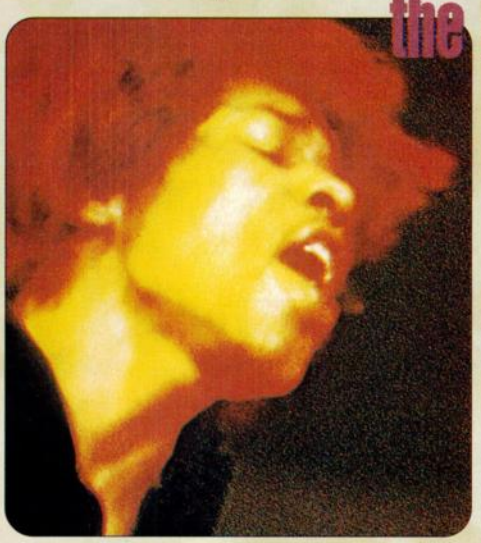
by Derek Johnson

Stargate

If you use noise gates while miking drums, to minimise spill between mics, or to gate out unwanted noise (breaths, headphone bleed-through and so on) on multitrack tapes, and find the task of applying a precise trigger to imprecise audio a little daunting, Symetrix may have developed the tool for you: the new two-channel 562E Windowing Expander/Gate. AutoWindowing is a processing technique that allows users to maintain control of the gate's envelope parameters; its dynamic smoothing process helps to "reduce the pops typically produced by envelope edges, overshoot and instabilities." The 562E's monitoring facilities also allow users to identify the signal to be gated, and how it's affected in both the direct and side-chain paths. The gate offers an external key input, balanced and unbalanced ins and outs, XLR and quarter-inch jack connectors and an internal power supply.

A Fuzion plc, 2 Lyon Road, Walton-on-Thames, Surrey KT12 3PU.
T 01932 882222.
F 01932 882244.

Re-experience the Experience



It's 30 years since the first Jimi Hendrix Experience album was released, and over a dozen years since it was first transferred to CD. But at last all the studio albums and the live set he played as 1969 turned into1970 are now available, in an aurally acceptable way.

Since his tragic death in the summer of 1970 there have been more rows about who owned and controlled Hendrix's legacy than on *Eastenders*, *Coronation Street*, *Brookside*, *The Bill* and all of Martin Scorsese's films put together. Some of the decisions as to how the posthumous releases should be produced and administered were questionable, to say the least. Studio master tapes of below-par out-takes were stripped of the original backing tracks and replaced by LA session players — the kind who regularly worked with the Carpenters and Art Garfunkel. The original CD releases by Polydor were processed from third- or fourth-generation quarter-inch tapes; sound quality was poor, tracks were not annotated properly, and someone, in their executive wisdom, programmed the double album *Electric Ladyland* combining sides 1 and 4 on one disc and sides 2 and 3 on the other, ruining the flow of the record. It was then released on a single disc — in the correct order this time — but this was before CD technology had the capacity to contain over 70 minutes of music, so someone simply edited (or, to be more accurate, butchered) some of the tracks to fit.

After a long and bitter lawsuit over these seminal recordings, Hendrix's father became the owner to the rights of all his son's work. Now on Universal/MCA records, the original master tapes have been tracked down from various sources by John McDermott and re-mastered by noted engineer George Marino and original session engineer Eddie Kramer. They've produced a beautifully processed, full-bandwidth, analogue-to-digital delight.

Alongside the four official records Hendrix released while still alive is an album containing the best material he left 'in the can'. The tracks on this album, *First Rays Of The New Rising Sun*, have seen the light of day many times before, but these are without doubt the best versions of the last things that Hendrix ever played. *Big George Webley*

Are You Experienced? (MCD 11608)
Axis: Bold As Love (MCD 11601)
Electric Ladyland (MCD 11600)
Band Of Gypsies (MCD 11607)
First Rays Of The New Rising Sun (MCD 11599)

A Experience Hendrix, PO Box 4130, Seattle, Washington 98104.

'Tools on Tour

Starting on page 162 of this issue, you can read Paul Lehrman's review of Digidesign's new Pro Tools 4.0 system. If you'd like to see it working for yourself, check out the following dates on the Digidesign summer tour: June 26, Digital Village, Chadwell Heath; July 4, Studio Care, Liverpool; 5, Digital Village, Croydon; 15, Natural Audio, London; 16 AudioTech, Surrey; 22 Turnkey, London; 23, CTS, Nottingham; 24, Media Spec, Glasgow; 29, Music Lab, London; 31, Media Spec, Manchester. Call the Digidesign Tour Reservation line to make sure you get a place: 01753 653322/658446/658475.

Elastica make tracks

Elastica's Justine Frischmann has taken delivery of a Tascam 488 MkII 8-track portastudio (supplied by Way Out West — 0181 744 1040) to help demo the new album which is shortly to be recorded at Mayfair Studios. Justine previously used a 4-track, but wanted more flexibility; Elastica guitarist Donna Matthews already had a 488 MkII, so, as Justine says: "I wanted one as well. The quality's great, and it's light enough to take on tour."

A Tascam Ltd, 5 Marlin House, The Croxley Centre, Watford, Herts WD1 8YA.
T 01923 225235.
F 01923 236290.

Microtech's polar exploration

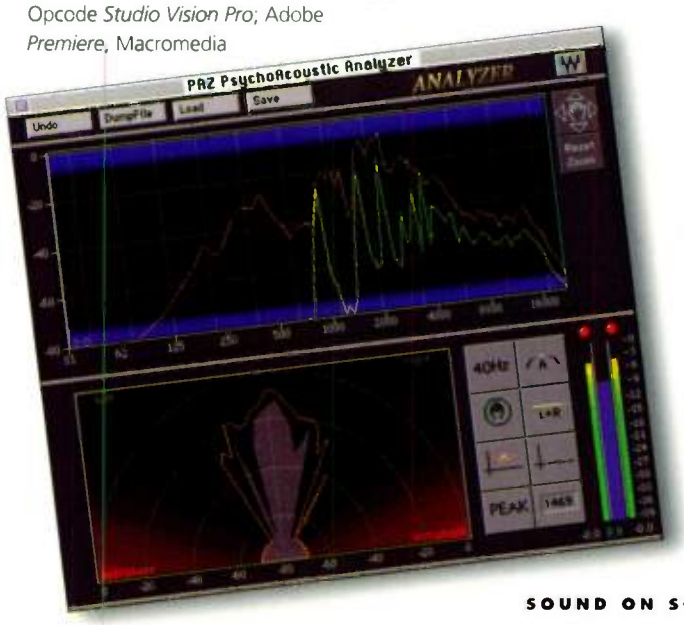
Microtech Gefell's new UMT800 is a large-format condenser mic for studios. It features a transformerless design, and its capsule offers five polar patterns (omni, wide cardioid, cardioid, hypercardioid and figure of eight), the first time this feature has appeared on one of the company's mics. Sensitivity can be reduced by 10dB, and a low-frequency roll-off switch reduces the proximity effect when close miking. The mic is claimed to have a wide dynamic range, a low noise floor and a frequency response of 40Hz-18kHz. It's recommended as particularly suitable for instrumental and vocal reording, as well as for use on film scoring stages.

A Stirling Audio, Kimberley Road, London NW6 7SF.
T 0171 624 6000.
F 0171 372 6370.
E sales@stirlingaudio.com
W http://www.stirlingaudio.com

SCV's new Wave

SCV London are augmenting their distribution activities with the launch of a new Software Division. Hardware such as that produced by Fostex, LA Audio and Audix will be joined by software from DSP plug-in specialists Waves, who have just appointed SCV their UK distributors. The move coincides with the launch of Waves' new *PAZ* psychoacoustic analyser with metering (see below) and *Renaissance Compressor*. The Waves product line supports all major audio applications including Digidesign Pro Tools (TDM & AudioSuite) and *Sound Designer II*, Steinberg *Cubase VST* and *WaveLab*, BIAS *Peak*, Opcode *Studio Vision Pro*; Adobe *Premiere*, Macromedia *Deck II* and *SoundEdit 16*, *Cakewalk Pro Audio*, and Sonic Foundry's *Sound Forge*. Waves plug-ins include the *Q10* paragraphic EQ, *C1* compressor/gate, *L1* limiter and ultra-maximiser, *S1* stereo image processor, *AudioTrack* multi-function processor, *PS22* pseudo-stereo maker, and *TrueVerb* reverb. Waves utility programs include the *WaveConvert* file format converter and *TrackPac Pro*, a no-loss audio file compression and expansion program.

A SCV London, 6-24 Southgate Road, London N1 3JJ.
T 0171 923 1892.
F 0171 241 3644.



Gone with the Win

Back in February and March of this year, we ran a competition with a 24-channel Soundcraft Ghost mixing desk, worth the best part of £6000, as a prize. The time has come to announce the winner, and the very lucky reader is one Doug Smith, of St Leonards-on-Sea, who is shown above being presented his new desk by Soundcraft Sales Manager Jon Ridell. Well done, Doug, and thanks again to Soundcraft for donating such a fabulous prize.

SOS can be reached on CompuServe; our email address is 100517,1113.

Our full Internet address is 100517.1113@compuserve.com.

shape of things to come

Les Jumeaux, a project of occasional *SOS* contributor Nigel Humberstone and his brother Kilve, have just released their second CD. *Cobalt* features contributions from Beaumont Hannant and guest remixers The Protagonist and Lunatic Eclipse. The CD is released on the ITN Corporation label, catalogue number corp016. Incidentally, music from In The Nursery (the Humberstones' alter ego) has been chosen for inclusion in a new series from Warner Brothers TV, *La Femme Nikita*.

Sunrise Audio Systems, the company behind the Falcon-based Sunrise Audio workstation reviewed in last month's issue, have a new contact number: try 01379 853845.

Steinberg's summer tour has grown by two dates: July 23 at Syco Music Software, London, and July 31 at Pro Music Technology, Oxford. You'll be able to see *Cubase VST* v3.4, the *Rebirth 338* virtual synth/drum machine and the *X-Pose* v1.1 visual sampler/sequencer. Contact Harman Audio for details of how to attend.
T 0181 207 5050.

Remember Q Logic's MIDI Metronome, the novel hardware visual timing reference? Well, it's still around, and Q Logic have ventured onto the worldwide web. If you visit http://www.qgroup.demon.co.uk/midimetr.html, you'll be able to check out a video clip of the MIDI Metronome, and obtain full details about this useful device.

Sample specialists East West have launched a fully interactive web site, where customers can audition, purchase and download sound files from home via phone lines or ISDN links. Point your browser at http://www.soundsonline.com.

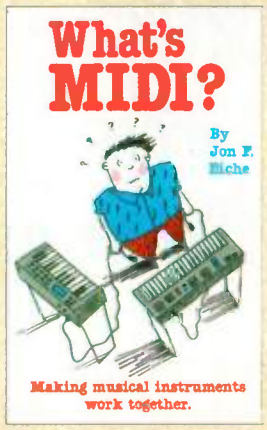
SOS can be reached on CompuServe; our email address is 100517,1113.

Our full Internet address is 100517.1113@compuserve.com.

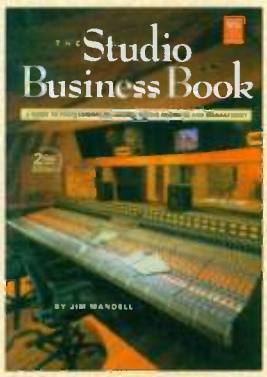
book corner

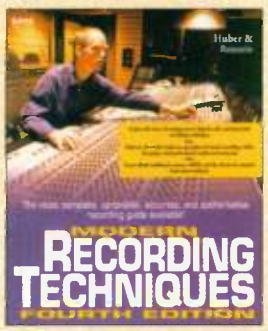
The books keep pouring in — here's the latest batch to tempt your wallet.

Readers after basic MIDI information should find Jon F Eiche's ultra-simplistic 62-page *What's MIDI?* a useful investment, especially given its user-friendly price of just £3.95. (Order code B347, postage £1.95 UK, £5.50 Europe, £8.50 ROW.) If you're not a complete beginner, *The MIDI Companion*, by Jeffrey Rona, is a popular book recently expanded. The new edition contains comprehensive coverage of all areas of MIDI, with helpful explanations of System Exclusive, using computers, troubleshooting and new explanations of the General MIDI standard. (Order code B348, priced £7.95, postage £2.50 UK, £6.95 Europe, £9.50 ROW.)



If you're after some help with recording, *Modern Recording Techniques* (Fourth Edition), by David M Huber and Robert E Runstein, is a weighty, up-to-date textbook that address all areas of the project studio recording market — digital recording, MIDI, mic placement, signal processing and the business side of things are all covered — and there's even a comprehensive glossary. The price is £23.95 (order code B349, postage £4.50 UK, £7.50 Europe, £14.50 ROW). Also out now is Bruce and Jenny Bartlett's *Practical Recording Techniques*, another recording textbook that's a mine of information in a single volume. Mic placement, recording the spoken word, and working with MIDI and digital audio are all covered, and there are even sections on location recording and recording classical music. All this will set you back £22.95. (Order code B350, postage £3.50 UK, £5.50 Europe, £8.50 ROW.)

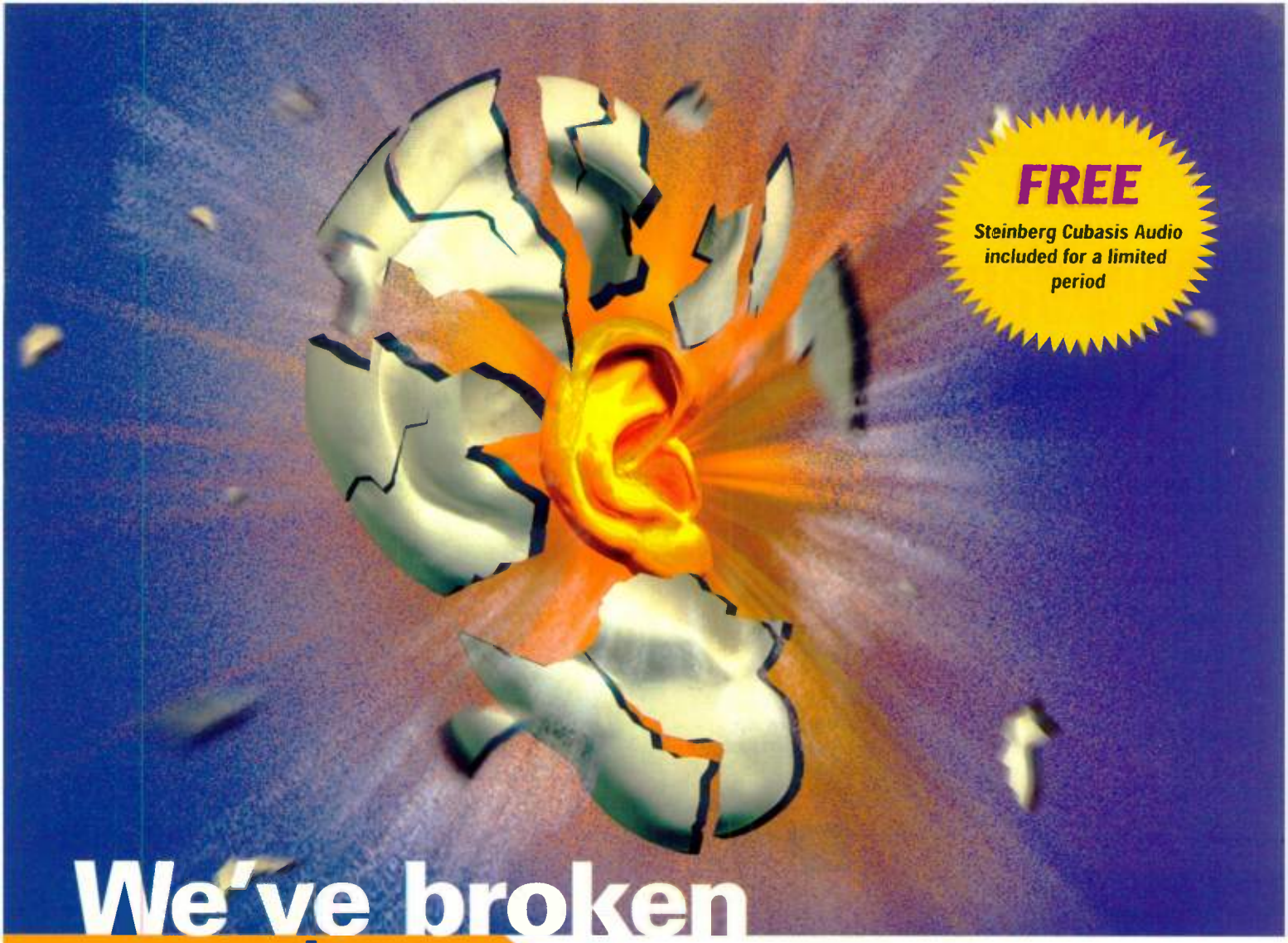




Now for what appears to be a unique book: *The Studio Business Book*, by Jim Mandell, deals solely with the business side of the recording industry. There's no information on mic placement or working with MIDI here — simply sound advice on running your studio as a going concern. While the bias is definitely American, much of the advice and tips can easily be translated into useable techniques on this side of the Atlantic. This is a good, friendly read, with plenty of case studies, and costs £24.95. (Order code B351, postage £3.50 UK, £5.50 Europe, £8.50 ROW).

Last up is the latest book from John Harris, *SOS*'s Demo Doctor. *Recording the Guitar* focuses specifically on all aspects of getting the sound of the guitar, electric or acoustic, onto tape — or into your sampler or onto your hard disk. John starts with setting up, strings, intonation and playing techniques, which can affect the sound you ultimately put on to tape. Electric guitarists will learn when to mic up and when to DI (and when to do both!), and diagrams illustrate a range of different mic positions to coax the sweetest sounds from your acoustic. Different preamps — valve, transistor, digital — are discussed, and you'll find out how to use compression, reverb, delay, gating, flange, chorus, harmonisers and so on. MIDI is also on the menu: you'll find out about pedalboards, MIDI controllers, program switching and MIDI patchbays. There's also a section on recording MIDI guitar and using sequencers, as well as sampling your guitar sounds. *Recording the Guitar* is priced at £10.95, and is, of course, available from our mail order department. Quote order code B353 (postage £1.95 UK, £5.50 Europe, £8.50 ROW).

A SOS Publications Ltd, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ.
T 01954 789888.
F 01954 789895.



FREE
Steinberg Cubasis Audio included for a limited period

We've broken the sound barrier again

Introducing Sound Blaster AWE64 Gold

The ultimate, affordable sound card for the audio enthusiast or semi-professional musician

The amazing Sound Blaster AWE64 Gold offers you incredibly realistic audio with 64 simultaneous voices and stunning solo instrument sounds previously used in only very high-end professional products.

All this channelled through a single MIDI port!

The AWE64 Gold gives you unmatched sound reproduction and lets you take advantage of advanced audio technologies such as SoundFont® 2.0 and E-mu® 3D Positional Audio. Create your own sound samples and edit them with Vienna, the AWE64's powerful voice editor. And for a limited period, the AWE64 Gold comes with Steinberg's Cubasis Audio for realtime music editing and digital audio recording.

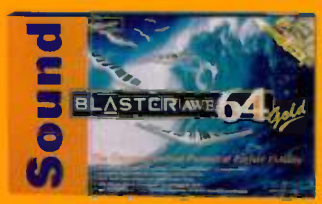
On the other hand, if you're a power gamer or budding musician, the Sound Blaster AWE64 Value will give you incredible audio realism also by breaking the 32 voice barrier.

You'll experience incredibly realistic instrument reproductions as well as stunning sound effects.

Both AWE64 Gold and AWE64 Value are fully compatible with all previous Sound Blaster products.

Either way, with AWE64 Gold £149 inc. VAT and AWE64 Value £79 inc. VAT you've got golden opportunities which you can't afford to miss.

	AWE64 Value	AWE64 Gold
EMU8000 Synthesiser	Yes	Yes
Creative WaveSynth/WG	Yes	Yes
SP/DIF digital output	No	Yes (120 db signal/noise ratio)
Gold plated RCA output	No	Yes (90 db signal/noise ratio)
Onboard RAM	512KB (upgradeable to 24MB)	4MB (upgradeable to 28MB)



TOP 50 BEST BUYS

To find out more, visit our World Wide Web site 'Creative Zone': **www.creativelabs.com/64uk**
Or contact the Creative Labs Presales Department on **01245-265265**

AWE 64 Gold

CREATIVE
CREATIVE LABS

shape of things to come

Neumann Wisdom

Neumann's famous TLM50 studio condensor mic is now back in production. This mic's valve-equipped predecessor, the M50, was used on most of the Beatles' Abbey Road sessions, and is often the mic of choice of many classical recording engineers. The mic's omnidirectional pickup pattern provides a smooth rise in frequency response, with increased directivity at higher frequencies, and a linear response down to extremely low frequencies. It is these characteristics, say Neumann, that allow the TLM50 to capture both the direct sound of an instrument and a balanced image of the environment. The mic comes complete with a wooden case, dedicated cable, swivel mount and auditorium hanger. Also now available are replacement capsules for both the TLM50 and the M50.

A Sennheiser UK Ltd, 3 Century Point, Halifax Road, High Wycombe, Bucks HP12 3SL.
T 01494 551551.
F 01494 551550.

Hey small Spendor!

A new pair of powered monitors have been released by Spendor. The shielded QT100s combine a 190mm elliptical driver and a 28mm soft-dome tweeter with integral amplifiers and an asymmetrical, acoustically damped, reflex-ported cabinet. Power handling is a respectable 60W a side, with an SPL of 103dB at 1 metre; frequency response is 68Hz-22kHz. These compact monitors weigh just 7.5kg each, and cost £704 a pair (including VAT). Watch out for an *SOS* review soon.

A Tony Larking Pro Sales Ltd, Norton Mill House, Nortonbury Lane, Letchworth, Herts SG6 1AN.
T 01462 490600.
F 01462 490700.

T Spendor Audio Systems 01323 843474.

Crimewatch SOS

We've received notice from a band called Backchat, who hail from East Sussex, that they had the bad luck to have their gear stolen recently. The date was April 19, the place was Eastbourne's Grand Hotel. Missing equipment includes the following: Roland D50 (serial number 727902); Yamaha SY85; Ibanez SR1305 5-string bass, in black alpine, plus gig bag containing three sets of Kaman strings; Squier Strat, red, in black gig bag; and a Beyer NE170 true-diversity receiver unit. A reward is being offered for information leading to the recovery of the gear; anyone who can help or has been offered equipment matching this description in dodgy circumstances should contact PC May on 01323 412299.

HHB Communciations' US office has relocated to the West coast, due to an increase in business in the area.
A HHB Communciations (USA), 626 Santa Monica Blvd, Ste 110, Santa Monica, CA 90401.
T 001 310 319 1111.
F 001 310 319 1311.

Spice Girls producers Andy Watkins and Paul Wilson have purchased an Otari RADAR hard disk recorder for their Thames Island studio. Paul and Andy, who co-wrote the debut *Spice* album, partly recorded it on RADAR and will be using it on the new Spice Girls album out later this year. They are now using it on their latest project with a new signing for Virgin, a female soul singer called Shernette.
T Stirling Audio 0171 624 6000.

PC music specialists Sound Solutions of Horsham have opened new demo facilities, which will allow customers, by appointment, to check out all aspects of music and the PC, including operating systems (Windows 95, Windows 95 OSR2, Windows NT), soundcards, sample CDs and master keyboards.
T 01403 732606.
E info@soundsol.com

The Internet Music Shop claims to be Britain's first independent on-line music and video shop. Their new multimedia search engine allows customers to search by artist, release, or even by song title. There are over 140,000 CD titles, 27,000 VHS videos, some vinyl, laser discs and more on file. Mainstream English language material is served best, and searches are fast and efficient.
W W http://www.musicshop.co.uk

Virtually free sounds

Yamaha have produced a new free library of sounds for the VL70M physical modelling sound module. The library of over 300 patches features many of the sound originally produced for the VL1, VL7 and VL1M. The files are saved in .mid format so that they can easily be dumped via MIDI from most sequencing software or a Yamaha MDF2 data filer, and include sounds ranging from classic oboes to aggressive lead synth voices. Get your disk from any Yamaha Hi Tech Main Dealer, or call the Yamaha Information Line on 01908 369269.

Give your mix the raw aggressive impact only a classic analogue Joemeek can deliver.

Praised by the press, demanded by the professionals and sought after for their extreme vintage sound.

Buy one.

Vintage stereo photoelectric compressor. £ 1250 exc.vat

Transformer / mic-pre / compressor / enhancer / vocal line level instrument channel. £ 599 exc.vat

The ultimate direct to tape channel. £ 1499 exc.vat

2 channel mastering enhancer. £ 340 exc.vat

Classic mic-pre / compressor / enhancer. £ 254.47 exc.vat

Joemeek Users Include:

Sony Mastering

Prodigy

Mark Knopfler

NRG Studios, LA

Jack Joseph Puig

Jerry Finn

Black Crowes

David Bowie

Toni Braxton

Spice Girls

EMI Records

Paul Weller

Oceanway, LA

Larrabee Studios

Green Day

Peter Gabriel

Orbital

Disney Corp

Leftfield

Videosonics

Tricky

Noise Labs

INXS

JOEMEEK

Joemeek Ltd. Swillett House, Heronsgate Rd, Chorleywood, Herts. WD3 5BB tel : 01923 284545 fax : 01923 285168

Exclusive U.K. Distributor Sound Valley Distribution Ltd. The Briars, North Rd, Amersham, Bucks. HP6 5NA tel : 01494 434738 fax : 01494 727896

02's Company

Yamaha's 02R digital recording console is selling well to the pros, with two recent customers buying a pair each. Orbital have recently installed two 02Rs in their recording studio, and the desks' first task was the multitracking and mixdown of the duo's recent revamp of the theme tune for *The Saint*.

Ian Jones of HHB experiences Christmas all over again.

The desks are used as a single 40-input console, courtesy of Yamaha's dedicated *02R Project Manager* software for Apple Mac.

Planet Audio, a programming and production suite based at London's Metropolis Studio complex, has also recently installed two 02Rs. The desks join three Alesis ADATs and a 16-track Digidesign Pro Tools system. Producer Rod Gammons notes: "Every analogue input and output comes up on the patchbay, as do all the ADAT and Pro Tools ins and outs, in analogue form, as well as all the analogue auxiliary sends on the desk. This allows us to insert a lot of our classic valve and esoteric outboard processors." Gammons' patching system also means that every keyboard is normalised to a mic/line in, or a free input on the 02R's (optional) analogue card; every AES input and S/PDIF in and out is also centralised, allowing the studio to distribute any clock or signal source from anywhere, to anywhere else, in any format.

Frontline Video have bought a single 02R, supplied by Aspen Media (01442 255405), as part of a package that also includes a Digital Solutions BVE02 audio-follow-video interface, which allows the facility's Sony video editor to work in tandem with the 02R. And to finish off the sales talk, HHB Communications (0181 962 5000) recently sold its 100th 02R, to Central Television. The occasion was marked by a celebration, with Yamaha handing over a gift-wrapped 02R to HHB MD Ian Jones.

Rod Gammons of Planet Audio.

Orbital.

A Yamaha Kemble Music Ltd, Sherbourne Drive, Tilbrook, Milton Keynes MK7 8BL.
T Product Info Line 01908 369269.
F 01908 368872.
W http://www.yamaha.co.uk

Location sound for the latest series of *Harry Enfield and Chums* was recorded by Martin Wilson using a Fostex PD4 portable timecode DAT recorder. Martin also used the PD4 on a dramatised documentary series that involved shooting in Turkey, China and Mongolia; it survived the dust of central Turkey and constant joltings in transit, reports Martin.

T SCV London
0171 923 1892.

A new series of Alesis QCard expansion cards is now available for the company's QS synths and QSR sound module. Each card provides 128 Programs and 100 Mixes; choose from Hip Hop, EuroDance, Sanctuary, and Stereo Grand Piano cards. Coming soon are Vintage Synthesizers, Vintage Keyboards, Classical, Latin and Rap Techno Dance. As an example of what to expect, the EuroDance card contains 8Mb of sample data — over 300 drum/music loops and samples, all at 16-bit and 48kHz. In addition, every QCard comes with two disks for Mac and Windows PCs, each containing a further 256 Programs and 200 Mixes, along with Alesis' *FreeLoader* software. The price is £199 per card.

T Sound Technology
01462 480000.

Spain Killer

DaD Tape, from Spanish company Duy SA, is an analogue tape simulation plug-in for Digidesign TDM and *Sound Designer II* systems; Pro Tools 4.0 with automation is supported. The plug-in is designed to simulate four distinct tape recorder types: a vintage machine with valve circuitry, a transistor-based machine of the late '60s, an op-amp machine from the '70s, and an up-to-date machine. Most noise-reduction systems can be simulated, and a switchable virtual tape speed control offers even more control over the resulting effect. *DaD Tape* is suitable for processing individual or sub-mixed audio tracks, and is said to be particularly good for percussive sounds, since it tends to round off peak transients.

A Syco Systems, Kimberley Road, London NW6 7SF.
T 0171 625 6070.
F 0171 372 7660.
E sales@syco.com
W http://www.syco.com
W http://www.duy.es

education corner

MIDDLESEX UNIVERSITY & SAE

Middlesex University has recently signed a memorandum of agreement with SAE Technology College, which will allow students

with the SAE diploma in audio engineering to progress onto the University's BA Sonic Arts programme.

A Middlesex University, Trent Park, Bramley Road, London N14 4YZ.
T 0181 362 5919.

A SAE Technology College, United House, North Road, Islington, London N7 9DP.
T 0171 609 2653.
E fuzzy@sael.demon.co.uk

NEW COLLEGE, TELFORD

Telford's New College recently opened a fully professional recording studio, called New Tracks, as the latest phase in their investments in music and the performing arts. The studio will not only benefit New College students, but will also be made available to other schools, colleges, community groups and individuals in the area. A range of evening higher courses in music technology and sound recording is already on offer. Studio equipment includes a Tascam MS16 16-track analogue recorder, an Alesis ADAT XT, D&R Orion 32:16:32:2 desk, *SAW Plus* digital editing software running on a Pentium PC, and a range of mics, processors and monitors.

A New College, King Street, Wellington, Telford, Shropshire TF1 1NY.
T 01952 641892.
F 01952 243564.

COMMUNITY MUSIC EAST

Lottery cash to the tune of £1.6 million has been awarded by the Arts Council towards the construction of a major community music centre and recording studio in a derelict warehouse in Norwich. The facility, under the control of Community Music East, aims to be high-spec, with enough room to record orchestras, but will also offer more opportunities to the public at large, including training.

A Community Music East, 70 King Street, Norwich NR1 1PG.
T 01603 628367.
F 01603 767863.

DURHAM STREET STUDIO, HARTLEPOOL

A £150,000 grant from Northumbria Water's Kick-Start Fund, plus grants from other quarters to the tune of another £410,000 (including £250,000 from Hartlepool City Challenge), is allowing Hartlepool's Durham Street Studio to convert a derelict church into a recording and performance venue. The Studio, as the new facility will be named, will offer a 24-track commercial studio, a 16-track community studio, an 8-track studio, rehearsal room, tape-copying facilities, and a 200-seat live venue. The project will also create enhanced opportunities for training in recording techniques for local people. Until the changes, Durham Street Studio can be contacted on 01429 869999.

ANDERTON'S MUSIC EDUCATION CATALOGUE

Anderton's Music Company of Guildford have released a new education catalogue. Not only are the company able to offer advice on what to buy when it comes to teaching music technology, as well as supplying the gear, they can also provide teachers with the training they may need to get the best out of the new technology. Free, impartial advice is available on all aspects of curriculum, exam and course requirements.

A Anderton's Music Company, 58 & 59 Woodbridge Road, Guildford, Surrey GU1 4RF.
T Education Hotline 01483 456888.
F 01483 38211.

MANGO MULTI MEDIA

Mango Multi Media, specialists in providing sound for multimedia applications, including the Internet and CD-ROM, are starting a range of evening courses. Subjects include: Introduction to Digital Recording/Editing; Digital Recording of Voice (for voice-overs); MIDI Production and Programming; Introduction to the Mac; and Setting up an Independent Record Label.

A Mango Multi Media, Studio B1, 21 Steward Street, London E1 6AJ.
T 0171 377 2722.
E lisa@mangomultimedia.demon.co.uk

UNIVERSITY OF DERBY

The School of Engineering at the University of Derby has just opened its new Green Lane studio. Built to support the department's BSc (Hons) in Music Technology and Audio System Design/BA (Hons) in Popular Music and Music Technology courses, the studio will be running a series of 'open access' workshops and courses over the summer. The four courses are: Digital Editing; An Introduction to MIDI; An Introduction to Recording; and a week-long intensive summer school in studio techniques. The university is also planning a series of digital sound recording lectures throughout the year, with places limited to a maximum of 12 participants.

A University of Derby, Kedleston Road, Derby DE22 1GB.
T 01332 622798.
F 01332 622739.

LUMEN STUDIO

Brighton's Lumen Studio has started a range of short courses in studio engineering. Introductory one-day courses for complete beginners will be followed by longer, more advanced courses. In keeping with Lumen's activities, the courses' creative focus will be on the production of dance music, while giving students a firm grounding in studio techniques. The studio is equipped with an Alesis ADAT, a Yamaha ProMix 01 digital desk and a large selection of outboard gear.

A Lumen Studio, 103 Islingworth Road, Brighton, East Sussex BN2 2SG.
T 01273 690149.
F 01273 690149.
E lumen@mistral.co.uk

Vorsprung Durch Musik

Musik Produktiv, a "major continental musical equipment retailer" with stores in Germany, the Netherlands and Switzerland, is setting up a pilot operation in the UK this autumn. The initial project will be relatively small, and its purpose will be to examine the UK market and establish a customer base. Future plans include a UK-based retail megastore.

A Musik Produktiv International, St Andrew's House, 22-28 High Street, Epsom, Surrey KT19 8AH.
T 01737 830079.
F 01737 833308.
E 101506.2746@compuserve.com

Mixing on the move

If you're looking for a notebook-sized mixer, check out Peavey's new Unity 300. This compact desk has four XLR/jack mic channels with insert points and four stereo line inputs. Each channel has a 2-band EQ, two auxiliary sends, a pan pot and a level control. Each mic input also has a gain control and phantom power. An additional pair of stereo returns can be used for effects, or as extra line inputs, and the desk is equipped with master tape out and return phono sockets.

A Peavey Electronics Ltd, Great Folds Road, Oakley Hay, Corby, Northants NN18 9ET.
T 01536 461234.
F 01536 747222.
W http://www.peavey.com/

shape of things to come

Alisha's Attic.

Kindred Spirits

Spirit consoles have been moving in some pretty conspicuous circles lately. First of all, no less than four Folio SXs are being used to provide talkback and foldback for the four sound rooms at Grand Central Studios, who specialise in audio for TV and cinema advertising. Spot Grand Central's Ivor Taylor sitting within touching distance of one of his new SXs in the picture (see bottom left). George Shilling, engineer or producer for Blur, Primal Scream, Wannadies and Eternal, has installed a 32-channel Spirit Studio in his home recording studio, along with a pair of Spirit Absolute 2 monitors (see picture, left). George, who's recently been working with Teenage Fanclub, hopes to spend some time working on solo material. Another home studio getting the Spirit treatment is the one installed in the attic owned by newcomers Alisha's Attic. They wrote their top 10 debut album on a 32-channel Spirit Studio (and recorded most of the vocals with it), and have recently added a pair of Absolute 2s.

George Shilling.

Ivor Taylor at Grand Central.

A Spirit by Soundcraft, Cranborne House, Cranborne Industrial Estate, Cranborne Road, Potters Bar, Herts EN6 3JN.
T 01707 665000.
F 01707 665251.
E spirit@dial.pipex.com
W http://www.spirit-bysoundcraft.co.uk

card corner

The new Zefiro Acoustics ZA2 (£379 plus delivery) is a full-duplex, ISA-format PC soundcard based around a 24-bit DSP. Notable features include three sets of digital ins and outs — co-axial and optical S/PDIF, and AES/EBU on XLR — and all digital outputs can operate simultaneously, allowing format conversion. There's an analogue stereo monitor output on board, and the card can convert from sample rates of 48kHz to 44.1kHz while recording, which is ideal for converting DAT masters that have been recorded at 48kHz to the CD standard of 44.1kHz. Sophisticated features include the ability to generate PQ subcodes for CDR, and selectable SMCS copy inhibit via the S/PDIF output. The ZA2 comes with all necessary cables and drivers and utilities for Windows 95, Windows 3.x and DOS.

A RKMS, Freepost (NG6175), Nottingham NG4 1BR.
T 0115 961 1398.
F 0115 953 3802.
E info@rkms.com
W http://www.rkms.com

Bath-based GOSH, the UK distributor for Hohner Midia products, have announced the availability of two new PC ISA soundcards from that company. The Prodif 24, priced at £349, records and plays back true 24-bit audio, in AES/EBU and S/PDIF formats, and has AES/EBU optical and analogue outs. Prodif 24 is compatible with *Red Roaster* CD writing software, and any other software that supports true 24-bit audio; sample rates of 48kHz, 44.1kHz and 32kHz are selectable via software. The 4-in/4-out ARC44, with all ins and outs on quarter-inch jacks, costs £499; special driver software allows you to use two cards at once (if you've got the free slots!), for eight simultaneous tracks of record and playback.

A GOSH!, Albert Villa, 2 King Edward Road, Oldfield Park, Bath BA2 3PB.
T 01225 313219.
F 01225 405184.
E stash@goshuk.force9.net
W http://homepages.force9.net/goshuk/gosh.htm

Holding all the cards

Owners of Yamaha's SY85 should have no trouble getting new sounds for their synth in the foreseeable future: Techmate UK have got hold of a pile of Yamaha ethnic card sets, available for just £49. For this entirely reasonable sum, you get a card full of new sample waveforms, plus one packed with single and multi patches that make use of the samples

Incidentally, Techmate inform us that they've also nabbed 100 Turtle Beach Maui PC MIDI/audio cards — the last you'll be able to buy new — and are selling them for an accessible £69 each including VAT (this card used to retail for £199). The Maui card (which *SOS* featured in our June 1995 issue) offers 128 wavetable instruments in ROM, and lets you use up to 8Mb of RAM to turn WAV files into MIDI instruments. *Wave SE* software is included, and an MPU401-compatible MIDI interface is also built in.

A Techmate UK, 215 Harwich Road, Colchester, Essex CO4 3DF.
T 01206 793355.
F 01206 864994.
E sales@techmate.demon.co.uk
W http://www.actual.co.uk/tech-mate

Turn Demo's INTO HITS

What distinguishes a hit record from a demo tape of the same music? Production values would be an all embracing answer, from the final arrangement and the number of overdubs, to the engineering expertise and ...the equipment used.

That's where Focusrite comes into the equation. Thousands of engineers and recording-musicians rely on Focusrite to get the best possible results onto tape (or hard disc), avoiding the compromised performance of most mixing boards.

The Focusrite Green Range is a family of microphone pre-amps, equalisers and dynamic controllers in configurations optimised for recording vocals, instruments and mixing.

Green One: Dual Mic-Pre. Two channels of the outstanding Green Range mic-pre, to get the most from your mikes. **£699***

Green Two: Focus EQ. The Mic-Pre, line and instrument inputs, plus the legendary Focusrite EQ. **£799***

Green Three: The Voicebox. The Mic-Pre plus a compressor, de-esser and a three band, voice-optimised EQ. **£849***

Green Four: Compressor Limiter: A two channel mono/stereo compressor with a unique look-ahead limiter, essential for digital recording. **£899***

Green Five: The Channel Strip. One channel with all the elements: the Mic-Pre, line & instrument inputs, 6-band EQ, gate and compressor. **£999***

The Green Range delivers outstanding performance; after all there is no point buying similar facilities to those in your console unless there is a quantum benefit.

Try before you buy - ask your dealer for an on-site evaluation. Contact Focusrite direct for your local Green Range Dealer and a brochure pack. Check out our web-site too.

* Prices exclude VAT

Chart Success - by Focusrite.

Focusrite GREEN RANGE

Brochure & further Information: Focusrite Audio Engineering Ltd. Tel: (0)1494 462246 Fax: (0)1494 459920 Home Page: http://www.focusrite.com

shape of things to come

DJs day out

The second annual Dance Tech 97 event is due to take place on July 20, at the Complex Club, in Sittingbourne, London. Organised by Sound Division, the event will allow various companies from the hi-tech world (Yamaha, Roland, Akai, Emu and Korg) and the DJ market (Vestax, Pioneer, Denon and Gemini) to demonstrate their products in one place. This year Dance Tech 97 is being staged in association with *DJ* magazine, and sponsored by Yamaha and Vestax; it's fully supported by the Mean Fiddler and Universe Organisation, as it was last year. Tickets costs £5, including a free £50 discount voucher to spend on the day.

A Sound Division, Adelaide House, 383-385 Liverpool Road, London N1 1NP.
T 0171 609 6639.
F 0171 609 1310.
E 100610.2341@compuserve.com

(Left to right) David Graham of Sound Division, Ian Jenkinson and Chris Birch of the Universe Organisation, and Chris Mellor, Editor of DJ.

Rack magic

Allen & Heath are launching a new desk in the Wizard series. The WZ20:8:2 is a dedicated 8-track recording mixer offering 8-buss routing and eight tape returns, with stereo cue and effects sends; a unique 'mixdown' switch instantly configures the inputs, giving multitrack signals the benefit of full channel EQ, effects sends and inserts, while tape return paths are available as additional inputs, making a total of 28 at mixdown.

There are eight mic/line inputs on balanced XLRs or jacks, with insert points. Each of the six auxiliary sends are on individual controls, and the switched 4-band EQ offers two swept mids. Remaining inputs are configured as six stereo line inputs, each of which have 2-band EQ and access to all six aux sends. Full 100mm faders are employed throughout, and additional features include a 1kHz line-up oscillator and a talkback facility. The desk can even be configured for desk or rackmounting usage without exposing the circuitry. The WZ20:8:2 is expected to retail very much on the friendly side of £1000.

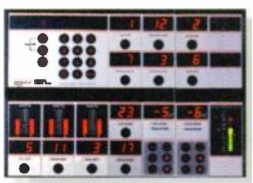
If a stereo desk is what you're after, try out the Wizard WZ16:2, which has a similar spec, but no sub-grouping.

A Allen & Heath, Kernick Industrial Estate, Penryn, Cornwall TR10 9LU.
T 01326 372070.
F 01326 377097.
E 106030.1426@compuserve.com
W http://www.allen-heath.com

turnkey

dynaudio | lexicon | dbx

If you want to look at equipment we'll send you some brochures...



If you'd prefer to listen and evaluate a wide range of products by strict A/B comparison there is currently only one option.

Turnkey's revamped and enlarged demo facilities feature what we believe to be the world's largest digital comparator systems for pro audio* and the only one of its type in the U.K.

Over 70 effects processors are available for instantaneous A/B via relay switching, eliminating the repatching time which makes good comparisons so difficult. 16 pairs of studio monitors, 10 power amps, 16 mixing consoles and around 30 sources and recorders from DATs, CDs, HDRs and Multitracks are on the same matrix so you can instantly configure complete systems.

Take 8 bus consoles - hundreds are bought each year on recommendation. Bearing in mind the sums involved it's hard to believe that the opportunity to properly compare the various brands for EQ and noise has not previously been offered.

We've taken the same innovative approach to demonstrating all our products from CD Rom samples to analog synthesisers.

Most dealers will tell you which products best suit your needs. Only one can show you.

One side of the switcher-equipped recording room.

Compare 6 mics by recording simultaneously to ADAT.

Pro-Tools III and Soundcraft DC2020 in Studio 1.

Huge range across Mac, PC and Acorn platforms.

INDEX

3 Turnkey Professional
4 Multitrack Recording
5 Multitrack Recording
6 Outboard
7 Outboard
8 Computer Software/Hardware
9 Computer Hardware & Samplers
10 Synthesisers
11 Synthesisers & Drum Machines
12 Keyboards & Guitars
13 Mics, PA/DJ, Mixers & Monitors

* The leading manufacturer of this equipment tells us that the Turnkey systems are the largest ever supplied worldwide.

turnkey 0171 379 5148
Fax: 0171 379 0093 114 Charing Cross Road London WC2H 0DT

KORG ALL DIGITAL EIGHT BUSS MIXER

SOUNDLINK 168RC

Over the last few years, Korg's SoundLink digital recording and editing system has gained wide respect in the post production and broadcast areas, with it's combination of flexibility and excellent sound quality. Using the experience they have gained with this product, they have now produced the SoundLink 168RC digital mixing console, which offers unprecedented facilities in an amazingly compact format.

There are 16 digital inputs and outputs in the ADAT optical format, allowing connection not only to ADAT's themselves, but also to the vast range of other equipment now supporting the format, as well as eight analogue mic / line inputs, two of which have phantom power. The master outputs are also available as coaxial SPDIF. For those of you who would prefer more analogue connections, Korg are also producing high quality external 8 channel A/D and D/A convertors, again using the ADAT format. And if all this isn't enough, you can cascade multiple 168RC's together for as many channels as you like, also leaving plenty of room for future expansion.

Internally, the 168RC has 8 subgroups, 3 band EQ, each of which is sweepable, and with 'Q' on the mid band, two external and two internal auxiliary sends. The internal aux sends are routed to two high quality effects processors with some of the finest algorithms around, including reverb, delay, distortion, pitch shift, dynamics processing and even speaker simulation. For automation, up to 100 'scenes' can be stored internally, taking a snapshot of every single parameter of the desk, which can then be recalled at the touch of the button, and in addition to this all parameters can be dynamically controlled in real time via MIDI. All in all, a tour de force product with far too many features to detail here. Call now for a demo!

- 24 Input 8 Buss Digital Mixer
- Snapshot & Full Dynamic Automation
- 2 Built In Effects Processors
- 16 Channels of Digital Ins & Outs
- Optional Outboard A/D & D/A Convertors

NEW PRODUCT
£1899
CALL FOR DETAILS
turnkey
Tel 0171 240 4036

NEW ProTools v4.0 Package

digidesign

- 7300/166 32/2Gb/CD & keyboard
- Apple 1705 17" MS Display
- ProTools Core & 882 Interface
- 2 Gbyte Approved HD
- Any Audio Sequencer
- 'Circle of Digi' Tutorial CD-ROM

FREE MIDI INTERFACE & MICROSOFT OFFICE

BUNDLE PRICE
£9995
INCLUDING INSTALLATION
turnkey
Tel 0171 240 4036
£9251.13 INC VAT

ProTools Plug-ins

To add to the collection of burgeoning TDM plug-ins is the new Waves Truverb reverb processor, Syncro Arts Tool Belt processor & Q-Sounds QX/TDM 3D spacial enhancer using the Qsound patented expansion algorithm.

Truverb Q-sound ToolBelt

Audio Media III Package

- Performa 6400/180 32/1.6/CD 28.8 modem & Keyboard
- Apple 15" AV MS Display
- AudioMedia III card
- Any Audio Sequencer

FREE MIDI INTERFACE & MICROSOFT OFFICE

AUDIOMEDIA III

BUNDLE PRICE
£2595
INCLUDING INSTALLATION
turnkey
Tel 0171 240 4036
£2696.23 INC.VAT

ProTools Project Package

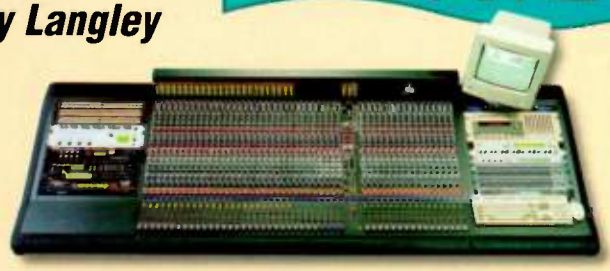
- 7300/166 32/2Gb/CD & Keyboard
- Apple 1705 17" MS Display
- 2 Gbyte Approved HD
- ProTools Project Core
- 882 I/O Interface
- Any Audio Sequencer
- 'Circle of Digi' Tutorial CD-ROM

FREE MIDI INTERFACE & MICROSOFT OFFICE

BUNDLE PRICE
£5995
INCLUDING INSTALLATION
turnkey
Tel 0171 240 4036
£5516.23 INC.VAT

BIG by Langley

AMEK



As Amek dealers we now have on demonstration a fortyfour input Big by Langley console. The Big's SuperTrue Version 3.1 VCA automation compatible with all other Amek desks up to the flagship Neve 9098 series console. With the Virtual Dynamics on-screen processing plus Rupert Neve voice recall, this is a console that is packed with facilities, over and above what it offers as a fully featured inline console: 4 band EQ, 8 auxiliaries, 12 bus, 24 outputs available in frame sizes from 28 to 44 with or without bantam patchbay.

Call for an appointment.

- 4 band EQ, 8 Auxiliaries
- SuperTrue V3.1 VCA Automation
- Virtual Dynamics on-screen editing
- Unique Rupert Neve Voice Recall
- 12 bus, 24 output
- Frame sizes from 28 to 44 Inputs

INCREDIBLE VALUE
£POA
CALL FOR A DEMONSTRATION
turnkey
Tel 0171 240 4036

*We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT E & O E Uk mainland carriage from £9.99

EUROPE'S LOWEST

KORG 12 CHANNELS FOR UNDER A GRAND?

The card that everyone's been waiting for! Now you can use Cubase VST (amongst others), and have multiple inputs and outputs, without spending a fortune!

But the PCI 1212I/O is far more than just a soundcard - it can become the very heart of your studio. There are stereo analogue ins and outs featuring 20 bit delta-sigma ADC's and 18 bit linear DAC's, SPDIF in and out, and 8 more digital ins and outs in standard ADAT format. The best part is that all these connections can be used independently giving you a total of 12 inputs and outputs! What's more, word clock and ADAT 9 pin connectors are provided, allowing sample accurate synchronisation with ADAT's and many other digital devices.

If you're not a MIDI user, the highly capable Deck II is an ideal choice. Fully featured with multitrack recording and extensive cut and paste editing facilities, Deck can sync to almost anything, including Quick Time movies and standard MIDI files, does file format conversion and supports plug ins.

Call for more details or to arrange a demo - this card could change your whole way of working!

- *12 Ins, 12 Outs and Digital Sync on 1 Card*
- *ADAT Format Ins & Outs*
- *Compatible With Cubase VST*
- *Optional Deck II Software bundled for £249*

NEW PRODUCT £599

DA20 DAT MACHINE — TASCAM

If you need a 19" rack mount DAT machine, they don't come any cheaper than this! But that's not at the expense of a quality machine: reliable tray-loading mechanism, SCMS is switchable in or out, both analog and digital recording at all 3 sample rates and coaxial SPDIF in and out. High sound quality is guaranteed by 1-bit DAC playback, and there is a special 'Table-of-Contents' feature.

~~RRP £709~~ **£639**

DA30 MkII DAT RECORDER

Professional machines start here! Tascam's DA30 and it's current Mark II equivalent are probably the most commonly found machines in professional studios, and with good reason: they combine a range of pro features such as 44.1kHz recording, AES/EBU digi I/O, balanced analogue connections, and now a jog / shuttle wheel, with sturdy build quality and excellent reliability. Incredible new low price makes pro quality affordable!

~~RRP £1299~~ **£975**

102MkII & 202MkII TAPE DECKS

Fantastic deals on Tascam's superb professional quality mastering cassette decks. Both are full 19" rackmount units, the 102 MkII is a single deck unit, the 202 MkII is a double deck, which records on both decks. Limited stocks only at these prices, ideal for mastering and duplication.

~~RRP £249~~ **£199**

~~RRP £349~~ **£269**

PCM-R500 DAT RECORDER — SONY

Sony lead the way in the DAT market once again with the new PCM-R500. A professional machine through and through, it features a four motor direct drive transport, jog shuttle wheel for fast precise transport control, balanced ins and outs, AES/EBU digital connections, and Sony's proprietry Super Bit Mapping system, to get the maximum possible quality out of the unit's ADC's. Unbeatable price only from Turnkey!

~~RRP £1175~~ **£999**

DTC-ZE700 DAT RECORDER

We have exclusively secured a small supply of the Sony DTCZE700 to bring you the cheapest full size DAT machine on the market, but this is not at the expense of features: SPDIF coaxial input and optical in and out, digital and analog recording at all three sampling rates (32 kHz, 44.1 kHz, 48 kHz), as well as all the usual ID functions and a full function infra red remote control. Also features Sony's exclusive Super Bit Mapping technology for incredible recording quality. Another DAT exclusive from Turnkey!

~~RRP £729~~ **£449**

MDS-JE500 MINIDISC RECORDER

Although DCC looks to have died as a format now, Minidisc is thriving, and rapidly becoming a standard in radio stations and other institutions around the world. With sound quality almost as good as DAT, and a range of editing features like Combine, Move, and Auto Cut, it makes an ideal choice for mastering on a budget. If MiniDisc is for you, there's no better value on the market than the MDS-JE500, with digital input, jog dial and full function remote control as standard.

~~RRP £349~~ **NEW PRODUCT £269**

MDR30 PORTABLE VERSION ALSO AVAILABLE only £299

THE UK 4 TRACK CENTRE

Our famous 4 track pack includes everything you need to start making music: Maxell headphones, a dynamic microphone, a chrome tape, cables, head cleaning kit and the best book we've yet seen on multitrack recording, taking you through basic track laying, mix-down etc... with sections on everything from mic placement to synchronisation and MIDI. We've obtained some great 4 track pricing and for a limited period, we will give you the 4 track pack (normal price £59.99) absolutely free when you purchase any of these multitrack recorders.

XR SERIES MULTITRACK RECORDERS — ALL INC '4 TRACK PACK' — FOSTEX

NEW **£249**

XR3 High speed machine at £249! New auto-bounce facility and built in mic - ideal for 4 track recording on the move.

XR5 Stunning new double speed Fostex machine with individual EQ, up to 3 aux sends and 2 stereo returns. 2 inserts & 4 separate tape outs allowing use with an external mixer.

~~RRP £420~~ **£335**

~~RRP £495~~ **£449**

XR7 The XR7 breaks new ground in price and performance - 6 inputs (2 mics), 2 separate aux sends, lowfrq plus sweep mid EQ. Records up to 4 tracks at once - double speed transport, Dolby C.

SV3800 INDUSTRY STANDARD DAT RECORDER — Panasonic

The Panasonic SV3700 has been the industry standard mastering DAT recorder, and is now superseded by the SV3800. Using 1 bit, 64x oversampled (equivalent to 20 bit), you can be sure of the highest possible sound quality. Records and plays back at all 3 sample-rates via analog and digital inputs. Highly usable jog/shuttle wheel. AES/EBU and SPDIF digital connections, error counting and many other software features. In stock now!

~~RRP £1291~~ **£POA**

PORTASTUDIOS — TASCAM

PORTA 03 MkII

New version of a classic portastudio. Improved styling and metering.

~~RRP £229~~ **£149**

ALL INC '4 TRACK PACK'

NEW **£349**

414

All new Portastudio from Tascam! Records to all 4 tracks at once using DBX noise reduction. Double speed recording for better bandwidth, 2 band EQ, 4 mic inputs and full LED metering make it great value for money. Includes free four track pack!

424 MkII

A brand new version of the best selling 424 from Tascam, inventors of the portastudio. Features include 3 band EQ with a mid sweep, records to all 4 tracks at once, 2 independent auxiliary sends (1 switchable pre/post fade). Logic controlled 2 speed transport with built-in memory location points. DBX noise reduction, initial supplies limited.

~~RRP £499~~ **£469**

MT50 MULTI-TRACKER — BOTH INC 4 TRACK PACK — YAMAHA

The MT50 can record on all four tracks simultaneously, and works at double the normal speed for improved frequency response and reduced wow and flutter. Each channel has it's own two band EQ, an auxiliary send for use with effects units, and DBX noise reduction is incorporated to keep background noise to a minimum. A special 'sync' output bypasses this so as not to interfere with timecode.

~~RRP £389~~ **£299**

D5 DAT RECORDER — INC 5 FREE 90min DATs — FOSTEX

Exclusive scoop purchase on a genuine professional machine brings quality within reach of the rest of us. Now that Sony's domestic machines are discontinued, this is one of the cheapest DATs around, but just look at the spec list. 19" rackmount, 44.1 kHz analog recording SCMS-free operation, error detection indicators, balanced ins and outs on XLRs, AES/EBu professional digital connections as well as all the usual DAT features from the makers of the industry standard D208 timecode machine. Huge reduction.

~~RRP £1299~~ **£769**

MT4X MULTI-TRACKER

The MT4X is Yamaha's top of the line machine and has a specification to go with it! It's logic controlled transport means that as well as two autolocate points and 'return to zero' function, you also get a special 'rehearsal' mode, so that you can practice dropping in and out as many times as you like, without risking erasing your precious recording! Other great features include three band EQ on each channel, two auxiliary sends, LCD metering, double or single speed operation, and individual track outputs for use with an external mixer.

~~RRP £569~~ **£399**

We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT. UK mainland carriage £9.99. E & O E

turnkey 0171 379 5148 turnkey 0171 379 5148
Fax: 0171 379 0993 114 Charing Cross Road London WC2H 0DT E-mail: sales@turnkey.demon.co.uk Web site: http://www.turnkey.uk.com

PRICES GUARANTEED*

A DIGITAL HURRICANE IN YOUR PC?

99% of available sound cards use the old-fashioned "DMA" system of recording audio in order to be compatible with Soundblaster games. With the Pinnacle and Fiji, Turtle Beach abandoned this system in favour of their proprietory Hurricane architecture. Basically, it gives you more tracks than DMA on the same PC hardware, and leads to less driver conflicts.

FREE DIGITAL ORCHESTRATOR PLUS WITH PINNACLE (WORTH £129)

The Turtle Beach Multisound series has long been considered the "Rolls Royce" of sound cards, from the very first Multisound in 1993, through to the highly respected Tahiti card, and now - the Multisound Pinnacle.

The audio quality of the Pinnacle is beyond reproach, based around a Motorola DSP. with 20bit convertors on both record and playback, 64x oversampling, and Delta/Sigma convertors. An on-board Kurzweil chip provides a top-quality set of synth sounds, which can be augmented with your own samples which can be mapped to a MIDI keyboard via the SampleStore™ control panel. (Up to 48 Meg of samples can be loaded, depending on the size of SIMMs fitted). Create your own drum-kits, mix in break-beats sampled from CD etc... etc...

Other upgrade options include a synth daughter-board (eg DB50XG), cable for MIDI interface, and S/PDIF daughter board allowing direct digital transfer to/from DAT, CD player, MiniDisk etc... (£99 for either card). The Pinnacle is bundled with Voyetra's D.O.P. sequencer which gives up to 16 audio tracks with digital effects (eg reverb, delay....) depending on hardware specification.

- 20 BIT DAC / ADC
- Enhanced or Std Duplex
- Sample Store (up to 48 Meg)
- Kurzwell Wavetable synth
- WaveBlaster™ connector (for DB50)
- Optional S/PDIF daughterboard

PINNACLE
£479
INC. FREE DIGITAL ORCHESTRATOR PLUS

FIJI
£369
A PINNACLE BUT WITHOUT SYNTH & SAMPLESTORE

£249 WHEN PURCHASED WITH FIJI OR PINNACLE

£349 WHEN PURCHASED WITH FIJI OR PINNACLE

£249 WHEN PURCHASED WITH FIJI OR PINNACLE

03D Digital Console

FREE TRIAL OFFER — YAMAHA

Like the 02R, the 03D is a fully-automated digital mixing console set to have a large impact on the mixing market. With 26-inputs & 18-outputs the console features fast 32-bit internal digital audio processing, versatile analog and digital I/O configuration, new 32-bit onboard multi-effects processors with freeze (sampling) and guitar amp simulation effects, motorised faders, fader and mute grouping, surround sound mixing, onboard automation, MIDI remote capabilities and much more. *Call now for a Turnkey Professional brochure and a free trial!*

NEW PRODUCT **£2999**

02R Digital Console

The fully digital 40 input 8 bus console with total automation and moving faders. 4 band parametric eq and dynamics for every input and 2 comprehensive on-board fx processors with a range of reverbs, delays and other standard fx. Optional interface cards allow full digital connection of ADAT, T-DIF and AES/EBU formats for integration of MTR and hard disk systems.

RRP £6999 **£POA**

PROMIX 01 Digital Mixer

STOP PRESS! NEW LOW PRICE ONLY AT TURNKEY

RRP £1999 **£1499**

CALL TURNKEY PROFESSIONAL ON 0171 240 4036 FOR DETAILS

DIGITAL PROBLEM SOLVERS

FRIEND-CHIP

In today's increasingly digital world, many people are still using their equipment's analogue ins and outs, because of the difficulty of interconnection and synchronisation. Friend Chip's new sensibly priced digital patchbays and 'black box' problem solvers end the misery and make the digital studio a reality! The DigiMax digital patchbay (£299) has 8 inputs and outputs (2 each on optical), can accept both AES/EBU and SPDIF signals, and is MIDI controllable. An XLR version (£499) is also available for greater AES/EBU reliability. The Audio Time Base (£499) is a 1u 19" rack which acts as a master clock source for your studio, outputting word clock, Digidesign Super Clock and SPDIF. The master clock can be internally generated, or a reference taken from mains, SPDIF word clock, Super Clock, video or LTC (SMPTE). Lockup from timecode is in around 1 second!

Also in the range:

DP-CON: optical to co-axial and vice versa £69
PRO-CON: SPDIF to AES/EBU and vice versa with SCMS stripping £129
D 4-2 COPY CON: switcher with 1 optical & 3 co-ax ins, 2 co-ax outs and SCMS stripping £99
SRA4.1: converts almost any incoming sample rate to 44.1kHz (ideal for ProMix01 and non 44.1 DATS) £149
SRC/W: sample rate conversion to 32, 44.1, 48kHz, with lock to external word clock £249
Super Clock Driver: converts DigiDesign superclock to word clock and vice versa, 3 outputs £129
Silent Audio Clock: converts Super Clock to word clock and vice versa with synchronous SPDIF signal £129
ADAT Audio Clock: ADAT 9 Pin to word clock, Super Clock and SPDIF clock convertor £129
ADAT Word Clock Synchroniser: ADAT 9 Pin to word clock and Super Clock converter, also sends MTC (synchronise your sequencer) with MIDI merg £199
ADAT SPDIF Synchroniser: as above but with converts only to SPDIF £199
ADAT MIDI Machine Control: MIDI to ADAT 9 Pin convertor with MIDI thru (add to either of the above for full remote ADAT control from your sequencer) £69
Rack Kit: holds up to three 'black boxes' £49

FROM **£69**

DA38 DIGITAL MTR

TASCAM

The DA88 has become the industry standard digital MTR in professional film, and audio recording. The new DA-38 looks set to build on this with features that include 18bit x 64 oversampling A/D's, 20bit x 8 D/A's plus via T-dif 24bit digital recording at 48 or 44.1 kHz. An internal electronic patchbay allows any input to be routed to any track and output. Plus up to 16 DA-38 units can be connected together and with the optional MMC-38 allows for sequencer and timecode control. Incredible price reduction only at Turnkey.

RRP £2999 **£1999**

DD8 HD MULTI-TRACK RECORDER

NEW PRODUCT — AKAI

Akai's new DD8. Records and/or plays back 8 tracks at a time directly onto hard drive, or crucially, 2.6 gig magneto optical carts. There is finally no lengthy backup at the end of a session, or reload at the beginning (of course you can still make a safety copy if you wish to). Sync multiple machines together, use it with the DL1500 remote for DD1500 style SuperView operation and editing, choose from a myriad of expansion options: TDIF, ADAT, AES/EBU and analog I/O, digital EQ, Ethernet, SMPTE, MIDI, 9 PIN and Biphase synchronisation - the list is endless! *Call for a Turnkey Professional Brochure and a free trial.*

PRICES FROM **£3199**

VS880 DIGITAL WORKSTATION

INC FREE HD & FX — Roland

It's an 8 track recorder (each with an additional 8 virtual tracks) and a 14ch digital mixer complete with automation. Our package includes the VS8F1 fx board giving RSS and SE70 type effects, and an internal 840 meg IDE drive. New version 2 software (available as an update) gives loads of new FX algorithms, mic simulation, and allows midi data to be recorded to the hard drive.

RRP £2384 **£1649**

DR-16 HD MULTI-TRACK RECORDER

First there was the DR4, then the DR8, and now Akai bring you 16 tracks of no-nonsense hard disk recording in a single box! 8 inputs and 16 individual outputs are provided making it perfectly suited for full blown multitrack recording. Amongst the options available is a video output board to give a full colour display of all the tracks, which makes editing a breeze. Buy now from Turnkey and we will include a free 2 gig hard drive!

RRP £4199 **£3599**

INC FREE 2GIG HD

CALL TURNKEY PROFESSIONAL ON 0171 240 4036 FOR DETAILS

MULTITRACKS NEW, USED & EX DEMO

Alesis ADAT XT ... £1750	Fostex XR7 ..... £399	Tascam DA20 ..... £629
Akai DR4D £1056	PanasonicSV3800 .. £1199	Tascam DAP1 ..... £749
Fostex D5 ..... £729	Sony DTCA6 ..... £649	Tascam DA38 ..... £1999
Fostex D80 ..... £1199	Sony MDSJE500 .... £269	Yamaha MD4 ..... £699
Fostex DMT8VL £850	Tascam 414 ..... £329	Yamaha MT4X £379
Fostex XR3 ..... £219	Tascam 424MK2 .... £449	Yamaha MT50 ..... £269
Fostex XR5 ..... £235	Tascam Porta03 MK2 £149	Yamaha MT8X £799

D80 HD RECORDER

2 FREE LOOMS — Fostex

The D80 is a 3U rackmount unit, with 8 individual in/outs and outputs, a removable front panel doubles as a remote and meterbridge, a removable 1.3 gig hard drive. Slaves to MMC as well as being able to act as a master, all with no track loss, and has SPDIF digital ins and outs to allow backup to a standard DAT machine and direct digital recording. Easy to use editing allows cut, copy and repeat pasting across multiple tracks.

RRP £1499 **£1249**

NEW D90 only £1499 WITH ADAT I/O, SCSI & BALANCED OPTIONS

DMT-8 VL DIGITAL MULTITRACKER

INC 4 TRACK' PACK & SM58 — Fostex

The personal digital multi-track is here at last, and at a price you won't believe! 8 separate tracks of CD quality audio recorded to half-gig hard-disk (up to 12 minutes). Record 2 tracks simultaneously, jog-shuttle audio and sync to MIDI without losing a track. The 8 channel mixer accepts 2 mics, with ø 2 band EQ and 2 aux sends. Separate output, and S/PDIF optical output. Why buy 4 tracks when you can have 8?! INCLUDES FREE SM58 mic. ONLY AT TURNKEY

RRP £1499 **£999**

*We will beat any genuine ... UK or European ... We must be able to supply ... and the goods must be available and in stock ... Prices include 17.5% VAT. E & O E. UK mainland ... Prices £8.99

Authorised Dealer Soundcraft DRAWMER MACKIE Roland SONY TASCAM FOSTEX digidesi

EUROPE'S LOWEST

ZOOM

A JOURNEY TO THE MOON!

Zoom is a Japanese company that was set up a few years ago by disgruntled staff from some of the major Japanese manufacturers. Their sole aim was to produce innovative new effects processors, that represent the best value for money on the market. Have they achieved that aim? We certainly think so!

1202 *TRUE STEREO FX PROCESSOR*

The 1202 is a full 19" rack unit, featuring true stereo 16 bit processing at 44.1kHz. The quality of the reverb alone would make it worth the price, but there's lots more: two simultaneous effects are offered, including delay, chorus, flanging, tremolo and pitch shifting, as well as various reverb types including reverse. If one of the 512 presets doesn't suit exactly then using the two parameter knobs will allow you to tweak the program until it does, and the addition of 2 band EQ will further tailor the sound to your mix.

~~RRP £149~~
£99

- *16 Bit 44.1kHz True Stereo FX Units*
- *Great Quality Reverb & Multi FX*
- *Vocoder Effect and Mic Input on 1204*
- *Over 500 Different Presets*
- *Free Rack Unit & Cables Only at Turnkey!*

1204 *TRUE STEREO FX PROCESSOR*

The 1204 builds on the success of the 1202 by adding MIDI control, 100 extra user presets for storing your own edits, and a two digit LED display. On top of this, there is also a rotary speaker effect, and a vocoder - a front panel mic input is even provided for quick and easy setup.

Nothing else touches these units at the price - check one out today!

RRP
£199

INC FREE 10u DESKTOP RACK & 4x 3m JACK LEADS

dbx

1066 *DUAL COMPRESSOR LIMITER GATE*

DBX build on the success of their highly acclaimed dynamics processing range with the flexible new 1066. In addition to all the professional features expected from this respected brand, the 1066 offers switching between their patented "Overeasy" soft-knee and hard-knee modes, sidechain switching, ultra-low distortion "Peak Stop Plus" limiting and meticulous US hand-built quality.
A/B this product at Turnkey to hear why DBX remains an industry standard in signal processing.

NEW BOXED
£479

266 *DUAL COMPRESSOR GATE*

Two channels of classic dbx compression with new Auto-Dynamic™ Attack and Release controls, program-adaptive expander gates, balanced inputs, precision LED metering and sidechain insert. Front panel selection of stereo or dual mono operation in a standard 1U rack design. Entire dbx range on demo at Turnkey!

~~RRP £229~~
£199

286A *'CHANNEL STRIP'*

These days, in the age of MIDI and hard disc recording, most people tend to only record one audio track at a time, and have seen the value in investing in a good quality microphone. However, a mic is only as good as the circuitry you pass it through afterwards, and for some time, high end manufacturers have produced 'channel strip' style boxes which include all the essential acoustic recording processes in one device. Now the DBX 286A brings you a high quality mic pre amp, Over Easy compressor / de-esser, enhancer and expander / gate all in one device, offering you a premium quality signal path at a budget price. The ideal enhancement to any project studio!

~~RRP £229~~
£199

163A *COMPRESSOR/LIMITER*

Compressors and de-essers are an essential part of the recording process, but the plethora of controls that many of them are fitted with can often lead to confusion and ending up with a worse result than you started with. The DBX 163A and 263A are designed to give you high quality results with total simplicity - a single control gives you 'more' or 'less', and the rest is all taken care of for you. The units are also ideal for portastudio and budget mixer owners, as they sport a front panel mic input, so no insert points are required. Buy one of each and get a free universal rack tray. Limited stocks only - order now to avoid disappointment!

~~RRP £189~~
£99

263A *DE-ESSER/COMPRESSOR*

~~RRP £169~~
£99

BUY THE 163A & 263A AND GET A FREE UNIVERSAL RACK TRAY

VTP-1 *DIGITAL MIC PRE*

DigiTech

The all new 2 channel VTP1 tube mic amp / EQ looks set to take the market by storm. It combines four bands of semi parametric EQ with a high definition mic amp based around a proprietary valve design. Phase reverse, high pass filter, 20dB pad (line inputs also available) and 48v phantom power are provided, together with high quality balanced analog outputs, and AES/EBU and SPDIF outputs at 44.1 or 48 kHz. Ideal front end for any digital system.

NEW BOXED
£999

VCS1 *COMPRESSOR*

The VCS1 is brimming with innovation and quality, and brings you a sensibly priced dual channel valve dynamics processor with plenty of useful features. The compressor has the usual envelope, threshold and ratio controls, but is also switchable between hard and soft knee compression, and has an auto mode for ease of use. There are also separate gate and limiter sections, to give highly detailed signal control. Valve gain is variable to give a range of sound from subtle colouring through to controlled distortion. Call for more info.

NEW PRODUCT
£799

CALL TURNKEY PROFESSIONAL ON 0171 240 4036 FOR DETAILS

XR300 *SYNCHRONISER* **TURNKEY EXCLUSIVE**

XRI Systems

Long the synchroniser of choice in professional studios, we now economically bring you this industry standard unit at an unheard-of price. Features include true SMPTE at all standard sample rates, MIDI clocks / Song Pointers or MTC for compatibility with all MIDI sequencers. Large LED time-code display. Merged MIDI input. Straight-forward operating system. Full 19" rack unit.

~~RRP £299~~
£159

STEREO VITALIZER *ENHANCER/EXCITER PROCESSOR*

The Vitalizer is the Rolls Royce of enhancer / exciter processors. Using a significantly different process to other such products, the effect deals with the full frequency range and is substantially smoother and richer. Also included is a "surround" effect which varies the width of the stereo field: massive bulk purchase allows this unbelievable price - check one out now - we guarantee you'll be impressed.

~~RRP £569~~
£299

G4 *ROTARY SPEAKER SIMULATOR*

KORG

Ever wondered why you can't quite get your organ sounds to sound like a real Hammond? That's because half the secret of the sound lay in the special rotating Leslie speakers used to give the characteristic vibrato effect. The G4 allows you to control acceleration, speed, rotor / horn balance, and even mic placement, giving a superb reproduction, complete with overdrive.
Loads of creative uses including loop processing, guitars etc, as well as organs.

This incredible end of line clearance deal with a 75% reduction means they will sell out fast. Buy now to avoid disappointment!

~~RRP £389~~
£99

STUDIO QUAD *4 CH. STUDIO FX PROCESSOR*

DigiTech

At last - Multi effects as they should be! The new Digitech Studio Quad features not only their custom designed and ultra-powerful '3-DISC' chip, but also 4 independent inputs and outputs, which using the built-in sub-mixer, can be configured as 4 mono lines feeding 4 effects processors, feeding 4 stereo outputs. Huge screen, and new intuitive operating system make editing a breeze. 20 bit convertors give greater than 90 dB signal to noise ratio. Effects include reverbs, delays, detuning, chorus, flanging etc... Hundreds of other features too numerous to mention.

~~RRP £529~~
£POA

PCP330 *VOCODER*

FAT

Freeform Analog Technologies FreeBass is already one of the most successful sound modules of the year, and now following hot on its heals comes the PCP330 Procoder. One of the most asked questions in the industry must be "Why doesn't anyone make a vocoder anymore?" - well here it is, with a fantastic feature list, great sound quality and a down to earth price. The carrier can be either an internal VCO or external line input, whilst both line and mic inputs are given for the modulator signal. Eleven filter bands each have their own level knob on the front panel giving true hands on control of your sound, and the sibilance (unvoiced) control also has an external input if required. The final output can contain any mix of modulator, carrier, vocoded signal and a special filtered version of the signal. Remember, this doesn't only create robot voices, there are thousands of creative uses, and it's also ideal for processing drum loops. Order now and own an instant classic!

NEW PRODUCT
£299

MIDIVERB 4 *PRO QUALITY FX UNIT*

ALESIS

The MidiVerb 4's excellent Alesis effects algorithms produce ultra-natural Reverberation, rich Chorus and Flange, Delay and Pitch effects that are designed for professional use. There are thirty-two effects algorithms, and 128 Preset and 128 User Programs to choose from. Large backlit LCD, online help, MIDI controller routing and programmable footswitch give you complete creative control. Choose £50 worth of cables absolutely free - only at Turnkey!

~~RRP £329~~
£289

INC £50 WORTH OF CABLES FREE

COMPOSER *WORKHORSE COMPRESSOR*

BEHRINGER

A natural sounding and fully featured compressor at a give away price!
Built-in gate removes any unwanted noise, soft-knee action makes compression much less obtrusive, "auto" mode makes quick setup a doddle and side-chain access means it can also be used for de-essing etc.

~~RRP £349~~
£199

*We will beat any genuine quote from a UK or European dealer, (must be able to supply in the UK), and the goods must be available and in stock. Prices include 17.5% VAT. E & O E. UK mainland carriage from £9.99

turnkey 0171 379 5148 turnkey 0171 379 5148

Fax: 0171 379 0093 114 Charing Cross Road London WC2H 0DT E-mail: sales@turnkey.demon.co.uk Web site: http://www.turnkey.uk.com

PRICES GUARANTEED*

Bellari

PREMIUM QUALITY VALVE OUTBOARD EQUIPMENT

If you've previously used valve equipment, you'll be well aware of the magical quality that tube circuitry produces, and if you haven't used it - try it now! Many manufacturers use the word valve as an excuse to charge exorbitant prices for their product, but not Bellari, and our factory direct exclusive makes the range unbelievable value for money!

The RP583 Studio Tube Compressor / Limiter has become an instant hit, offering as it does two channels (stereo linkable) of some of the finest sounding compression money can buy, with a smooth and natural compression characteristic. Ratio is continuously variable from 2:1 to infinity, and there are separate controls for attack, release, threshold and make-up gain. Dual VU metering is provided, as well as jack and balanced XLR ins and outs, and sidechain access is fully catered for. Ideal for a variety of instruments, vocals and complete mixes.

NEW PRODUCT **£499** FACTORY DIRECT

RP533 Studio Tube Multi-Processor

Whilst mixers these days are of a better quality than they used to be, to get the best possible signal to tape or disk, you can't beat a dedicated unit - and for value for money, you can't beat the Bellari RP533 Studio Tube Multi-Processor. The all tube 2u box, features a premium quality transformer balanced mic pre amp with switchable 30dB pad, phase reverse and true 48V phantom power. The compressor has all the features of the RP583, and the exciter section adds a wonderful sheen to virtually any sound, as well as beefing up the bottom end. Each stage has it's own bypass switch, sidechain access is provided, and the large VU meter can monitor input, output, or gain reduction. No serious recordist should be without one!

NEW PRODUCT **£499** FACTORY DIRECT

RP520 Studio Mic Pre Amp

A true dual tube mic pre amp at a bargain price, with tubes used at all the crucial gain stages, not just strapped across the outputs. Features include phase reverse, input and output pads, separate gain and output level controls, true 48v phantom power, jack and XLR ouputs and dual VU meters. Bypass you desks mic amps and feel the quality!

NEW PRODUCT **£399** FACTORY DIRECT

RP562 Stereo Exciter

Traditional exciters usually do a good job of brightening up the extreme top end, but can often leave you with a rather harsh signal lower down. The incredible warmth of the Bellari Sonic Exciter ends all that, providing a sparkling top end with no harshness, and a huge bottom end to boot. The stereo unit has both jack and XLR connectors, dual VU meters, and even a separate subwoofer output with it's own cutoff and level controls. Superb sound quality at a fraction of the price of similar devices.

NEW PRODUCT **£299** FACTORY DIRECT

ADB3 Stereo Direct Box

Stand alone 2 channel tube DI box.

NEW PRODUCT **£129**

MP110 Direct Drive Mic Pre Amp

Stand alone single channel tube mic pre amp.

NEW PRODUCT **£169**

GREEN RANGE

Focusrite

Focusrite have long represented the pinnacle of audio achievement, but sadly their products have always been out of reach for most of us. Now, specifically with the high quality project studio in mind, they have designed the Green range of processors. The first 5 products are:

RRP **£819** DUAL MIC PRE

The Focus - 4 band parametric EQ with filters.

RRP **£939** FOCUS EQ

The Dual Mic Pre - an audiophile quality dual channel mic preamp.

RRP **£989** VOICE-BOX

The Voicebox - this combines a mic/instrument preamp, compressor, de-esser and parametric EQ in a single unit - the ultimate signal path for digital recording!

RRP **£1049** COM-PRESSOR

The Compressor - highly versatile compressor with hard & soft knee types, separate limiter and gate and built-in sidechain filters.

RRP **£1029** CHANNEL STRIP

The Channel Strip - similar to the Voicebox, but also featuring line level inputs and extra EQ.

All 5 are on permanent demo at Turnkey

CALL TURNKEY PROFESSIONAL ON 0171 240 4036 FOR DETAILS

EQ1 Parametric EQ

TL Audio

TLA's range of outboard must be the best selling valve gear ever! Their classic warm valve sound, combined with the low noise floor that modern digital recording demands have made them a huge success story. Our tremendous buying power now allows us to offer the superb EQ1 at this incredible price. The EQ1 is a dual 4 band (or single channel 8 band) parametric EQ - a high performance transformerless pre amp is followed by four valve stages per channel, which provide a fine and gradual overdrive characteristic, and a frequency response which is virtually flat from 20Hz to 40kHz. Limited quantities only at this price!

RRP ~~£821~~ **£499**

CALL TURNKEY PROFESSIONAL ON 0171 240 4036 FOR DETAILS

PME8 PARAMETRIC EQ

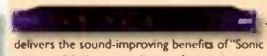
PEAVEY

Unbelievable clearance deal on this top quality parametric EQ from Peavey. Built to their usual high standards, the PME8 is a 2U rackmount featuring two channels of fully parametric (cut / boost, frequency and "Q") 4 band EQ, clearly laid out, and each control with its own knob. A second output is also provided with a 40Hz high pass filter for removing unwanted rumble etc. Very limited stocks only - first come, first served!

RRP ~~£309~~ **£149**

362 Sonic Maximizer

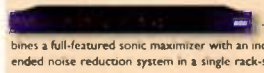
BBE



The 362 series delivers the sound-improving benefits of "Sonic Maximizer" technology with the convenience of ganged-stereo operation.

RRP ~~£189~~ **£169**

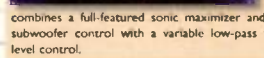
362NR Sonic Maximizer + Noise Reduction



The 362NR combines a full-featured sonic maximizer with an independent, single-ended noise reduction system in a single rack-space unit.

RRP ~~£289~~ **£199**

362SW Sonic Maximizer + Sub Woofer Control



The 362SW combines a full-featured sonic maximizer and an independent subwoofer control with a variable low-pass filter and output level control.

RRP ~~£269~~ **£169**

MPX 1

lexicon

For those of us who need top quality reverb & multi FX but cannot stretch to the expense of the PCM80 & PCM90, Lexicon have released the MPX-1. Featuring the famous 'Lex' chip for reverb and separate DSP processor for multi FX, the MPX-1 brings you all that is good in signal processing for under £1200 inc VAT! Up to 5 simultaneous effects are available including pristine quality stereo pitch shifting, and effects can be "morphed" from one algorithm to another, as pioneered in the Vortex. All new operating system includes on-line help and database for storing presets. Achieving quality results is as stress free as possible.

RRP ~~£1199~~ **£999**

PCM80 EFFECTS PROCESSOR

The PCM80 effects processor has state of the art audio quality with true stereo processing, amazingly detailed editing including MIDI clock control and a card slot. Cards include Dual FX, Pitch FX and the Martin Gershin card.

RRP ~~£2199~~ **£1899**

4 POLE FILTER

waldorf

The 4 Pole is the legendary Microwave / Wave 24 dB lowpass filter. You are free to apply this filter to any audio signal that you patch into the Filter. So if your favourite sampler or sample player lacks that special quality, you can give it a sonic boost via the 4 Pole Filter.
It is the most powerful (and quite possibly the only) analog filter available today!

NEW BOXED **£269**

X POLE FILTER

What do you get if you take two of Waldorf's 4 pole filters, put them in a rack and spice it up? The all new X-Pole! Maintaining all of the 4 Pole's great sound, MIDI and tactile controllability, the X-Pole allows you to treat two mono signals independently, or the two channels can be linked together for a stereo signal. 2u rack design makes for easy integration into your studio. Fatten up your sound today - your loops need never be the same again!

NEW PRODUCT **£439**

ALEX EFFECTS PROCESSOR

If You're looking for a straight reverb unit, Lexicon have a reputation that's hard to beat! These are the cheapest units to offer the famous 'Lex' sound - The Reflex has the additional benefit of dynamic MIDI, allowing real time control of multiple effects parameters. Huge discounts only at Turnkey!

RRP ~~£389~~ **£249**

REFLEX ALSO AVAILABLE WITH MIDI CONTROL only £299

OUTBOARD NEW, USED & EX DEMO

Alesis 3630	£149	BBE 362	£199	BOSS VT1	£279
Alesis MEQ230	£229	BBE 462	£279	Drawmer M500	£495
Alesis MICROVERB4	£195	Behringer EX2100J	£119	Lexicon ALEX	£249
Alesis MIDIVERB4	£275	Behringer EX3100	£189	Lexicon MPX1	£959
Alesis Nanoverb	£135	Behringer MDX1200	£149	Lexicon REFLEX	£299
Alesis QUAD2	£549	Behringer MDX2100	£199	XRI 300	£125
APHEX-104	£219	Behringer MDX2400	£199	Yamaha REV500	£369
APHEX-108	£219	BOSS GX700	£369		
APHEX-109	£367	BOSS SX700	£349		

*We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT. E & O E. UK mainland carriage from £9.99

KORG ensoniq AUDIS Steinberg Technics Vestax KURZWEIL FATA

EUROPE'S LOWEST

Steinberg

PLUG-IN ARCHITECTURE PC WAVE EDITOR

WaveLab is a native 32-bit Windows 95/NT application which makes full use of the latest developments in 32 bit technology. It is the fastest Audio Editor currently available on the market, and can utilise any Windows compatible Sound Card as well as the Digidesign Session 8 PC. An integrated Audio database for managing audio files on multiple media is included, and it is also the first program on the PC that incorporates high-quality Time Stretching/Pitch Shifting using the same algorithms as the famous Steinberg Timebandit program on the Mac. True multitasking is supported - you can edit, process, undo/redo, load and save, all while the file is being played back!

WaveLab is the only Audio editor that provides unlimited and instantaneous Undo and Redo, and basic editing operations like copy/paste are equally fast, regardless of whether the file contains five seconds or one hour of audio! Other features include the ability to simultaneously process an unlimited number of files (batch processing) and advanced Spectrum analysis time stretching, pitch correction, harmoniser, hi-fi chorus, parametric equaliser, dynamics processor, markers, advanced zooming, real time scrolling on playback, Windows 95 context help in all dialogs, and even "Tips of the day" on startup! All in all, there is no finer wave editing program available for the PC, and the plug-in architecture means the program is totally open ended, allowing enormous scope for future expansion. Get £50 off the price of any soundcard when purchased with Wavelab. Another Turnkey megadeal!

- *32 bit Windows 95 Native Application*
- *Plug In Architecture Allows 3rd Party Algorithms*
- *True Multitasking Environment*

RRP £349 NEW BOXED

ZIP REMOVABLE DRIVE

INC DISK & SCSI CABLE — iomega

There was a time when hard disks were a luxury for sampler owners, but with the advent of the ultra cheap Iomega Zip Drive, this has become a thing of the past. For under £150 the Zip drive stores 100Mb (94Mb formatted) on each cartridge. A must for anyone with more than 2 meg of RAM!

RRP £219 **£149**

SIBELIUS-7 TOP-END NOTATION V3.0

Sibelius

Why do so many music academies use a program which doesn't work on the PC or Mac?! Because for professional notation type-setting, nothing else comes close. "In a totally different league from anything else" - Paul Patterson, Royal Academy of Music. Future Music Platinum award.

We are now an Acorn Authorised Dealer, we stock and demonstrate the exciting new RiscPC computer, running RiscOS/3 powered by the 200 MHz ARM Processor, and with optional 486 or 586 board for running Microsoft Windows software.

Acorn

Call Geoff for DEMO. One to one tuition also available upon request.

FROM ONLY **£499**

TURNKEY PENTIUM PC

turnkey

Two things we've noticed over the last year is the enormous growth of the PC hardware market (as more and more people become PC owners), and the unfortunate proliferation of sub-standard hardware. Our response to this is the launch of the new Turnkey PC. Based on carefully chosen components, this workhorse machine will not let you down, and offers a specification which will not restrict your options, either now or in the future.

Turnkey PC + MIDIMan DMan + Digital Orch	£1699
Turnkey PC + Pinnacle + Digital Orch	£1829
Turnkey PC + Fiji+ Cubase 3.0	£1999
Turnkey PC + Pinnacle + Cubase 3.0	£2099
Turnkey PC + Audiowerk8 + Logic Audio	£2249

Intel P166mmx, 512k cache, 32 Mb RAM, 2 Gig HD, 12x CD

Ask about upgrades to P200mmx chip, 15" and 17" displays, SCSI cards and CD-R drives.

MUSICTIME NOTATION ARRANGER

PASSPORT

MusicTime has been our best selling music package for 4 years. Based around the industry leading 'Encore' software (as used by Disney, and many film & TV producers), it allows you to perform all editing functions without leaving the notation environment, making it simple and clear to use, especially for people with some classical music training.

Keyboard Review - *Overall I found MusicTime an extremely well thought out program as well as being versatile, user friendly and very good value for money. As a music type-setting package I have no hesitation in giving it the highest recommendation.* (rated 94% Diamond Award)

RRP £89 **£79**

With MusicTime Deluxe, you get both CD-ROM and floppy versions in the box, and many more features including part extraction, cross-staff beaming, correct playback of complex repeats (DC, Coda etc), and automatic part extraction. Also includes a free Soundblaster™ type MIDI interface cable.

RRP £129 **£99**

NEW DELUXE VERSION

CAKEWALK v6.0 GREAT NEW VERSION IN STOCK

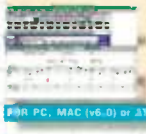
CAKEWALK

The top US sequencer races ahead with new version packed with killer features - 10 or more audio tracks (processor dependant). Realtime effects (reverb, flange, EQ, chorus, delay, up to 4 at once). Time compress/expand, pitch-to-midi conversion, support for Microsoft DirectX Audio Plug-ins (eg KS Waves). CW Pro 6 can completely control a VS880, ProMix01 or Mackie1604vlz0, or you can design your own mixer screens.

ON DEMO **£329**

BAND-IN-A-BOX INTELLIGENT ARRANGER v7.0

PG Music



Tired of starting each song with a "Blank Slate"? Band-in-a-Box is the world leading intelligent arrangement software. Combine your chord ideas with built in styles, or create your own. NEW VERSION now includes full GS / XG compatibility, as well as 'Auto Soloing' which has to be heard to be believed. Notation / Lyrics display during playback. Can export music into Cubase.

#1 SELLER **£89**

FOR PC, MAC (v6.0) or ATARI (v5.0)

DIGITAL ORCHESTRATOR PLUS DIGITAL AUDIO SEQUENCER

Voyetra

"D.O.P." allows recording or playing of independent digital audio tracks synchronised with MIDI tracks. The number of digital tracks is limited only by a user's hardware. Full drag and drop digital audio editing features are provided, as well as unlimited bouncing of tracks and support for multiple sample rates, import & export of WAV files. Audio Transforms include digital delay, chorus and flange to fatten up tracks, noise gate, limiter and compressor controls to remove unwanted noise and alter dynamics; and echo, reverb, reverse and fade/crescendo.

NEW **£129**

SOUND STUDIO GOLD AUDIO SEQUENCER + EFFECTS

Evolution

At £149, Sound Studio Gold is the **cheapest** hard-disk recording sequencer with real-time digital effects. Based on the popular "Samplitude" digital audio engine, Sound Studio Gold adds reverb, echo and other realtime effects, plus a heap of useful features like loop-in-record, AVI support for Video playback, and notation printout. Features: 16 Audio Tracks (mono or stereo) • Audio Record while playback • Audio Track-bouncing • Realtime Reverb/Echo/ Volume/ Panning • 256 MIDI Tracks • Large Time display • AVI Support • Left and Right Master Level faders • VU meters for audio input/record

NEW ONLY **£149**

LOGIC AUDIO "DISCOVERY" DIGITAL AUDIO SEQUENCER

emagic

Based on the highly evolved Logic Audio software (rrp £999), the new Discovery version only leaves out some of the more esoteric notation facilities, foldlers, and has version 1 of Time Machine audio processing - other than that, it's exactly the same! Save yourself £200 today! Minimum spec pc is Pentium 90, Windows 95, 16 meg RAM. Macintosh - any 33 MHz 68040 16 meg RAM. Call the experts.

RRP £299 **£199**

PACKAGE WITH AUDIOWERK8 IS ALSO AVAILABLE only £669

16 BIT DUPLEX FAMOUS NAME SOUND CARD

This deal offers you a 16 bit card with much lower noise levels than similarly priced cards, and allows full duplex recording/play on fast 486 or Pentium computers. Ideal with Cubase Audio, Mastertracks Pro Audio, D.O.P. etc... Built-in MIDI interface (cable included in the price), and optional Wavoblaster connector to provide synth sounds. Really really easy installation with Win95. Just put the card in, switch the PC on, and insert the disk when prompted. Takes about 90 seconds! (a bit longer if existing sound-card is already installed)

RRP £249 **£189**

MIDIQUEST 6.0 UNIVERSAL PC EDITOR LIBRARIAN

Sound Quest

MIDIQuest is the most powerful, flexible and comprehensive editor librarian around, with support for the widest range of MIDI devices including XP50, JV1080 series, Morpheus / UltraProteus, MU50, MU80, Quadraverb Plus / GT, Classic Keys, TD-7, KT76 / KT88, Korg X5, DPM3 and many others. Driver upgrades are generally free of charge, so MIDIQuest will last for as long as MIDI is around! It's a really good investment. New version comes on CD-ROM and is fully Windows 95 native (ie 32 bit).

RRP £235 **£199**

MIDI INTERFACES FOR PC COMPATIBLES

INTERFACES

Gameport Cable	fits any Soundblaster™ type card	£25
MIDI Link	1 in, 1 out serial interface for notebooks	£69
MPC401-II	1 in, 1 out MIDI card with Wavoblaster	£65
Portman 2x4	2 in, 4 out parallel interface for notebooks	£119
Winman 2x2	2 in, 2 out MIDI card for Windows only	£129
MIDI Edge 1x4	1 in, 4 out MIDI card with Wavoblaster	£129
WinMan 4x4s	4 in, 4 out MIDI / SMPTE card for Windows	£219
PortMan 4x4s	as WinMan4x4s except for Parallel port	£219

CUBASE

INC FREE MIDI INTERFACE — Steinberg

CUBASE 3.0 PC The industry standard MIDI sequencer is now even better value than ever! Version 3 now includes hard disk recording facilities that work with virtually any soundcard! ***Score version only £449***

Free upgrade to VST PC version when available

CUBASE VST MAC As well as all the great sequencing and audio recording facilities you've come to expect from Cubase, Power PC owners can now take advantage of up to 32 audio tracks, complete with built in digital EQ, DSP, reverb and FX! ***Score version only £449***

EACH **£329**

We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the claim, and the goods must be available and in stock. Prices include 17.5% VAT. E & O E. UK mainland carriage from £9.99

turnkey 0171 379 5148 turnkey 0171 379 5148

Fax: 0171 379 0093 114 Charing Cross Road London WC2H 0DT E-mail: sales@turnkey.demon.co.uk Web site: http://www.turnkey.co.uk

PRICES GUARANTEED*

emagic

Audiowerk8

- 2 Ins, 8 Outs and Digital I/O on 1 Card
- Use 2 Cards in the Same Computer
- Optional Multichannel Digital Interfaces
- Comes with VMR Software Bundled Free

HARD DISK RECORDING BREAK-THROUGH

Every now and again products like Tascam's first portastudio and the Alesis ADAT come along and revolutionise the recording market. Emagic's new Audiowerk 8 is now set to bring multi-channel computer hard disk recording within reach of everyone.

For an incredible £499 including VAT, you can now buy a PCI card for Mac or PC, which gives 2 analog inputs, 8 analog outputs, and SPDIF digi I/O as standard! You even get Emagic's new Virtual Multitrack Recorder software thrown in!

Virtual Multitrack Recorder

The bundled VMR software gives a clear virtual representation of an 8 track tape recorder, making operation incredibly straightforward. Multiple takes can be recorded per drop, and your favourite version selected afterwards. The large smooth scrolling waveform display makes editing a doddle!

This is just the start of the good news though - the Audiowerk 8 integrates seamlessly with Logic Audio on either platform, you can use 2 cards in the same computer to give 24 track recording with 16 outputs, and a daughter board socket will allow future options like an ADAT 8 channel optical digital i/o, or 4 extra stereo SPDIF outs! The card is only 7" long, so it fits in virtually any machine, and uses state of the art bitstream convertors for pristine sound quality. The card is on permanent demonstration at Turnkey, and the first 50 purchasers will receive a free loom for connection to your mixing desk. Call us now!

NEW PRODUCT
£499
INC FREE 8 WAY LOOM

S3000XL
INC FREE ZIP DRIVE & 16 MEG — AKAI
WORKHORSE SAMPLER

Akai continues it's tradition of supplying workhorse samplers to the studio market with this sturdy offering. The compact 2U rackmount machine features 32 note polyphony, 10 outputs, 2 meg expandable to 32 with SIMMS, SCSI as standard, MESA editing software, and a whole range of expansion abilities including digital i/o and an extra filter board. Buy from us and get 16 meg and a ZIP drive free!

NEW BOXED
£1799

S2000
ENTRY LEVEL SAMPLER

Akai's entry level studio sampler, the S2000 doesn't skimp on features: 32 note polyphony, low pass resonant filters, 2 meg RAM expandable to 32 meg, optional 8 output board and quad FX board. Comes bundled free with MESA software to allow full graphic editing from your computer.

Now bundled with SCSI interface, 8x speed CD-ROM drive, ZIP drive and 8Mb of RAM plus a CD for the incredible price of only:
£1199

RRP ~~£999~~
£899

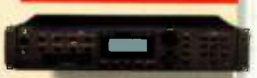
We endeavour to keep all AKAI expansion boards in stock at all times, including those for the more obscure and discontinued models. Here are some examples of ways to get the maximum out of your sampler or hard disk recorder:

IB208P	8 outputs & digi i/o for S2000	£399
IB304F	2nd filter board for S2000/S3000XL	£349
EB16	multi FX board for S2000/S3000XL	
EXM3008	8 meg expansion for S2800/S3000/S3200/CD3000	£549
EXM008	8 meg expansion for S1000/1100	£499
IBM208P	8 outputs & digi i/o for MPC2000	£249
IB807V	monitor output board for DR8/DR16	£499
IB804AEX	8 in 16 out ADAT interface for DR16	£399
IB803M	MIDI interface for DR8/DR16/DD8	£199
IB802T	SMPTE board for DR8/DR16/DD8	£249

E6400
EMU
SAMPLER

Building on the success of the E64 comes the E6400 from EMU. As well as coming with 4 meg of RAM as standard, and all the features of version 2 software, expandability is unrivalled with options including an extra 8 outputs, 32 MIDI channels, 18 bit dual stereo FX processors, and up to 128 note polyphony! Huge EMU CD ROM library available at Turnkey.

NEW BOXED
£2499
INC FREE ZIP DRIVE & 16 MEG



ESI32 + SCSI
SAMPLER WITH V2.0 SOFTWARE

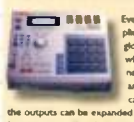
Featuring 32 note polyphony, 4x polyphonic, G-chip resonant filters, huge quality library, (Akai and EmaxII compatible) Time-stretch, doppler FX, parametric EQ, exciter etc.

All E-mu samplers come with free access to our enormous sample library (we have all the Elll library on CD-ROM) and excellent tech support (many staff are owners)

RRP ~~£1199~~
£899

Now bundled with SCSI interface, 8x speed CD-ROM drive, ZIP drive and 8Mb of RAM plus a CD for the incredible price of only:
£1199

MPC 2000
INC FREE 8 MB RAM — AKAI
SAMPLING DRUM MACHINE



Ever since the launch of the Roger Linn MPC60, Akai have led the way in sampling drum machines. It's latest evolution, the MPC2000, is a lot more than a glorified drum machine however - the 64 track sequencer is a [illegible] of what most people consider to be the only real alternative to computer based setups (32 MIDI channels are available), the sampling section is virtually identical to the best selling S2000. SCSI is standard, and the outputs can be expanded from 2 to 10 and digi I/o for only £249! There are far too many other features to mention here - on demo now at Turnkey.

NEW
£1175

MU10
CUBASIS — YAMAHA
GM SOUND MODULE

The Yamaha DB50XG daughter-board took the market by storm. Yamaha release the MU-10 external sound-card! No more screw-drivers, no IRQ conflicts, no DMA problems, just connect to the serial-port (cable included) and install the software. This beats even the easiest plug-n-play cards. FOR SOFTWARE, Yamaha wouldn't settle for the "stocking filler" programs often thrown in with lesser products, MU10 includes the CD-ROM version of Steinberg's brand-leading Cubasis. (not Cubase Lite). Also you can route any sound through MU10 effects!

RRP ~~£199~~
£189

CLUBMAC
PIONEER
EIGHT SPEED CD-ROM DRIVE

If you want access to large amounts of sample library in a hurry, then there's no better way to do it than via CD-ROM. Hundreds of discs are now available full of everything from orchestral instruments to hip hop loops, all ready prepared to load into your sampler. In theory SCSI is SCSI, but in practice it's just not the case, particularly when it comes to samplers. Drives that function perfectly with one machine will often flatly refuse to work with another. So we've taken the guesswork out, and come up with a bargain priced CD-ROM drive that works with all current Akai, Emu and Roland machines, and what's more, it runs at 8x normal speed, for ultra quick loading. Guaranteed to work! (Please specify which sampler when ordering.)

RRP ~~£329~~
£189

REMIX 16
NC FREE HEADPHONES
SAMPLING UNIT

The ultimate performance sampler/mixer.

Akai are world leaders in sampling - just try finding a production studio without one of their machines - and now they have brought that knowledge to the DJ market. 16 pads trigger fully editable samples live, whilst the removable cross fader (with transformer buttons) fades between the deck/line input, and the sampler.

There are far too many features to list here - but if you want to take your mixing to a higher level, this is the tool to do it.

RRP ~~£999~~
£599

AUDIOMEDIA II
digidesign
STEREO HD RECORDING CARD

Turn your Mac into a Hard-disk recording system with the AudioMedia II, which comes with Sound Designer II non-destructive editor software. Features stereo in and out (both digital and analog), and SMPTE sync, as well as realtime compression / Parametric EQ / Pitch Shift and Time Stretch.

Now bundled with MasterLink CD & Yamaha CDE-05 quik_speed CD writer.
£1199

RRP ~~£999~~
£399

SAMPLE LIBRARIES
Time+Space

We have two 100 CD jukeboxes in store holding the complete Time & Space range of sample CDs. Whether you want drum loops for techno, drum & bass or deep house, ethnic instruments & textures or a sound FX library - there's sure to be something to suit your needs.

These discs make ideal fodder for all kinds of sampler, from those built into mixers to full blown stand alone units.

Check one out today!

PRICES FROM
£29

SU10
INC 2 FREE TIME & SPACE CDs — YAMAHA
SAMPLING UNIT

Yamaha's SU10 is a ground breaking unit, making professional quality stereo sampling available to everyone. Up to 54 seconds of sampling is available and 48 samples can be held in memory at any one time. Samples can be filtered, reversed, scaled, crossfaded, pitchshifted and even scratched using the ribbon controller. The built in sequencer means you can produce your own tunes using just this unit! The SU10 comes bundled with 2 free Time & Space CDs containing almost 800 samples.

RRP ~~£299~~
£269

ALSO AVAILABLE WITH 4 OCTAVE MIDI KEYBOARD only £349

DIGITAL ONLY CardD
PC SOUNDCARD

Even the quietest PC sound cards will inevitably pick up some electronic interference just by being in the same case as your VGA card, cooling fan etc... If you've got a DAT machine, the Digital Only CardD could be the ideal choice, since it provides S/PDIF terminals which allow you to use your DAT machine as the DAC and ADC convertor - basically the audio is already in the digital domain before it gets anywhere near the PC. If your source material is already on DAT, you can get it into the PC directly without re-recording it - just a direct digital transfer.

WAS ~~£389~~
£349

COMPUTER
NEW, USED & EX DEMO

Emagic Logic Audio Discovery	£289	Turtle Beach Fiji	£329	Turtle Beach TROPEZ+	£249
Steinberg Cubase 3	£279	Turtle Beach Pinacle	£449	Yamaha DB50XG	£119
Steinberg Cubase score	£379	Turtle Beach Tahiti	£289	Yamaha MDF2	£249
Steinberg Cubasis AV	£129	Turtle Beach TBS2000	£139	Yamaha MU10XG	£159
Steinberg Wavelab	£399	Turtle Beach Tropez	£259	Yamaha SW60	£139

SAMPLING
NEW, USED & EX DEMO

Akai S2000	£849	Emu E64	£1899	Emu ESI32 SCSI	£859
Emu E4	£2199	Emu E6400	£2599	Yamaha SU1	£249

DJ-70 MkII
UNDER HALF PRICE! — Roland
SAMPLING WORKSTATION

With the introduction of the DJ-70MkII, Roland have finally made sampling DJ friendly. A complete sampling workstation, the DJ-70MkII features top quality sampling as in their professional studio models, powerful processing, including excellent resonant filters for great analog style sounds, 8 track sequencer, 3 octave music keyboard, play pads for drums and loops, and a scratch dial. The basic memory of 2 meg is expandable up to 32 meg and up to 24 samples can be played simultaneously. Any DJ-70MkII bought from Turnkey comes with free access to our extensive Roland sound libraries. Call in for a demo today!

RRP ~~£1699~~
£799

*We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT. E & O E. UK mainland carriage from £9.99

turnkey 0171 379 5148 turnkey 0171 379 5148
Fax: 0171 379 0093 114 Charing Cross Road London WC2H 0DT E-mail: sales@turnkey.demon.co.uk Web site: http://www.turnkey.uk.com

Authorised Dealer Soundcraft DRAWMER MACKIE Roland SONY TASCAM Fostex digidesk

EUROPE'S LOWEST

YAMAHA

BLUE MEANIE INVASION!

A3000 SAMPLER

Arriving any time now, Yamaha's A3000 is their first entry into the sampling market for almost ten years, but this break has allowed them to take a good look at the market and come up with a highly competitive product. 64 note polyphony, four outputs (expandable to twelve plus digi i/o), .WAV file compatibility and memory expandable up to 128 meg, means that the A3000 must be taken seriously at this price. Call for full details or a demo.

- 64 Note Polyphony as Standard
- 4 Outputs Expandable to 10 + digi i/o
- Reads Akai and .WAV Format Files
- Memory Expandable to 128 meg

NEW PRODUCT £1299

AN1x VIRTUAL ANALOGUE SYNTH

The analogue emulation market is hotting up with this exciting new release from Yamaha. Building on the incredible success of the CS1x, the AN1x is built on the same design principles, but uses technology from the groundbreaking VL range to produce stunning virtual analogue sounds. With a 5 octave aftertouch sensitive keyboard, 10 note polyphony, 8 knobs and a ribbon controller, and built in effects, the AN1x is sure to be an instant hit. Demand will far outstrip supply - get your order in early!

- Amazing Low Price for Polyphonic Modelling
- 10 Note Polyphony
- Front Panel Knobs all Send MIDI Controllers
- 5 Octave Velocity & Aftertouch Keyboard

NEW PRODUCT £899

QUASIMIDI

TECHNOX SOUND MODULE

If you need to get your hands on some top quality dance sounds on a budget, look no further than Quasimidi's Technox. All sounds can be edited via the LCD display and two front panel dials, which are also used for sound selection - sounds are divided into groups to make it easy to find the one you want. 16 part multitimbral and always 24 note polyphonic with built in effects, it makes a perfect addition to an existing MIDI setup, but is comprehensive enough to use on its own, and the superb arpeggiator means you'll never get bored! *Call for a free demo CD. Money back within 7 days if not satisfied (ask for conditions).*

NEW PRODUCT £499

RAVE-O-LUTION 309 DANCE WORKSTATION

The Rave-O-Lution 309 is undoubtedly Quasimidi's best and most innovative product to date. Imagine the raw powerful sound quality of Roland's TR909 and TB303, give them 50 times as many sounds, add resonant filters to the drums, and you've still only got half the instrument that is the Quasimidi 309! Knobs for all functions all send out MIDI controllers, built in real-time and step-time sequencer, 2 on board effects processors & EQ, optional rack ears, typical German build quality - far too many features to mention here! The ultimate dance production workstation, must be heard to be believed. "superb bass synth .. excellent drum sounds ... one of the most immediately useable products on the market" - Sound On Sound. *Call for a free demo CD. Money back within 7 days if not satisfied (ask for conditions).*

NEW PRODUCT £649

QUASAR SOUND MODULE

Quasimidi's first groundbreaking product, and still a stormer! The simultaneous use of multiple types of synthesis including Analog Emulation and FM, give this module a huge range of sounds from standard General MIDI tones through their famous dance sounds (including 909 etc) to incredible special effects. Huge LCD and dual digit LED displays in conjunction with a plethora of front panel knobs and buttons make use of the comprehensive editing facilities child's play. 2 MIDI inputs, 6 audio outputs, always 28 note polyphonic, and superb onboard effects and arpeggiators. Two sound expansions are also available to turn it into the ultimate dancefloor machine - Hardcore and Techno, both only £169. Sorry, no demo CD available of this one, but take our word for it, it sounds the business! *Money back within 7 days if not satisfied (ask for conditions).*

NEW PRODUCT £799

JV1080 SYNTH MODULE

Roland

In the same way as the S1000 became the industry standard sampler, Roland's JV1080 has become the industry standard synth module. It's not hard to see the reason why - straightforward operation combined with top flight sound quality and a huge range of useable sounds. But expandability of the machine is where it really comes into it's own. There are over 10 different expansion boards which can be fitted (up to 4 at once), each one with as much ROM as the original machine, covering sounds from Vintage to Orchestral and Dance to World. At Turnkey we have the full range in stock, as well as an unbeatable price on the machine itself. Buy with any four expansion boards for only £499 extra!

RRP ~~£1199~~ £869

JV2080 SYNTH MODULE

The Roland JV1080 has been become the industry standard sound source for home studios and professionals alike. It's superb sound quality, 64 note polyphony and expandability were a winning combination.
Now the new JV2080 builds on that success by offering a giant editing screen, three independent effects processors as well as reverb / delay and chorus, and room for 8 of Roland's renowned expansion boards - the potential is virtually limitless! Judging by the success of the JV1080, these will be in strong demand - call us now! Buy with any four expansion boards for only £499 extra!

RRP £1399 £POA

SYNTH MODULES

EMU

ORBIT
PLANET PHATT
CARNAVAL

Emu have taken their wealth of experience in making modules such as the Proteus, Vintage Keys and Morpheus, combined it with the filters from the incredible Emulator 4, and with their usual innovation, come up with the Orbit, Planet Phatt and Carnaval.
The Orbit is stacked full of classic drum sounds, pulsating basses, ambient pads, as well as a huge variety of hits and effects, Planet Phatt brings a new definition to swing, and the Carnaval is ideal for dance grooves as well as Latin specialists.
The inclusion of the E4's 16 different types of 6 pole filters mean that these modules have more powerful filtering than any other synth. Finally the 'BEATS MODE' includes a wide selection of loops and grooves, which can have their pitch changed without tempo change and vice-versa, and even their sounds too!
V2 software now gives improved beats mode and other enhancements.
Orbit upgrade available for only £69.

RRP £869 £749

MICRO PIANO PIANO MODULE

KURZWEIL

The MicroPiano is the most highly regarded piano module on the market, featuring Kurzweil's breathtakingly realistic true stereo samples - 32 note polyphony means you won't suffer from note-stealing and the wide range of other keyboard sounds and strings make it useful in many other situations. Built in effects including very high quality reverb mean there's no need to tie up another effects unit. Strictly limited quantities at this price mean that stocks won't last long. Order today - you won't be disappointed!

RRP £599 £349

MATRIX 1000 SYNTH MODULE

Oberheim

Now almost 10 years old, and still sounding as fresh as the day it was released. The Matrix 1000 is essentially a Matrix-6 in a rack - 6 note polyphonic, 2 oscillators per voice, true analog VCF filters with 8 modes. "Matrix ™" modulation with 20 sources and 32 destinations, raw gutsy analog sounds. Why 1000? The 1000 presets were generated by Matrix-6 owners worldwide in response to a competition to find the best analog sounds on the planet. You're sure to find the perfect patch for virtually any application. Group mode allows chaining of up to 6 units to create a true monster! Fully editable via MIDI, Mac, PC or Atari editor (available for only £49).

RRP £599 £399

PMA-5 HAND HELD COMPOSER

Roland

This incredible Palm Top composer allows you to compose while you travel with the benefit of Roland sounds. The dreamy user interface can be manipulated with the included touch pen, giving you control over all 306 instrument sounds and 16 drum kits. Compose up to 20 songs with 21,000 notes at the airport, on the train or during lunch. Four Melody Tracks, Four Backing Tracks, 100 preset styles with variations. Customise and store 200 of your own patterns. Up to 600 Patterns total to work with, Great for practice or live performance accompaniment. A great portable partner for your Laptop.

RRP £445 £369

MSE1 & MVE1 SOUND MODULES

Roland

Spectacular end of line clearance deal on these superb Roland speciality sound modules - buy a stand-alone module for less than the price of a JV1080 expansion card! Both are 8 part multitimbral, 28 note polyphonic, and have dual 20 bit FX processors. The MVE1 has all the classic analog sounds from Jupiters to ARPs to Moogs, and the MSE1 has the lushest string pads and clearest solo sounds you're likely to hear anywhere, and RSS! Stocks will not last long - get your order in now!

MSE1 RRP £469 £199
MVE1 RRP £469 £239

SOUND MODULES NEW, USED & EX DEMO

Yamaha RY8	£169	Emu MORPHEUS	£799
Akai SG01K	£219	Emu Orbit	£699
Akai SG01P	£219	Emu Planet Phatt	£749
Akai SG01V	£219	Emu UltraProteus	£929
Alesis D8	£269	Korg X50R	£329
Alesis QSR	£685	Kurzweil K2000KB	£1699
Alesis SR16	£99	Kurzweil K2000R	£1299
Boss DR5	£259	Kurzweil KMP1	£349
Boss DR660	£309	Kurzweil KMP1	£349
Emu Carnaval	£749	Roland JV1080	£750
Roland MC303	£449		
Studio Electronics ATC1	£799		
Yamaha MU5	£169		
Yamaha MU50	£299		
Yamaha MU80	£349		
Yamaha P50	£249		
Yamaha QY22S	£349		
Yamaha RY20	£289		
Roland VS880	£1299		
Roland VS880 Expanded	£1649		

We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT E & O E. UK mainland carriage from £9.99

turnkey 0171 379 5148 turnkey 0171 379 5148

Fax: 0171 379 0093 114 Charing Cross Road London WC2H 0DT E-mail: sales@turnkey.demon.co.uk Web site: http://www.turnkey.uk.com

PRICES GUARANTEED*

Roland

JUPITER STRIKES BACK!

JP8000
ANALOG MODELLING SYNTH

So far, modelling technology has been used to recreate acoustic timbres, but Roland are the first to specifically model true analog synthesis with their new Analog Modelling technology, and believe us, the results are spectacular!

Analog Modelling not only produces superb emulations of the great synths of the 60's and 70's, but also totally unique timbres never before heard. Realtime control is excellent, and all knobs, sliders, buttons and the ribbon controller send out Continuous Controller messages. For instant creativity, a powerful arpeggiator and real time phrase synthesiser are included, which can be easily synchronised to an external MIDI clock. This is very likely to be the hottest synth of '97 - order now!

- *Superb New Analog Modelling Synthesis*
- *Unrivalled Realtime Control*
- *Highest knob Count Around for Easy Programming*
- *Built in Arpeggiator and Realtime Phrase Synth*

~~RRP £1499~~
£POA

FAT

FREEBASS TB303 CLONE

If you need the unique sound of an original Bass Line™, but can't afford the inflated prices that go with it, then Freeform Analog Technologies' Freebass is the product for you!

It's the only authentic sounding TB303™ clone on the market, and it's got MIDI! 1U rack with 1 knob per function, all the sound controls of the 303 are duplicated, Cutoff, Resonance, Envelope Mod, Accent, Tune and Decay. Waveform is continuously variable from square wave to sawtooth, and an auto tune button is included to retune the oscillator - no more continual drifting!

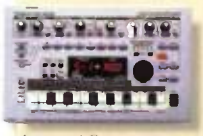
On top of this, there's an audio input to the filter stage, allowing you to process any external signal with the FB383's powerful synthesis. The ultimate analog bass machine - this incredible price means these will fly out of the door! Another Turnkey exclusive.

- *Superb Sounding TB303™ Clone*
- *Fraction of the Price of an Original*
- *External Input to the Filter*
- *Exclusively Available at Turnkey*

NEW PRODUCT
£199
FACTORY DIRECT

MC-303 GROOVEBOX
DANCE WORKSTATION

Roland



The enduring popularity of the TB303, MC202 and TR909 has just refused to go away but increasing rarity has meant that secondhand prices have been driven up to ridiculous levels. Roland, the creators of these machines, now bring you the MC303 Groovebox which combines all their classic drum machine sounds, a step time / real time sequencer, 303 'acid' bass sounds complete with front panel filter controls and a whole host of other useable sounds (it's 16 part multi-timbral!). This box is an all in one dance music solution, and believe us, it sounds the business! Initial supplies will be very limited, order now to avoid disappointment!

NEW
£POA

ALSO AVAILABLE WITH MK149 MIDI KEYBOARD only £599

MICROWAVE II
WAVETABLE SYNTHESISER

waldorf

The Microwave II combines all the famous features of the original Microwave together with today's requirements for user interface, signal to noise ratio and sonic purity. It's simplicity of use is obvious with the use of just 5 rotary dials and a 2x40 character back lit LCD. On the back the Microwave II has 2 fully modulatable stereo outputs (configurable as 4 monos with panning). Tone generation comes from a powerful DSP generating wavetables, the 10 voices each feature two oscillators, 2 wave generators, a mixer, two filters in series, a stereo amplifier, four envelopes, 2 LFOs, a modulation matrix with 16 slots and several 'modifiers', more than enough to keep even the most demanding programmer satisfied!

NEW PRODUCT
£999

XM1 & XMc1
ORGAN MODULES

HAMMOND

Amazing sounding all new organ module with remote drawbar controller. Based on the guts of the CRIMD XK3, there is nothing as realistic as this on the market. Built in Leslie simulator and overdrive, up to 3 registrations simultaneously, variable release envelopes, percussion and lots many more features to list here. Exclusively supplied by Turnkey.

~~RRP £1089~~
£999

BASS STATION
BUDGET MONO SYNTH

novation

END OF LINE CLEARANCE EXCLUSIVE TO TURNKEY

If you need to get into analog synths on a ... then the Bass Station keyboard is for you. But this is no mere toy! Two oscillators, pulse width modulation, two LFO's and knobs that send out MIDI information, make this a versatile sound creation tool, capable of a wide range of bass sounds and effects. An ideal addition to any MIDI setup!

~~RRP £349~~
£219

PULSE
MONO SYNTH

waldorf

Waldorf quality at a previously unheard of price! Their first venture into the burgeoning monosynth market has been universally acclaimed, and rightfully so. The Pulse's three oscillators produce some of the fattest sounds around, and it's modulation matrix allows a far higher degree of programming complexity than anything else in its range. Add to that the fact that editing any parameter sends out a MIDI controller and you have a fantastic all round performer.

RRP
£499

DR-660
Dr. RHYTHM DRUM MACHINE

BOSS

BOSS have been making Dr. Rhythm drum machines since the early eighties, combining value for money and ease-of-use with the latest drum and percussion sounds. The DR-660 builds on the success of the DR-550 Mk2, but offers 16 full velocity and aftertouch sensitive pads, 4 separate outs (unheard-of at this price), and 255 drum sounds including the best of TR808 / 909. The 660 also boasts the 'human feel' control first introduced on the R8 which allows velocity to control a real-time crossfade between several waveforms. Process your sounds with on-board digital reverb and chorus - fully editable, with individual effect send control for each drum sound.

~~RRP £459~~
£299

SUPER BASS STATION
NEW MONO SYNTH

Novation's Bass Station Rack has been one of the most successful monosynths ever, and now they take the concept one further. Three oscillators give extra fat sounds, whilst ring modulation and oscillator sync, along with noise and distortion generators give it a hard edge when required. Even the MIDI spec benefits from LFO to MIDI clock sync, and there's an arpeggiator. Initial stocks very limited - get your order in now.

NEW PRODUCT
£499

STOP PRESS!
NEW LOW PRICE

PULSE PLUS
MONO SYNTH

The Pulse Plus has all the features of the Pulse but with audio input, CV and gate control. You can even play your guitar through it! The fattest sounding monosynth around just got better - check one out today!

NEW
£699

SR-16
DRUM MACHINE

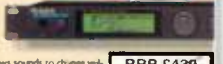
ALESIS

The SR-16™ Stereo Drum Machine is an excellent tool for songwriting and performance. It features a great selection of 233 sounds, offered both in dry form and with reverb. Alesis's exclusive Dynamic Articulation™ feature enables a drum sound to change as time compress as it's played harder for truly realistic performances. The SR-16 features 200 preset patterns that were actually played in by real studio drummers - not just programmed and quantised. Of course the SR- 6 also provides complete MIDI implementation, a footswitch input, flexible programming and editing features and velocity-sensitive pad buttons.

RRP £289
£189

DM5
DRUM MODULE

ALESIS



The DM5 offers superb performance features and an excellent selection of drum, percussion & FX samples putting over 540 all-new studio drum sounds into a 1u rack space, many recorded in true stereo and with ambient effects. It's Expanded Dynamic Articulation feature allows sounds to change volume, tone, and pitch according to MIDI velocity. The Random Sample feature realistically varies the sound of the drum as you play. The DM5 includes an ultra-fast trigger-to-MIDI converter with 12 trigger inputs, 4 audio outputs and a backlit LCD display. The drum sound for you is waiting right here! Another Turnkey magic!

RRP £429
£269

PROGRAMMER
FOR MATRIX 1000 OR MICROWAVE

access

There's no doubt that the Oberheim Matrix 1000 and Waldorf MicroWave deliver powerful analog sounds. However, when it comes to programming your own sounds, top producers have tended to go for older synths like the Moog and Super Jupiter, because their knobs and sliders make for easy creation of new sounds. The Access programmer gives you the best of both worlds - now you can freely experiment with your modern analog synth using the same intuitive front panel, and better still, record every tweak of a parameter into your sequencer.

EXCLUSIVE
£329

We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT. UK mainland carriage £9.99. E & O.E.

turnkey 0171 379 5148 turnkey 0171 379 5148
Fax: 0171 379 0093 114 Charing Cross Road London WC2H 0DT E-mail: sales@turnkey.demon.co.uk Web site: http://www.turnkey.uk.com

Authorised Dealer | Soundcraft | DRAWMER | MACKIE | Roland | SONY | TASCAM | Fostex | digidesi

EUROPE'S LOWEST

Wave Synthesiser

TURNKEY EXCLUSIVE! waldorf

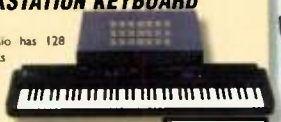
We now offer a new custom range of Wave synthesisers with 76-note keyboards in four colour options - standard blue, red (as shown), Sahara and black. Totally unique sound.

PRICES FROM £6299

CALL TURNKEY PROFESSIONAL ON 0171 240 4036 FOR DETAILS

WK-1500 76 NOTE MIDI WORKSTATION KEYBOARD

INC FREE STAND, HEADPHONES & PSU CASIO



This TOP OF THE RANGE Casio has 128 sounds, 100 auto accompaniments and a 76 note keyboard. It is also fully General MIDI compatible and all 16 MIDI channels can be controlled from the keyboard.

With an onboard six track sequencer all your songs can even be recorded on the instrument itself. This is unbelievably good value for such a great instrument.

RRP £549 £299

MASSIVE DISCOUNT SAVE OVER 45% ON PRICE

K5000s ADDITIVE SYNTH

KAWAI

In this age of many 'soundalike' sample + synth keyboards, it's not often you get something coming along with a completely fresh approach. Kawai have dared to be different though with the K5000S, and reintroduced additive synthesis. This has been tried in the past, but the limited DSP power has severely curtailed the possible results. The only method of synthesis that can theoretically produce any possible sound, additive has a palette which ranges from superb acoustic simulation, to timbres quite unlike those offered by any other synth. The inclusion of a traditional synthesis section complete with an incredibly powerful filter means it's also a cinch to create fantastic analogue style sounds, and a generous complement of knobs which all send MIDI controllers add to the ease of use. Far too many features to mention here - call for more information or for a demo.

NEW PRODUCT £1299

RACK VERSION ALSO AVAILABLE only £999

XP-10 MULTITIMBRAL SYNTH

INC FREE STAND, 'PHONES & CABLES Roland

Fantastic deal makes this the most affordable pro keyboard on the market. Take Roland's legendary sound set, add a decent five octave keyboard, an arpeggiator and innovative editing features like sound morphing, and you have the XP10. Fully General MIDI compatible for all your midiphiles, the XP10 comes bundled with a free stand, headphones and cables only at Turnkey.

RRP £499 £399

THE RAVEN KEYBOARD DANCE WORKSTATION

QUASIMIDI

Dance experts Quasimidi have done it again with this incredible new product. Stacked full of hundreds of the finest dance sounds, from fat analog synths through retro drums and special effects. On board sequencer with special loop motif mode makes it a cinch to create instant hits! Typically superb sound quality from this top German manufacturer. Also available, Raven Max expansion board giving over a thousand new sounds. Call in for a demo, we guarantee you'll be impressed. Free demo CD available, please call to receive one. Money back within 7 days if not completely satisfied - please ask for conditions.

NEW PRODUCT £999

QS6 EXPANDABLE SYNTH

ALESIS

The QS6 64 Voice Expandable Synthesiser starts with a powerful 64 Voice synth engine, powered by 8MB of sound ROM which is expandable to 16MB, either through the large range of Alesis QuadraCards, or blank Flash RAM cards for use with the free Alesis Sound Bridge sample transfer software. There are 640 programs and 500 'mixes', including a complete GM bank. Built-in serial port for direct interface to a computer, and free CD-ROM filled with sequencers, editors, song files, and samples which turn the QS6 into a complete music work station. Call now for more details, and find out about one of the most underrated synths on the market.

RRP £999 £649

XP-50 WORKSTATION KEYBOARD

Roland

All the power and flexibility of the JV1080 in a keyboard, together with what has to be the best onboard sequencer around, and a built in disk drive. The XP50 has a 5 octave keyboard and 2 outputs, also available is it's big brother the XP80 with a 7 octave keyboard, 4 outputs and the king size display as featured in the new JV2080. We have limited stocks only at staggering prices - don't delay - order today!

RRP £1499 £POA

XP-80 WORKSTATION KEYBOARD

RRP £1799 £POA

PROPHECY VIRTUAL MONOSYNTH

KORG

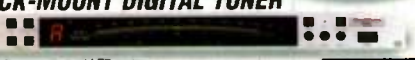
The Prophecy is already a legend in its own lifetime, and this incredible new low price makes it better value for money than ever. Virtual synthesis not only gives some great acoustic simulations, but also superb analog sounds, from Moogs through ARP's to some of the classic Rolands. The keyboard that revived the arpeggiator still has one of the best around today, and the ribbon controller and knobs galore make for a highly expressive instrument. Limited stocks only at this price - buy now or forever hold your peace!

RRP £999 £699

CALL SOHO SOUNDHOUSE ON 0171 379 6766 FOR DETAILS

DTR-1 RACK-MOUNT DIGITAL TUNER

KORG



- Oversize easy to read LED meter.
- Auto tuning with 3 selectable modes; Strobe, Cent, Hz.
- Two tuning inputs to handle tuning of 2 instruments.
- Built-in microphone is perfect for tuning acoustic instruments.
- 3-Octave reference tone. • Cable check function.

RRP £249 £169

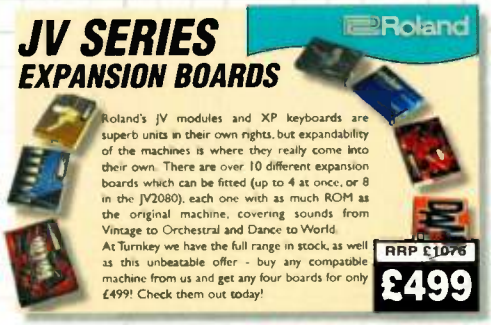
DTR-2 RACK-MOUNT DIGITAL TUNER

- Rack-mount auto chromatic tuner with large LED meter.
- Full 7 octave tuning range.
- Auto reference calibration function can automatically calibrate the tuner to instruments that are not easily tuned.

RRP £149 £99

JV SERIES EXPANSION BOARDS

Roland



Roland's JV modules and XP keyboards are superb units in their own rights, but expandability of the machines is where they really come into their own. There are over 10 different expansion boards which can be fitted (up to 4 at once, or 8 in the JV2080), each one with as much ROM as the original machine, covering sounds from Vintage to Orchestral and Dance to World.

At Turnkey we have the full range in stock, as well as this unbeatable offer - buy any compatible machine from us and get any four boards for only £499! Check them out today!

RRP £1076 £499

TRINITY KEYBOARD WORKSTATION

KORG

When it comes to workstation keyboards, the Korg name is legendary. Their current flagship product, the Trinity not only features the customary range of exemplary sounds, but also touchscreen technology to make it one of the most intuitive instruments on the market, and a range of options to turn it into a fully fledged recording studio: sample playback (Akai compatible), Prophecy expansion board, and even hard disk recording!

RRP £2345 £1399

TRINITY PLUS £1799
TRINITY PRO £1999
TRINITY PROX £2199

PACIFICA 112 ELECTRIC GUITAR

YAMAHA

Available in Natural, Satin, Black or Antique stain with maple or buvinga fingerboard. All with FREE Pro set-up.

RRP £199 £169

PACIFICA LEFT HOOKER ALSO AVAILABLE only £179

PC-160 MIDI CONTROLLER KEYBOARD

Roland

"The PC160 has full-size keys with touch-sensitivity, an expressive 'bender' lever allowing pitch glides, vibrato etc... ±2 octave switches let you play over a 6 1/2 octave range. There's also a socket for optional sustain pedal (£14.95), and editing of GM/GS parameters for sound modules / cards which support this feature (eg Yamaha DB50).

This incredibly cheap deal is based on a once-only bulk-buy shipment. Order now while stocks last! (Batteries included, PSU optional)

RRP £139 £69

CS1x SYNTHESISER

YAMAHA

Here's another fantastic addition to this year's slew of equipment specifically designed for dance music. Not only does it look great, it sounds great too! As well as 480 XG format voices and 11 different drum kits, the CS1x also has 128 special performance sounds especially designed for dance and techno music. Front panel knobs allow instant access to crucial editing parameters like the filter, and 2 are assignable to anything you like. Round this off with top quality effects and an arpeggiator, and you have what has to be the best value keyboard of the year!

RRP £599 £POA

SANSAMP RANGE

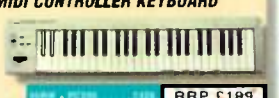
TECH 21 • NYC

The Tech 21 range of hand built American products emulates every tube amplifier sound ever desired, giving you the classic Fender, Marshall, Boogie, HiWatt, Vox sounds etc - an all in one versatile unit at a fraction of the cost of the originals!

XXL distortion preamp pedal £89
TRILOD 3 ch. preamp £149
GT2 preamp simulator £149
Classic Sansamp £249
BassDriver DI £169
SansAmp PSA1 rackmount £479
Trademark 60 1x12 - IN STOCK £699

CALL SOHO SOUNDHOUSE ON 0171 379 6766 FOR DETAILS

PC-200 MkII MIDI CONTROLLER KEYBOARD



Compact touch sensitive master keyboard offering full control over pitch bend and mod, data slider assignable to reverb, pan or any controller, sustain pedal input, transpose over 2 octave range, send patch & bank change messages.

Check out our unique package prices with these modules:

RRP £199 £149

MK149 MIDI CONTROLLER KEYBOARD

Evolution

Compact touch sensitive master keyboard offering full control over pitch bend and a mod. wheel assignable to reverb, pan or any controller, sustain pedal input, transpose over 2 octave range, send patch & bank change messages.

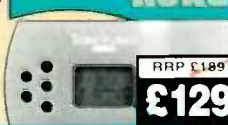
Check out our unique package prices with these modules:

NEW £119

PANDORA'S BOX EFFECTS UNIT

KORG

Personal effects - compact enough to fit in your hand, powerful enough for the professional. 60 effects including compression, overdrive, distortion, wah, pitch-shift, reverb, amp simulation and cabinet resonator. Even has built in metronome. Limited stock at introductory price.



RRP £189 £129

CALL SOHO SOUNDHOUSE ON 0171 379 6766 FOR DETAILS

AX-1 STRAP-ON STAGE KEYBOARD

Roland

Poseurs, look no further! For remote MIDI keyboard controllers, there's nothing better than Roland's AX1, and now with this amazing deal, there's nothing cheaper either.

The 4 octave keyboard features full size velocity sensitive keys, pitchbend ribbon and expression bar. An array of program change buttons means quick and easy patch changes, and the bright red paint job doesn't (quite) glow in the dark! Very limited stocks - order now to avoid a lifetime of female rejection!

RRP £399 £249

KEYBOARDS NEW, USED & EX DEMO

Korg X5 ..... £449	Korg Trinity PLUS £1799	Roland A33 ..... £349
Alesis QS6 ..... £599	Korg Trinity PRO £1999	Roland PC200GS £139
Hammond GM1000 ..... £349	Korg Trinity	Roland RD500 ..... £1249
Korg N364 ..... £899	Prophecy Option £299	Roland XP10 ..... £349
Korg PROPHECY £559	Korg Trinity Sample Option £399	Roland XP50 ..... £999
Korg Trinity £1449	Korg Trinity Scsi Option .. £249	Roland XP80 ..... £950
Korg Trinity Digi Io Option . £99	Korg X50 ..... £599	Yamaha CS1x £350
Korg Trinity	Kurzweil PC88 ..... £1499	YAMAHA PF150 ..... £1149
Hard Disk Option £399	Novation Bass Str R £329	Yamaha QS300 ..... £899

MULTI-FX PROCESSOR ZOOM 505 & 506 - IN STOCK

ZOOM

The 24 built-in Digital and Analogue Effects, 9 of which can be used simultaneously and stored in any one of 24 fully programmable memory locations, alongside the Integral Auto-Chromatic Tuner and Amp Simulation, make the New Zoom 505 Guitar a mouth watering prospect.

Full Zoom range in Stock

1010	CALL
1020	£169
2020	£169
3030	CALL
4040	CALL
9050	CALL

NEW £99

CALL SOHO SOUNDHOUSE ON 0171 379 6766 FOR DETAILS

*We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT E & O E. Uk mainland carriage from £9.99

turnkey 0171 379 5148 turnkey 0171 379 5148

Fax: 0171 379 0093 114 Charing Cross Road London WC2H 0DT E-mail: sales@turnkey.demon.co.uk Web site: http://www.turnkey.uk.com

PRICES GUARANTEED*

TURNKEY EXCLUSIVE! Xpression

XPRESSION MONITORS
FROM HARBETH ACOUSTICS

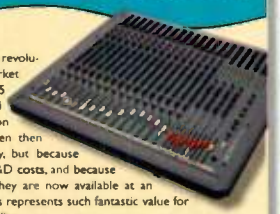
Many of today's popular budget monitors sound impressive in the store, with tremendous bottom end and sparkling treble. But mixes made on these monitors can still sound wrong when played on other systems. The problem? Lack of clarity and detail in the mid-range, particularly vital when working with vocals and lead instruments. Harbeth, manufacturers of monitors for the BBC and others for many years, now address this problem with their new expression near-field monitors, offering not only great overall frequency response, but unrivalled mid-range clarity for any speaker even close to this price bracket. Return for credit within 1 week if unsatisfied - we're that confident! Another turnkey exclusive.

- *Prestige Manufacturer with Years of BBC experience*
- *Superb Detail and Stereo Imaging Capabilities*
- *Separate Subwoofer Available for Only £349*

NEW PRODUCT
£379 PER PAIR

SPIRIT STUDIO
CONSOLES BY SPIRIT

Soundcraft



Soundcraft's Spirit Studio desks revolutionised the project studio market when they were introduced over 5 years ago offering sound quality and features only previously found on desks several times the price. Even then they were great value for money, but because Soundcraft have recouped their R&D costs, and because of our substantial buying power, they are now available at an unbelievable price. No other desks represents such fantastic value for money, just check out the feature list:

'In line' layout means 40, 56 and 72 inputs respectively for the 16, 24 and 32 channel desks. 4 band EQ with 2 mid sweeps. 6 aux. sends. 8 true subgroups. direct outs on every channel. LED metering, fader reverse - the list is endless!

RRP ~~£1537~~	RRP ~~£2063~~	RRP ~~£2894~~
£969	**£1469**	**£1999**
16 ch	24 ch	32 ch

GHOST CONSOLES

INC FREE METER BRIDGE

Ultra low noise inputs, 4 band EQ with 2 fully parametric mids, up to 12 auxiliary sends, MIDI mute automation and MTR transport control are a few of the features that put other project consoles to shame (no MIDI on LE versions).

RRP ~~£6607~~	RRP ~~£4617~~
£3399	**£2849**
32 ch LE	24 ch LE

FOLIO NOTEPAD PORTABLE MIXER

SPIRIT Soundcraft

For quality mixing on a budget, this has to be the neatest solution around. Typical Soundcraft quality has been further enhanced by the use of surface mount technology and custom designed rotary pots. 4 mono inputs are provided along with 2 stereo, which also feature RIAA preamps for record deck connection. 2 band EQ and an auxiliary send complete a highly flexible package.

RRP ~~£199~~ **£149**

FOLIO F1 NEW MIXER

The introduction of the new F1 sees the Williams team of mixer manufacturers in top gear! Features include 3 aux. sends, 100mm faders, 3 band mid sweep EQ and insert points. Available in 14 or 16 channel versions.

RRP ~~£379~~ **£299**

FOLIO SX
MULTITRACK RECORDING CONSOLE

The Folio SX represents incredible value for money, offering as it does 12 mono and 2 stereo fader channels, 3 band mid sweep EQ, 3 aux sends and a whole host of other goodies. Optional rack ears also available.

RRP ~~£619~~ **£479**

MIXERS NEW USED & EX DEMO

Behringer Eurodesk	£1295	Mackie LM3204	£539
Mackie 16	£1095	Samson MIXPAD9	£500
Mackie 24	£2750	Samson MPL 2242	£429
Mackie CR1202VLZ	£289	Sndcrft Folio F1 14	£299
Mackie CR1402VLZ	£399	Sndcrft Folio F1 16	£349
Mackie CR1604VLZ	£939	Sndcrft Folio Notepad	£149
Sndcrft Folio SX	£479		
Sndcrft SPIRST16	£899		
Soundtracs Topaz32	£1899		
Yamaha Promix 01	£1199		

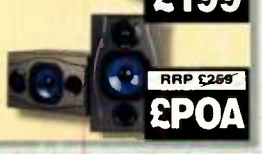
ABSOLUTE ZERO
by SPIRIT
NEW NEARFIELDS

Soundcraft

The latest additions to Soundcraft Spirit's monitor range are the Absolute Zero's. For those of us with slightly less demanding monitoring applications, they make the ideal choice.

RRP **£199**

ABSOLUTE 2
by SPIRIT
STUDIO MONITORS



Here at last! Stunning sounding and looking monitors from the UK's leading mixer manufacturer. Incredible bass extension and power handling at a killer price. In stock now, come in and audition them ASAP!

RRP ~~£259~~ **£POA**

SERVO 150
AMPLIFIER

SAMSON AUDIO

Samson's Servo 150 is specifically designed for use with nearfield monitors, and does an excellent and unobtrusive job, sticking as close as possible to the "wire with gain" ideal for an amplifier. It offers a power rating of 80 Watts per channel RMS, making it an ideal partner for most of today's nearfield studio monitors. The standard 2u design means it fits neatly into your rack system. Independent left and right volume controls are given, and there are built in signal and clip indicators, together with protection circuitry to help prevent blowing your speakers. At this price stocks won't last long - another Turnkey exclusive!

RRP ~~£349~~ **£169**

SERVO 240 (120w per chan.) ALSO AVAILABLE only £199

SPIRIT AUTO
CONSOLES BY SPIRIT

Soundcraft

Soundcraft's Spirit Studio desks are well known for their build quality, superb sound and features, as well as being tremendous value for money. For those of you who would find VCA automation useful, we have managed to exclusively secure a very limited supply of Spirit Autos at an unbelievable discount - just check out the price! The desk sends and receives simple MIDI controller messages (no messy sysex), so it can be used with virtually any sequencer. First come first served!

RRP ~~£3755~~	RRP ~~£6607~~
£1189	**£2199**
AUTO 16	AUTO 32

MICS NEW, USED & EX DEMO

AKG C1000S	£189	AKG D112 £195	Shure SM57 £89
AKG C12VR	£249	AKG D3700 £69	Shure SM58 £99
AKG C3000	£249	RODE NT2 £455	

C3000
LARGE DIAPHRAGM MIC

INC FREE BOOM STAND

The C3000 uses all of AKG's experience in building large diaphragm mics such as the C12 and C414, but by using modern manufacturing techniques, and only offering two patterns (cardioid and hyper cardioid), the price has been kept to a minimum. Its open sound and superb frequency response make it ideal for vocals, as well as sounding great on a variety of other instruments.

RRP ~~£399~~ **£269**

CONTROL 5
STUDIO MONITORS

JBL

These classic monitors from JBL have been a standard in studios for several years and still stand up very well against more recent competition. The solid build quality you can expect from JBL comes as standard and the ported design gives fantastic bass response. Internal fuses help to prevent blown tweeters and a compatible Turbosound sub-woofer is also available for only £199. Exclusive to Turnkey.

RRP ~~£439~~ **£249**

CONTROL 1 COMPACT MONITORS

These superb compact monitors (RRP £22 9) are ideal for accurate monitoring on a budget. Sturdy impact resistant casing makes them the only choice for location work.

RRP ~~£189~~ **£99**

BUNDLE WITH DENON PMA250 only £269

SM58
INDUSTRY STANDARD DYNAMIC MIC

SHURE

Shure's SM58 has been the industry standard microphone for as many years as we can remember, and even today it's still a great buy: Robust enough to withstand countless heavy metal gigs, versatile enough for a wide range of studio uses, the yard-stick by which all other mics are judged, now at an unrepeatable price.

RRP ~~£169~~ **£99**

NT2
LARGE DIAPHRAGM MIC

RODE

It's not often that a new name comes to light in the microphone market, but Rode have certainly made a name for themselves with the NT2. The gold plated large diaphragm capsule gives a superb full frequency response, great for all round use and particularly good on vocals. Cardioid and omni patterns are available, as well as a 10dB pad. Price includes flight case, windshield and shockmount!

NEW BOXED **£499**

MONITOR 2
MID FIELD STUDIO MONITOR

ALESIS

Buying a great pair of speakers for your home studio setup often envolves a compromise between sound quality, cost, bass performance and portability. Now you can have it all with this once in a lifetime deal on the stunning Alesis Monitor 2's.

Flat bass response down to 40Hz assisted by the substantial ported cabinets which come in a mirror image pair. The three way design with 10" woofer offers superior transparency with excellent quality reproduction across the whole frequency range. Power handling is up to 150W per speaker for some serious fun. We cannot hold this offer forever - buy now before it's too late!

RRP ~~£699~~ **£399**

IMPACT SERIES

Turbosound

IMPACT180

IMPACT120

Turbosound is a legendary name in the PA business, but until recently many of us could only dream of owning a Turbo rig. Now with the introduction of the Impact series, you can stop dreaming! Turbosound quality at a previously unheard of price - for example we can offer the superb Impact 120's at only £999 a pair - incredible value for money! Come down for a demo now - they're sure to make an impact!

RRP ~~£1295~~ **£999**

IMPACT110

Megadeal on the Impact 110 subwoofer - it's passive crossover also makes it an ideal partner for studio nearfields.

RRP ~~£282~~ **£199**

CALL TURNKEY SOUND SYSTEMS ON 0171 497 5737 FOR DETAILS

STAGELINE DJP200s & KAM GMX 250

INC FREE CABLES

MIX PACK

Another easy to use package for the budding DJ. The brand new GMX 250 mixer from KAM in combination with Stageline's DJP200s is the ultimate bedroom package:

- 2 x Stageline DJP200
- 1 x KAM GMX 250
- 2 x Skipper
- 2 x Numark Cells
- 1 x Alesis Fusion

RRP ~~£580~~ **£349**

CALL TURNKEY SOUND SYSTEMS ON 0171 497 5737 FOR DETAILS

SL 1210 MkII
TURNTABLE

Technics

After more than 10 years at the top, Technics SL 1210s are still holding their own.

Solid build quality, near instant start & stop and a rock steady pitch control make them a safe buy.

Package prices also available with various mixers please enquire.

RRP ~~£499~~ **£POA**

CALL TURNKEY SOUND SYSTEMS ON 0171 497 5737 FOR DETAILS

MONITORING NEW, USED & EX DEMO

JBL CONTROL1	£99	Soundcraft Absolute 0	£189
Omniph Footprint	£279	Soundcraft Absolute 2	£249
Samson SERVO150	£169	Tannoy PBM 6.5 MkII	£259
Samson SERVO240	£229	Yamaha NS10MSTUD	£249

POWERSTATION
PA MIXER BY SPIRIT

Soundcraft

Another winner from Soundcraft, their first entry into the powered mixer market is sure to be a success. Based around the well-known Folio 12, and also featuring a 2x300w amplifier, dual 7-band graphic and a built-in Lexicon Alex! Check out these package deals

CALL TURNKEY SOUND SYSTEMS ON 0171 497 5737 FOR DETAILS

PA NEW, USED & EX DEMO

Alesis MATICA500	£499	Dynamix DPA400	£199
Alesis MATICA900	£649	Dynamix Spkr Control	£19
Amcron Powerbase 1	£249	EV S200X	£999
Bose 502	£1215	EV S200XEQ	£369
Bose 502P	£1399	Fender 110ELC	£129
Bose 802	£1756	Fender 112ELC	£146
Bose 802C	£385	Fender 115ELC	£166
C Audio RA2001	£1219	Fender B520PD	£809
C Audio RA3001	£1339	Fender ESPL3001	£319
C Audio ST400	£703	Fender ESPL3002	£499
Fender ESPL3801	£329		
Fender ESPL3802	£550		
Fender LX1504	£288		
Fender SPL215S	£825		
Fender SPL9000	£750		
Fender SPL4300	£421		
Fender SR4150	£378		
Fender SR8300P	£469		
Fender SR8520P	£599		
Fender SR8520PO	£734		
Fender SR8300P	£549		
Fender SR8520P	£699		
JBL 8SR	£429		

We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock. Prices include 17.5% VAT E & O E. Uk mainland carriage from £9.99

Retrospec Juice Box

Tube DI Unit

PAUL WHITE turns on the Juice and finds it a perfect excuse to get in his monthly 15 minutes of guitar practice.

USA-based Retrospec build a range of valve products for both live performance and studio use, and the Juice Box reviewed here could be used for either. Apart from its all-tube circuitry, the Juice Box is a conventional instrument DI box, with an unbalanced high-Z jack input, a unity-gain buffered output for feeding an instrument amplifier, and a balanced XLR output for recording or feeding a PA console. The circuitry comprises two double triodes in a class-A circuit (one 12AX7 and one 12FQ7), and the output stage is transformerless. There's no EQ and no speaker simulators — just a +20/0/-20dB rotary gain switch and a gain-trim pot, plus a ground-lift switch.

Retrospec have obviously hedged their bets on the XLR wiring protocol, because they carefully explain the origins of the NAB pin-3-hot and IEC pin-2-hot systems, then go on to deliver both! When the -20 or 0dB gain settings are engaged, the output is pin 3 hot (the opposite way to the AES/IEC standard), but when the +20 option is selected, an extra valve gain stage is placed in circuit, inverting the phase of the signal and making pin 2 hot. In practice, this isn't really going to matter unless you use two devices to DI a stereo signal, then for some reason set one unit to 0dB gain and the other to +20dB gain — hardly a likely eventuality.

Constructionally, the Juice Box is impressively tough, appearing to be built from ⅛ inch sheet steel. The case is perforated to allow cooling and the design purports to conform to the EEC's EMC directive, though there's no CE mark, and I doubt the ventilation slots would pass the 'granny with a hat pin' test for electrical safety. Power comes from a torroidal transformer, and a recessed selector switch allows 110V or 220V operation. The mains lead is captive, and a small toggle switch is used for the mains power, while a status LED indicates that the unit is powered up.

pros & cons

RETROSPEC JUICE BOX £495

pros
- Transparent, natural sound.
- Rugged construction.

cons
- Output polarity switches at high gain setting.
- High cost compared to solid-state equivalent.

summary
A great-sounding valve DI box, which combines detailed tonal transparenty with warmth.

SOUND ON SOUND

PERFORMANCE

Valve gear is credited with all kinds of magical properties, but in this design the distortion is kept to a very low 0.05%, and any impression of clarity is more likely to be due to the fast transient response that results from a 10Hz-100kHz frequency response. Background noise is better than 90dB, with 18dB of headroom before clipping — though the manual points out that any connected mixer shouldn't present a load of lower than 10kΩ if the full gain range is to be realised. Most mixer-line inputs have a 47kΩ input impedance, so this shouldn't be a problem, though it does mean that you can't go in via your mixer's mic inputs.

Tested with my Fender Strat Plus, the DI'd guitar tone was clean, articulate and responsive, with a lot more tonal change between the different pickup switch settings than you might expect. The sound had that even, 'ringing' characteristic that you get from the best tube amps, but without any of the noise or distortion. Of course, this is only of any use when you're recording clean sounds, but the sort of clean sounds that you get make you want to keep playing, even when no additional EQ is used. Having painted such a rosy picture, I must admit that I obtained similarly transparent results from one of my better solid-state guitar DI units, though, to be fair, the Juice Box is slightly warmer sounding in a direct shoot-out. Even so, I feel that the main benefits come from its high input impedance and wide bandwidth rather than from any mystical tube-distortion mechanism. Whatever the reason, this is a very nice-sounding DI box that's close to perfect for use with undistorted electric guitar and bass. SOS

info

£ £495 including VAT.

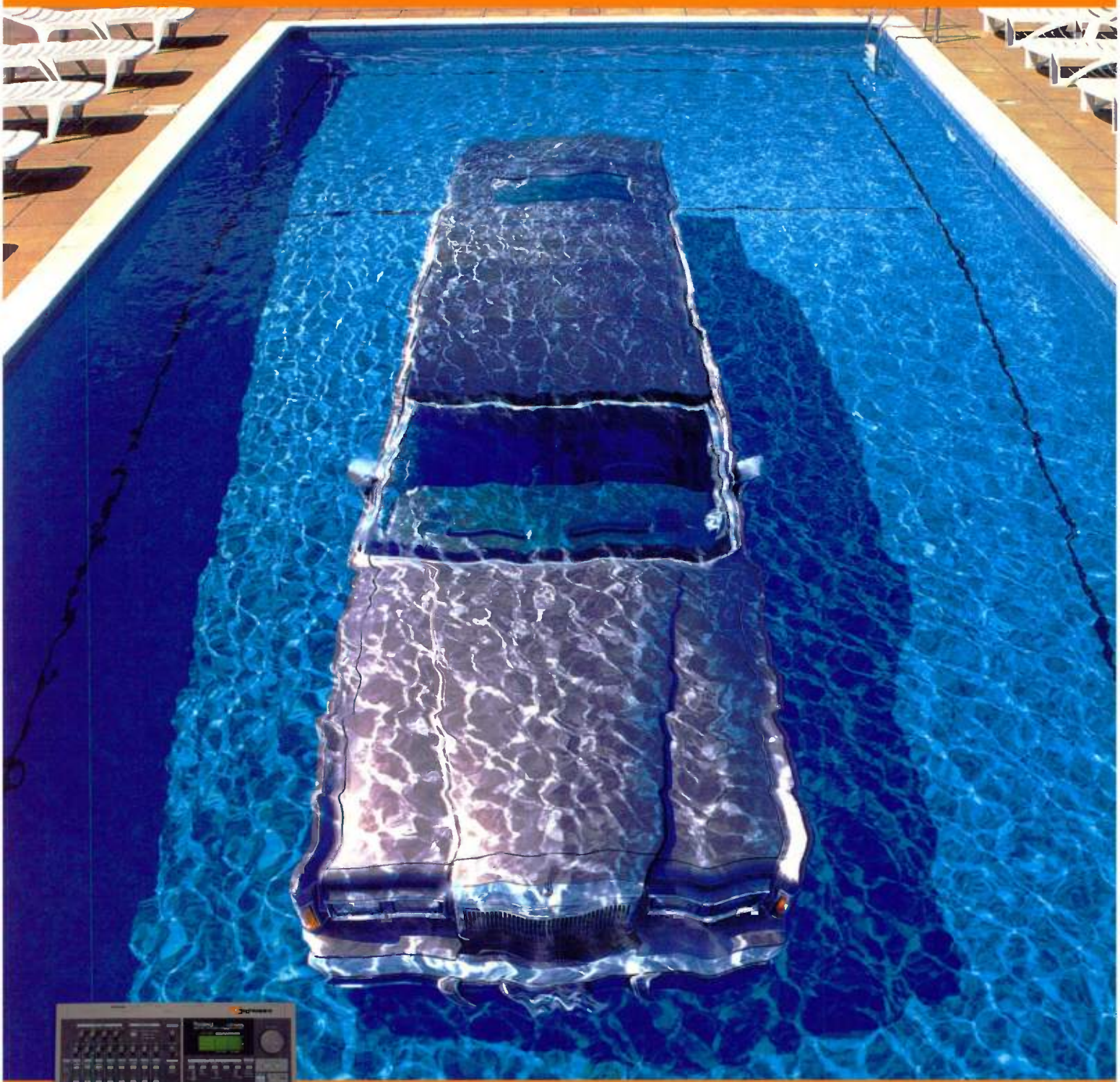
A ASAP Europe, First Floor, Units C & D, Tower Bridge Business Complex, 100 Clements Road, London SE16 3DG.

T 0171 231 9661.

F 0171 231 9111.

E 101641.2551 @compuserve.com

For 25 years musicians the world over have made it with Roland instruments.
No others sound as real. No others have the warmth and the depth.
When you want to make music, make it with a Roland.



Make it with a Roland

In 1996, the Roland VS-880 Digital Studio Workstation revolutionised the hard disk audio recorder market. Now for '97, the V-Xpanded package is even more dynamic. On-board auto-mixing function. Built-in effects board. COSM. Mic simulation. Voice transformer. 19 band Vocoder. 1.4 Gbyte hard drive. 64 virtual tracks. Editing with 999 levels of undo. SCSI port as standard. Linear and compressed recording. All in the digital domain. Make it with a Roland.

Roland

For details of this and other new Roland products call the Roland brochure hotline: 01792 515020
Roland (UK) Ltd. Atlantic Close, Swansea Enterprise Park, Swansea SA7 9EJ. UK web site: http://www.roland.co.uk

WRH

Amek System 9098

Dual Mic Amp

Pro quality at an affordable price? HUGH ROBJOHNS inspects a preamp with a prestigious name.

Amek's association with the legendary Rupert Neve has led, over recent years, to a range of highly regarded studio desks and related stand-alone equipment. The System 9098 Dual Mic Amp reviewed here is derived from a highly specified recording desk and has been designed to meet the needs of the most critical professionals. The key to the professional environment, of course, is quality, since any degradation to the microphone signal can never be replaced. However, price is equally, if not more, important because the whole music and recording business is so very competitive.

As you might expect from any mic-amp design originated by Rupert Neve, the System 9098's sonic purity and excellence can be assumed, but the really impressive thing is that Amek have been able to price it significantly lower than its immediate competition (such as the Focusrite Red 8). Scoring high in the value-for-money tables, the 9098 is potentially within the reach of the aspirational home studio owner.

OVERVIEW

The System 9098 Dual Mic Amp accommodates a pair of microphone or DI inputs and provides up to 72dB of gain through a combination of a switched coarse setting and separate fine-gain control. The usual collection of mic-amp facilities is provided, including polarity reversal, high-pass filter and phantom power, but — somewhat unusually — the unit also incorporates a Mid-Side (MS) decoder and stereo-width control. Each channel has its own level metering and the signal output is fully balanced and isolated.

MECHANICS & ELECTRICS

The 9098 is a solid 1U rackmount unit with most input and output connections on the rear. The box weighs in at about 4kg and is 330mm deep (including connectors). The upper and lower surfaces contain a few ventilation slots around the linear power unit, which are necessary as the unit seems to run slightly warm.

Internally it's well built, with a large motherboard covering the whole floor area of the case. The power supply is mounted directly on this PCB within a separate screened case, and two small daughterboards carry the front-panel metering and some push switches. The integrated circuits are all socketed and the few internal jumpers and test points are labelled clearly. Intriguingly, the circuit board has provision for two additional plug-in peak-limiter cards. The manual states that these are not available at present, but may possibly be provided as an option at a later date.

The rear panel carries an IEC mains socket with associated voltage selector and fuse holder. A pair of 4mm binding posts with supplied linking bar bring out the chassis earth and analogue ground connections. Microphone inputs and line-level outputs are catered for with 3-pin XLRs; the inputs are electronically balanced but the outputs incorporate substantial transformers.

Without wishing to bore you with detail, I will explain that the microphone amplifiers are of the TLA or 'Transformer-Like Amplifier' design which has been seen on many other products from Rupert Neve. Active components are used to simulate the operational characteristics of conventional transformer coupling, but with far better performance. In this case, the topology includes a discrete transistor front end feeding an OP275 and a pair of NE5534 ICs (for the tech-heads out there). All technical specifications are exemplary — particularly the channel crosstalk, which is better than 100dB at all frequencies: these figures translate directly into the kind of sound quality that really does make a difference.

KNOBS & LAMPS

The front panel is neatly separated into three sections, with the two channels separated by the Mid-Side facility. The operational controls for each channel are completely separate, so the unit really is a dual-channel design rather than a stereo one, although the provision of a switched input gain control and a centre detent on the fine control will allow accurate gain matching between channels.

On the extreme left of each control section is a 3-pole quarter-inch jack socket for DI inputs. The System 9098 will happily accept either a balanced signal or a conventional unbalanced one on a normal 2-pole plug, and the DI input is activated by pressing the adjacent DI button. This input has a 100kΩ input impedance; when it's active, the gain range is restricted to 30dB.

The next control is a large knob to set the coarse gain in ten 6dB steps (only the first five steps of which are functional on the DI input). To the right is a fine gain-trim knob which offers ±6dB with a centre detent at unity gain.

Four push buttons provide the essential

pros & cons

AMEK SYSTEM 9098 £1056

pros

- Well-designed, classy circuit design from 'the master'.
- Sound quality up with the established leaders, but priced more attractively.
- Stereo width control and MS facilities make this a very flexible tool.

cons

- Quality still doesn't come cheap.
- Manual could be a tad more helpful in the MS department.

summary

Extremely high-quality 2-channel microphone pre-amplifier. Excellent sound, easy to use, and with all the facilities you could need, including proper DI inputs. The addition of MS facilities and stereo-width control is unusual but very welcome, making this a superbly flexible unit.

SOUND ON SOUND

facilities of phantom power, polarity reversal, 120Hz high-pass filtering and an output mute (post meter); each has an associated LED to show when it is active.

Above the buttons, a horizontal LED bargraph meter shows the channel output level. The meter is scaled between -30 and +14dBu and the topmost LED, labelled Over Load, illuminates at a pre-defined peak threshold (adjustable on internal jumpers between +18, +20 and +22dBu — the last being the default).

FAT OR THIN STEREO

The 9098 Dual Mic Amp is unusual in its provision of a stereo width control and MS matrices, but is all the more versatile for it. The MS facilities comprise a knob and three buttons. Two of the buttons apply the MS matrix converters to the input or output signals; the third activates the stereo width control. If an MS stereo microphone is connected, the input MS decoder may be inserted to convert the signal to conventional LR (Left Right) format. Alternatively, the output of the Dual Mic Amp can be converted to MS format from a conventional LR input signal (although few people would want to, these days...).

When activated, the width control allows the stereo image to be reduced to mono, or increased such that the S component of the signal is 6dB higher than normal. Since this facility increases the amount of 'out-of-phase' information in the stereo signal it should be used with care to retain mono compatibility, but the 6dB limit is a sensible one and the control provides an effective range.

The manual for the System 9098 is generally very well written, but it falters when it comes to the section on MS operation. For example, it erroneously suggests that signal processing should not be performed on an MS signal. While I would agree that, in unskilled hands, great damage can be done to an MS stereo signal if it's mistreated (although no more so than when an LR signal is mistreated), much of the advantage of the format comes from the way in which the two legs *can* be processed independently. Indeed, one of the most commonly used treatments is to apply severe high-pass filtering to the S signal to reduce inevitable low-frequency rumbles and image imbalances, yet this is specifically discounted in the manual!

IN USE

This unit is everything I expected it to be: a very competent performer, and well up to the standards anticipated of a product with Rupert Neve's signature on the front. Although I wasn't able to make a direct head-to-head comparison with the top-flight Focusrite Red 8 mic preamp, I was left with the impression that the Amek unit is very much in the same class and can certainly extract every last bit of information from the microphone.

It's simple to set up and operate, and has masses of headroom and an extremely clean and accurate sound quality. It makes top-flight mics sound fantastic, and even cheap ones perform far better than they have a right to. The DI input works remarkably well: I recorded a wide variety of guitars without any hint of a buzz or hum. The wide bandwidth and enormous headroom of the System 9098 ensures that every element of even the fastest transient is faithfully captured.

The MS facility is useful — many potential purchasers may doubt it at first, but I'm confident that most will find it indispensable after a short time. The use of MS microphone techniques tends to be confined to broadcasters, but MS has a much broader application and this unit might encourage music studios to experiment and discover the benefits of the format for themselves.

At £1056, the System 9098 is not exactly bargain basement, but this is an attractive price when you consider its superb sound quality, let alone its facilities and design pedigree. SOS

info

£ £1056.33 including VAT
A Amek, New Islington Mill, Regent Trading Estate, Oldfield Road, Salford, Manchester M5 4SX.
T 0161 834 6747.
F 0161 834 0593.

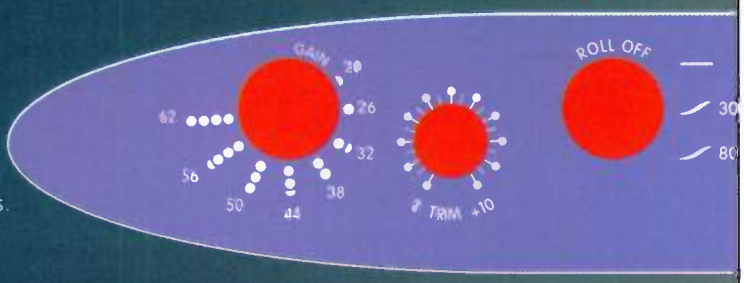
A new philosophy...a new range of devices

DACS

Sonic Clarity...Functional Clarity

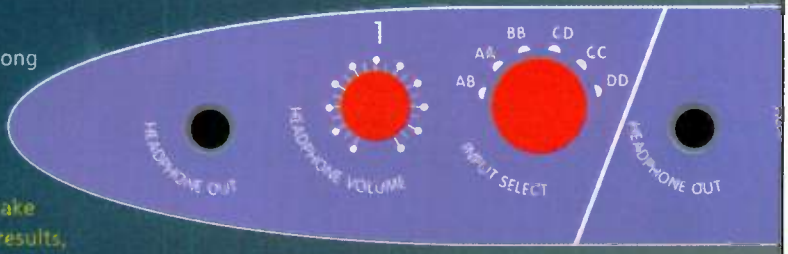
MICAMP

Discrete front end, ultra low noise – ravishing warmth, absolute clarity. A classical engineer who recorded two albums with it, rated it superior to microphone amplifiers costing far more. Another, after recording the vocals for a jazz album, has ordered eight channels. All loved the unique metering.



HEADLITE

Four inputs and four independent outs with a six position monitor select on each – absolute clarity. They are capable of driving down long lines, and **yes**, they can play loud enough for drummers, and **no**, they are not expensive



YOU are what makes your studio world class. These visually striking, well engineered units will make it easier for you to continue to achieve world class results, well into the 21st century.

Each hand made, individually set up device comes to you with a 3 YEAR GUARANTEE.

DACS Ltd, FREEPOST NT1808, GATESHEAD, NE10 0BR

3 YEAR GUARANTEE

DACS

To place your order or find out more, please call **Douglas Doherty** now Tel: (44 191) 0191 438 5585 Fax: (44 191) 0191 438 6967, e-mail: DouglasJPDoherty@compuserve.com

Korg Pandora

Multi-effects Unit

It's small, sleek and extremely covetable. DAVID MELLOR opens the box...

The original Korg Pandora was one of those pieces of equipment that screamed, "Own me! Own me!" as soon as you saw or handled it. The new, updated Pandora PX2 is similarly attractive and I'm sure that your hand twitched in the direction of your wallet as soon as you saw the photo on this page. In the original Pandora, Korg put together a wonderful combination of simple design, ease of use, and excellent effects to interest any guitarist, and even synthesists who might like to add guitar-style processing to their lead lines. In the PX2, the Pandora concept is extended with drum programs and additional auxiliary input functions, but the emphasis is still on simplicity and ease of use.

EFFECTS & OPERATION

As soon as the PX2 appeared through my letterbox, I rushed for my trusty (or is that rusty?) Fender Stratocaster, jack lead and headphones. I plugged in, set the input gain switch, and that was the rest of the day gone. My fingers did the walking all over the fretboard of my guitar, and all over Pandora too. I found myself improvising in styles ancient and modern, and some that I don't believe I've ever heard before. It's quite an inspiration. I've always claimed to be a great believer in creating effects from individual building blocks, such as compression, distortion and reverb, to match the sound that already exists in your mind's ear. But a good selection of presets can inspire musical creativity beyond what you can imagine — and if I could impress myself with my Pandora-inspired creativity, I am more than sure that you will too.

As I said, the Pandora PX2 is a simple device: you would be disappointed if you'd thought that it could create any sound in the known universe of guitar sounds. But if Pandora's range is limited, what it does it does very well. As on the original Pandora, the building blocks of the effects are Drive, Tone, Modulation, Ambience and a Cabinet Resonator, with noise reduction thrown in too. Any of the 38 presets (compared with the original Pandora's 20) can be edited and stored, and you can always go back to the original factory presets if you need to.

In editing mode, the Drive parameter offers eight alternative types, ranging from compression through mild overdrive to high-gain distortion. As always, it's impossible to say that a digital box of tricks can sound exactly like a real amp and speaker, but the results are perfectly good enough to record directly, and you always have the option of amplifying if you feel you need to. For each type of drive there is one editable parameter adjusted by the Value buttons — in the case of compression, this is the strength of the compression effect, and for the other types of drive, the 'amount'. The Cabinet Resonator, which is, along with noise reduction, curiously separated from the rest of the editing functions, is not a cabinet simulator in the sense that it's frayed round the edges, weighs 40kg and rattles when driven hard, but it does give the flavour of a real speaker in a box, if not the substance. The Value buttons adjust the strength of the resonance. The Tone parameter comes, usefully, after the Drive section and offers two bands, low and high.

Possibly the most interesting section is Modulation, which, even though it can only do one thing at a time, has a wide range of options. I always look first to the phaser in a digital effects unit, because the digital versions hardly ever come up to the standard of the old analogue phaser foot-pedals dating from the 1970s. This one, however, is certainly comparable, if a little on the clean side. There are four phaser types and in each the Value buttons set the modulation speed. For funk-heads, there's a selection of four auto-wah effect types. I normally can't stand auto-wah myself, so if say that I can't stand the PX2's auto-wah either then that must be a

pros & cons

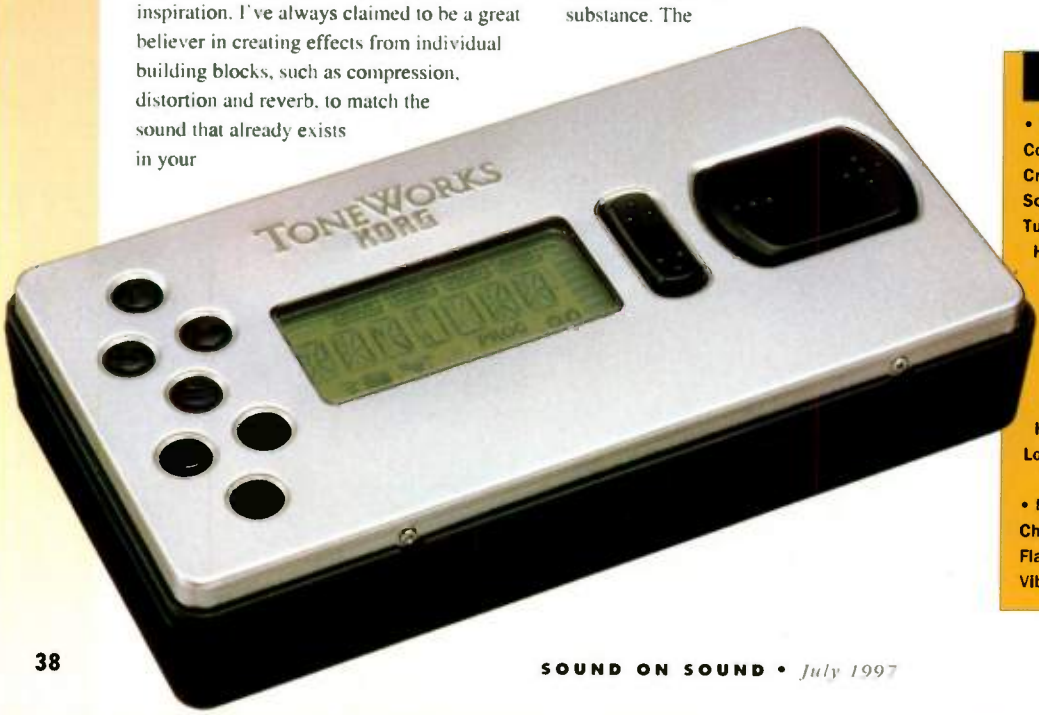
KORG PANDORA PX2 £199

pros
- Good presets.
- Easy to edit.
- Brilliant practice aid.

cons
- Can't use reverb or pitch-shift in the same program as modulation.
- Tuner difficult to use.

summary
Simple, inspiring and a pleasure to use.

SOUND ON SOUND



WHAT'S IN THE BOX

- **DRIVE**
  - Compression
  - Crunch
  - Scream
  - Tube
  - Hotbox
  - Higain
  - Valve
  - Crush
  - Scoop
- **EQ**
  - High EQ
  - Low EQ
- **MODULATION**
  - Chorus 1-4
  - Flange 1-4
  - Vibrato
  - Delayed vibrato 1-3
  - Phaser 1-4
  - Tremolo 1-4
  - Pan 1-2
  - Auto Wah 1-4
  - Wah
  - Random filter
- **AMBIENCE**
  - Delay 1-6
  - Echo 1-6
  - Room reverb
  - Hall reverb
  - Pitch shift 1-8
- **CABINET RESONATOR**
  - Combo 1-2
  - Stack 1-2

PX2

compliment of a kind. Although each of the remaining chorus, flange, vibrato and tremolo effects has only one variable parameter, the simplicity of not having too many options to meddle with actually means that you find the sound you want more quickly — hence more music-making!

SOUND QUALITY

I continue to be amazed at how natural digital reverbs can sound, considering that real acoustic reverb contains an almost infinite complexity of reflections. Korg, I feel, are the unsung heroes of digital reverberation. If you listen to the variety and useability of the reverb effects on their keyboards, you'll find that they stand comparison with almost anything the major reverb manufacturers have to offer. On the Pandora PX2 you will only find two reverb types, Room and Hall, but there are a total of 12 delay types as well: although the delay times can't be adjusted precisely, the options are more than sufficient for a unit of this type. Pitch-shifting is possible too, with a useful detune setting as well as semitone intervals.

BELLS & WHISTLES

If you thought Pandora was just an effects unit, then think again, because there's more! The PX2 can also act as a tuner with settings for signal through and signal off, as appropriate. I didn't find the digital display nearly as useable as a needle-type tuning meter, but perhaps I could get used to it, and it would be one less gadget to have to plug in. As well as an effects unit and a tuner, Pandora also incorporates rhythm programs — it's a drum machine too. Don't expect a TR909 or anything like that: the rhythms are really only there as a practice aid. But it's great to be able to play along to one of the 32 preset rhythm patterns, or a sampled metronome, not just for practice at keeping time but as a songwriting tool too. If a simple rhythm track isn't enough, you'll need to consider using the auxiliary input. In this case, you can plug in your Walkman and strum along to a backing track, or even play along with your heroes. And if the backing track just happens to be in the wrong key, you can pitch-shift it: if necessary, you can also adjust its tuning. If you're pitch-shifting the auxiliary input, any ambience applied to the input signal is switched off, but you would expect this — processing power can't be infinite. Also, there's an option to cancel the centre image of the stereo auxiliary input, with the object of removing the vocal or lead instrument which is probably balanced equally left and right. As usual with this kind of function, it works better on some recordings than others, but that isn't Korg's fault.

> "Korg, I feel, are the unsung heroes of digital reverberation."

In conclusion, the Korg Pandora PX2 may be simple, but it's simple in the sense that you can easily use it to the full. It's a terrific little box and you couldn't possibly be disappointed with it. SOS

info

£ £199 including VAT.
A Korg UK Ltd, 9 Newmarket Court, Kingston, Milton Keynes MK10 0AU.
T Brochure Line 01908 857150.
F 01908 857199.

AT40 SERIES

For information on the complete range, contact a 40 series sound specialist today.

Active Sound - Watford - 01923 246282
Axis Audio - Stockport - 0161 4747626
Blue Systems - Saffron Walden - 01799 584095
KGM - Wakefield - 01924 371766
Musical Exchanges - Birmingham - 0121 2367544
Music Lab - London - 0171 388 5392
Music Village - Romford - 0181 598 9506
Rose Morris - London - 0171 836 0991
Studio Spares - London - 0171 4854908
Sutekina - London - 0171 2407696
The Guitar & Amp Centre - Brighton - 01273 676835
The M Corp - Hants - 01425 470007

Setting a new standard of audio excellence to which others can only aspire.

audio-technica
The Complete Microphone Solution

Technica House, Royal London Industrial Estate Old Lane, Leeds LS11 8AG
Tel: 0113 277 1441 Fax: 0113 270 4836 E-mail: sales@audio-technica.co.uk

Bellari RP562

Stereo Tube Sonic Exciter

PAUL WHITE tests one of the few low-cost tube enhancers on the market, from a new name in excitement.

Back in the early '80s, exciters were — well... exciting, but now everyone builds the things and, though there are subtle differences, few stand out from the pack as being truly different. Bellari's claim to individuality is the use of tube circuitry and an all class-A signal path. Rather than using conventional harmonic regeneration, they've used an approach that seems closer to BBE's, where the various harmonics of the sound are restored to their original time relationships after the phase-mangling that goes on in a typical audio chain. The tubes are there just to add a little compression and coloration.

In order to access as wide a market as possible, the designers have also included a sub-bass output, which makes the Sonic Exciter useable in home-theatre and PA applications as well as in studio work. The brief manual describes some of the techniques used to restore the correct phase relationships, and these include all-pass filtering, frequency-compensated gain adjustment (EQ?), and frequency-compensated domain delay — which seems to be another way of saying that some parts of the frequency spectrum are delayed slightly with respect to others. Using all class-A circuitry means that any distortion components will be mainly second-harmonic, and this tends to sound more musical than odd-harmonic distortion.

The hardware is conventional, with the exception of the two tiny, circular moving-coil level meters, and the fact that the main left/right audio connections are duplicated on both unbalanced jacks and balanced XLRs. The power cable is fixed, which avoids the irritation of an EC lead becoming dislodged in the back of a busy rack, and there's a further jack output to feed a mono sub-woofer.

Bellari have done a lot of work on restyling their products, but I'm not convinced that they've quite got it right yet. The gold anodised panel is nice enough, but the rather cheap-looking plastic knobs seem out of place on a piece of pro audio gear.

INSIDE STORY

Before proceeding further, I just had to take off the lid and have a look around. What I found was a pair of 12AX7/ECC83 dual-triode valves, run at a proper high-tension voltage, plus a few IC-based circuits, most of which looked like filters of one kind or another. I must admit that I'd expected the circuitry to be a little more complicated, but the constructional standard is OK and the accessibility of parts for servicing is good.

All the controls are ganged for stereo operation, and the first two controls relate to the sub-bass output — something that few studio users will have an application for, though it could be interesting to compress the sub-bass output, then add it back into the mix for more low-end energy. One control sets the upper frequency limit of the sub-bass output, between 35Hz and 200Hz; the other sets the sub-bass level. The controls that deliver the excitement are labelled Bottom and Definition, but there's no drive control to set up and no way to adjust the frequency range that's excited. The lack of a drive control is a good thing — it makes setting up easier — but not being able to vary the part of the spectrum that's being excited could be seen as slightly limiting.

Bottom is, as you might imagine, a bass control of sorts, and it is centre detented, though the manual implies that the flat position is with the pointer at about 11 o'clock. The book then goes on to talk about spectral spread in the first half-turn of the control but, as far as I can tell, turning the knob left of centre reduces the amount of bass, while turning it clockwise increases it. An Active button with status LED lets you know when the process is in circuit, and the Definition control adds brightness as it's turned up from its minimum position. Interestingly, when the unit is switched into circuit with the Definition control set to minimum there still seems to be a very slight excitement effect, possibly due to the valves in the signal path.

(RACK) MOUNTING EXCITEMENT

To test this unit, I tried it on a couple of CDs that I felt were slightly on the dull side, and I also used it to beef up a drum submix,

pros & cons

BELLARI RP562 £299

pros
- Attractive price for a valve processor.
- Easy to use.
- Smooth, forgiving sound.

cons
- Only really offers effective control of high frequencies — the low control is basically EQ.

summary

I have to admit to being surprised at the low cost of this unit; though it is fairly limited in what it can do, it does it extremely well.

SOUND ON SOUND

something it did extremely well. The Bottom control seems to be little more than EQ, but it's well designed and adds the requisite weight to the low end, providing you use it sparingly. Definition does just what it says on the tin, and the effect is reasonably smooth, sounding more like a BBE than a typical harmonic exciter; again, though, it has to be used sparingly if you're processing a whole mix. Transient details are lifted out of the mix and the overall clarity and transparency of the material improve, as does the apparent separation between instruments.

When it came to processing the drum mix, I needed a modern sound that would cut through, so I used far more processing than I would dream of using on a full mix, but it worked beautifully by sharpening up the snare drum, adding edge to the hi-hats, and giving the bass drum more attack. The mid-range seems completely unaffected by the process so the overall timbre of the sound isn't changed too radically, which can be a good thing; on the other side of the coin, you can't address mid-range problems when they do show up as you can with something like SPL's Vitalizer. Being ruthlessly honest, I don't think I managed to do anything that I couldn't have done almost as well using one of the better solid-state exciters — but then again, the RP562 is a good deal cheaper than many solid-state models!

"Transient details are lifted out of the mix and the overall clarity and transparency of the material improve, as does the apparent separation between instruments."

SUMMARY

The pricing on this processor is very competitive, and the unit does everything you'd expect an exciter to do, and does it rather more smoothly than many of its competitors. The use of valves also seems to add a little something to the tone, as evidenced by the slight timbral sparkle you hear when the unit is switched in, even with the Definition control turned right down.

The Bottom control behaves more like a regular EQ, but it operates at the right point to prop up ailing bass and kick-drum sounds, and the sub-bass output, although unbalanced, is fine for feeding a sub-bass amp and speaker system in a small PA or home theatre. Another major point is ease of use — the Bottom and Definition knobs can be used in exactly the same way as a 2-band equaliser, and everything is done by ear rather than by watching meters or LEDs. Given its sub-£300 price, the RP562 is a strong contender in what's becoming an increasingly crowded market place. SOS

£ £299 including VAT.
A Turnkey, 114-116 Charing Cross Road, London WC2H 0DT.
T 0171 379 5148.
F 0171 379 0093.
E sales@turnkey.demon.co.uk

Alesis Nano

Stereo Piano Module

A very, very big piano inside a very, very small box: DEREK JOHNSON investigates Alesis' latest impressive conjuring trick.

Squeezing over £100,000's worth of grand piano into a box the size of a largish personal stereo might appear to be an impossible task — but not for Alesis. The company's recent moves into miniaturisation include the Nano series of one-third rack-width processors, and newswatchers among you will know that the range is due to grow to include sample-based sound modules. First off the production line is the 64-voice polyphonic NanoPiano.

Taking pride of place in the NanoPiano's 8Mb collection of 16-bit, 48kHz sampled waveforms are the phase-accurate stereo multisamples of a *very* expensive 97-key, nine-foot-six Bösendorfer Imperial grand (the largest piano commercially available), which have already graced such Alesis products as the Quadrasynth Plus Piano and QS8. For many musicians, especially those searching for an affordable, compact, high-quality piano sound source, this would be enough. But Alesis use it just as a starting point: in addition to the magnificent piano just described, the NanoPiano's 256 preset Program collection also includes assorted electric pianos, organs, basses, strings, and synth pads, plus a variety of splits and layers. The samples for these Programs are sourced from elsewhere in the Alesis synth family, and the icing on the cake must be Alesis' QS Parallel Matrix Effects — four independent stereo multi-effect processors.

WHAT IT'S GOT

Having read the preceding overview, you might be left wondering how all this could possibly fit in the unassuming black box whose picture illustrates this review. Don't let the size and small number of controls fool you. While the NanoPiano can be very simple to operate, it does have hidden depths. Let's start with the technology-shy interface: from the left, there are knobs for volume, effects level (which adjusts one effect per Program), MIDI channel (the NanoPiano is most definitely monotimbral), Program Category (there are 16), and Program (with 16 Programs in each Category). A pair of LEDs indicating power and MIDI activity winds up the options available. It's just as simple at the back: MIDI In and Out/Thru, a stereo pair of audio output jacks and a PSU socket (for the wall wart, which is gratifyingly compact). There's no power switch, no display, and no headphone socket, but you can't have everything. Note that a supplied rackmounting screw fixes the module to a compatible rack tray alongside two other Nano products.

If you're wary of MIDI, then go no further, although your MIDI controller will undoubtedly be equipped with pitch-bend and modulation wheels, and will transmit velocity, aftertouch and Program Changes, to which the NanoPiano will happily respond. However, if you're willing to get your hands dirty, there's a TARDIS of an editable instrument waiting inside — providing you have the technology to generate System Exclusive data. The downside here is that the module has but one edit buffer (it's equipped with 256 *presets*, remember), so any alterations you make will be temporary, unless they're saved externally — a profile should be available for your generic software synth editor soon, and if you have a suitable mixer map for your sequencer, you can make changes on the fly. A NanoPiano voice can consist of a waveform, sweepable (but not resonant) filter, three envelope generators, three LFOs, and four programmable effects. Unfortunately, the (admittedly preliminary) manual lacks precise System Exclusive data.

pros & cons

ALESIS NANOPIANO £339

pros
- Very compact.
- Easy to use, yet contains a hidden MIDI powerhouse.
- High-quality, true stereo piano.
- 64-note polyphony.
- Huge collection of presets.

cons
- No display.
- Flimsy front-panel knobs.
- No user memories.

summary

If it's piano without the price — or bulk — you're after, you must hear Alesis' module first. A hit.

SOUND ON SOUND

HOW IT SOUNDS

The NanoPiano's 8Mb of waveform ROM is divided into 80 separate groups of waveforms, although the vast majority of these make up the left/right pairs of several stereo piano samples. The manual provides a full list of these waveforms, and also names all 256 preset Programs.

The 16 Program Categories mentioned above are called Acoustic Piano, Piano & Strings, Piano Layer, Piano FX (strange piano variants), Electric Piano, Electric Piano Layer, Chromatic (clavinets, vibes, harpsichords and more), Organ, Bass, String, Synth Pad, Lead Synth, Split (mostly bass and some sort of piano), Effect (strange sounds), Piano & Pad, and Piano & Vox. Each Category has a selection of 16 programs.

That's a lot of presets, and a varied collection they are. Quite apart from the stereo pianos, there are some fine organs (including the delightfully cheesy Surf Organ), a good selection of acoustic, electric and synth basses that augurs well for the forthcoming NanoBass module, a variety of synths and pads, and some excellent electric pianos. Virtually all the layered presets — combinations of acoustic or electric piano and strings or synth pads — are excellent to play. Personally, I could do without the piano/vox layers and the so-called Effects and Piano Effects, although these last two do show how far the idea of a 'piano module' can be stretched. Even more variation is available when you simply waggle your controller's mod wheel: on pianos, this opens the filter, dramatically brightening the sound; on electric pianos or organs it alters the modulation speed or depth of the effects.

Piano

The quality of the raw samples is good, and the module as a whole offers low-noise audio output. Sample loops and multisample crossover points often let budget sound modules down, but not the NanoPiano. Looping is excellent, and the changes between different samples within a waveform have been so smoothly disguised as to be virtually unnoticeable unless you listen *very* carefully. You won't find here the buzzing loops and jarring transitions that make solo work impossible. The pianos even sound good dry — they have a natural 'in your room' quality.

One of the nice things about the NanoPiano is its 64-voice polyphony. Arpeggios? Sustain pedal? No problem! This polyphony is halved or quartered on some (unspecified) two- and four-element Programs; to combat note stealing, Alesis have implemented 'Dynamic Allocation', a clever bit of software that steals notes intelligently — it seems to work.

IS IT GOOD?

Already, the NanoPiano is a personal favourite. Its stereo pianos are, to my ears, much less produced or processed than some of the competition's, and it was quite easy to forget that I was controlling it from a plastic 61-note synth keyboard. The rich, full-bodied sound quality really did affect how I played, and the module responded well at all dynamic levels — I found it great for romantic and classical

> "The rich, full-bodied sound quality really did affect how I played."

repertoire (Mendelssohn's *Songs Without Words* had never worked for me on a sample-based instrument before), but it has the presence to fit into more contemporary settings — jazz, rock, or even triggered from an arpeggiator and treated by some MIDI-clocked delays.

Black marks are few. The lack of display and internal PSU are excusable in a module so small, but I hope that the final manual will contain more MIDI detail. Personally, I found the Program and Category knobs a little unstable. They're fiddly to get into the right position and sometimes slip; on my unit, the Program knob pointer didn't line up with all 16 Program numbers.

But enough negativity. If all Alesis had provided was a sampled Bösendorfer Imperial, the NanoPiano would have been a serious contender for your money. Add the extra sounds, the effects and the editability, and it's unmissable — it's even cheaper than the competition. Whatever your piano needs, I'm sure the NanoPiano will fill them.

SOS

info

£ £339 including VAT.
A Sound Technology plc, Letchworth Point, Letchworth, Herts SG6 1ND.
T 01462 480000.
F 01462 480800.
W http://www.soundtech.co.uk

Quested VS2205

Active Nearfield Studio Monitor

Some of the most prestigious names in monitor design are getting into the project studio market. PAUL WHITE auditions Quested's new baby powered monitors, affordable enough for the project studio owner and portable enough for the producer on the move.

Roger Quested has been building studio monitoring for more years than I can remember, and though his reputation was forged by monitors you could park your car in, his range of smaller monitors has also found its way into both professional and project studios the world over. The VS2205 is a compact, active 2-way monitor designed as an accurate nearfield reference, and is small enough to make it ideal for those producers who like to carry their own monitoring around with them.

INSIDE & OUT

Because engineers tend to put their speakers sideways atop a console's meter bridge (regardless of manufacturer's recommendations), the VS2205s deliberately present a low profile. To achieve this, the design uses two identical 5-inch bass/mid drivers, each mounted in its own ported chamber, while the cabinet edges are rounded to help reduce HF diffraction — and to prevent dented shins when the monitors are being transported!

Handling the top end is a ferrofluid-damped 28mm soft-dome tweeter with wide dispersion characteristics, the aim being to deliver a wide listening angle rather than a single, tightly focused 'sweet spot'. From the Quested literature, I get the impression that Roger disapproves of horns or waveguides because of their intrusive effects on the phase response of the system, and instead prefers to use a tweeter with a naturally wide dispersion characteristic. The crossover frequency is a fairly low 1.25kHz (though the steep 24dB/octave slope prevents the tweeter from working too hard at the bottom end of its range), and the overall frequency response is 75Hz to 19kHz within +/- 2dB. The maximum quoted SPL is 108dB (C weighted).

The box itself is extremely solid, not least because of the internal baffling that divides the two bass/mid enclosures, and extra weight is added by the 100W and 50W (LF and HF) RMS power amplifiers, plus the active crossover circuits. Clip-on grille covers are fitted as standard, but the top end definitely sounds more transparent when these are removed. A cutout in the bottom of the grille shows the new purple Quested logo, and a green LED lights when the speaker is powered up. There's also a front-panel clip LED to warn of imminent speaker abuse, and habitual abusers are protected from their own folly by full thermal protection.

Separate recessed rear-panel switches allow both the high and and low end to be rolled off if required; the low-end switch introduces a rolloff for use with Quested's optional subwoofers, while the high switch puts in a 1dB drop at 20kHz for room matching. There's also -10dBv or +4dBm sensitivity switching. Power comes in via standard EC mains connectors. Each cabinet measures just 340 x 265 x 282mm, and weighs a manageable 29lbs, with

pros & cons

QUESTED VS2205S £1716

pros
- Smooth, unfatiguing tonality.
- Excellent vocal reproduction.
- Compact, yet adequately powerful.

cons
- Transient detail could be slightly better.

summary

These are nicely built active monitors that combine true portability with Roger Quested's characteristic 'tell it like it is' tonality. Some may find them slightly lacking in detail, but you can listen to them for hours without feeling fatigued.

SOUND ON SOUND

the power amp heatsinks recessed into the cabinet sides out of harm's way.

LISTENING TESTS

When I auditioned the very familiar set of test CDs in my collection, the first thing that struck me was how smooth and comfortable these speakers are to listen to, with none of the 'tizz' or brashness associated with so many popular nearfield speakers. On the downside, though, I feel that percussive transients could be just a hint crisper. The bottom end is delivered with a solid thump that belies the 75Hz lower frequency-response limit, and for use in a small studio I think the bass goes quite low enough, though I feel that bass sounds lack a little definition. I guess the bottom line is that good transient detail goes hand in hand with a bright sound, and over-bright monitors can be very hard work, especially if you're using them for long sessions.

As claimed, the acceptable listening angle is very wide, and vocal reproduction is particularly smooth and well behaved. Stereo imaging is good — not too surprising, considering the small physical side of these speakers — and the available level is adequate for nearfield use.

"The acceptable listening angle is very wide, and vocal reproduction is particularly smooth and well behaved."

SUMMARY

These are good monitors and, though they're not perfect, I prefer their understated, neutral tone to the brash pyrotechnics of many American models. But, while they're not unreasonably priced, neither are the VS2205s exactly cheap, and for the same money, you could choose a pair of small Dynaudio active speakers, the new mini Genelec system, some excellent Spendors or, for rather less money, the Event 20/20 actives. Which ones you prefer depends largely on what you expect from your monitors — though I'm a stickler for smooth, accurate monitoring, I have to admit that I found the overall sound of the VS2205s just slightly unfocused, though not seriously so. You really need to hear these speakers side by side with the competition in a decent listening room to put them in perspective, but I think you'll be impressed by their smooth vocal delivery and by their tendency towards honesty rather than flattery.

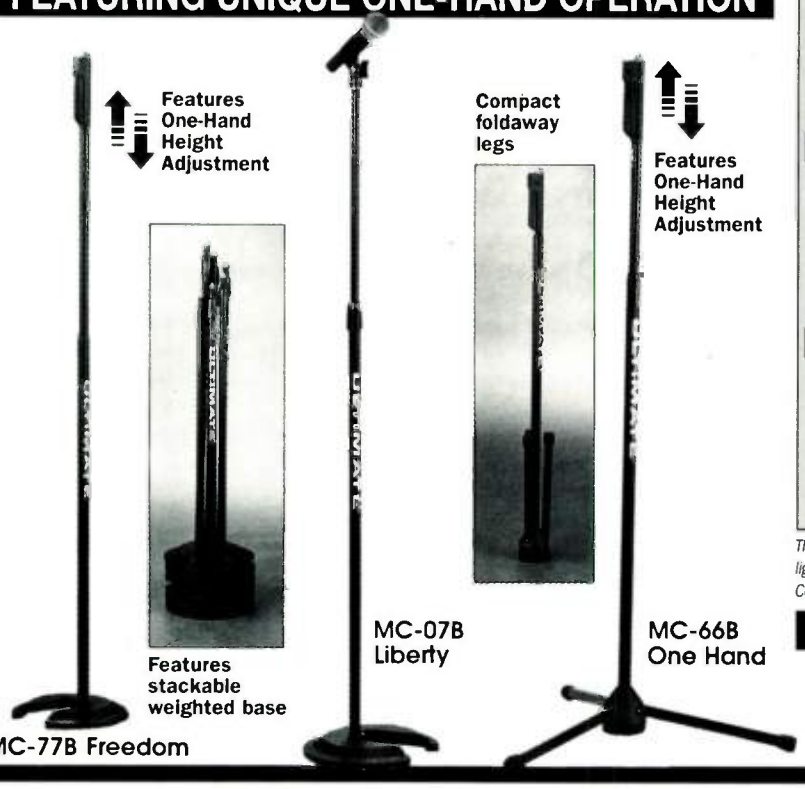
On balance, I think it's fair to say that these little monitors have more virtues than vices, and their compact format makes them idea for mobile recording or as a producer's portable reference. SOS

£ £1715.50 per pair including VAT.
A Quested Monitoring Systems, Unit 2A, West Ealing Business Centre, Alexandria Road, London W13 0NJ.
T 0181 566 2488.
F 0181 566 2484.

ULTIMATE SUPPORT

FOR MIC STANDS

FEATURING UNIQUE ONE-HAND OPERATION



Take hold of the most innovative mic stands on the market today.

FREEDOM (MC 77B)
The Freedom Mic Stand combines the unique features of the liberty and One-Hand Stands...the convenience of single hand height adjustment with the space-saving stackable weighted base
Height 39"-64"
Weight 8lbs

LIBERTY (MC-07B)
The Liberty weighted base mic stand features a stackable base that allows up to six stands tobe stacked in the footprint of one. Quick response on-off clutch.
Height 34"-3/4"-64"
Weight 9lbs

ONE HAND (MC 66B)
The One-Hand Stand has a unique clutch that lets you adjust the height with just a squeeze. The legs fold up along the shaft making the One Hand Stand extraordinarily compact.
Height 40"-1/2"-66"
Weight 3lbs

The Ultimate range of innovative support systems are lightweight, strong and virtually indestructable. Contact us for a full colour brochure.

ULTIMATE™

Distributed by HW International
167 171 Willoughby Lane
Brantwood Indust. Area, London N17 OSB
Tel: 0181-808 2222

Rob lends an ear to the mix.

the young ones

MORPHONIC PRODUCTIONS & STUDIO

You've got the talent but you haven't got the gear. Sound familiar? CHRISTOPHER HOLDER visits a production team who decided to do something about it, and are reaping the rewards.

Ealing, West London: a classic scene of middle-class suburbia. Leafy streets of terraced housing are filled to capacity with parked cars — here a Mondeo, there an Escort, further on a Cavalier nestled behind... a Yugo? The spluttering example of precision Eastern European engineering falters to a stop, the occupant unfolds himself from the cockpit and invites me indoors. Amongst manicured gardens, polished brass doorknobs and contrastingly coloured eves proudly stands a bastion of *Young Ones* living. The front yard looks like a building site; inside, the hall and ground floor looks as though it *should* be a building site. Up a flight of crotchety stairs and through another door is an environment you're less likely to expect — a recording studio, meticulously laid out and obviously maintained with absolute care. The Morphonic studio is the spiritual home of the bright young production and remixing team I've come to meet.

The three Esses: SOS, a smoke and bacillus staphylococcus.

We've all looked at the gear in our home studio and fantasised about making a living out of what is more often a serious hobby than any foray into the heady realms of commerce. Just think of it, being able to dedicate all your time to your studio and making music. Rob, John and Thor are Morphonic Productions and are essentially living that dream (cue Police Academy-style theme music).

CRUISING ON IMPULSE POWER

How did Morphonic get started?

Thor: "At Thames Valley University, doing a course in Music Technology."

Rob: "I was sharing a house with Thor and we had a little setup there — just a sequencer, sampler and the [Casio] CZ5000."

Thor: "I managed to nick a Seck desk from college for a while. Then John bought a load of stuff as well."

John: "I had an option on this loan, and I asked these guys whether they wanted to share the brunt of it, going with what they had and what I had, trying to get a decent studio up and running. The three of us then began teaming up on projects at college."

Rob: "It was about that time that we were invited to audition a track for an advertisement."

John: "It was an Impulse ad, and I think it was Underworld that got it in the end."

Thor: "They gave us a brief on a Monday to do this advert, and gave us a week to write a track and mix it. They put us in a studio that was still being built!"

John: "We spent a good part of the time rewiring. Effectively we only had about 30 hours to finish it."

Thor: "Later on, in June of last year, we approached a guy we knew of who was producing a charity compilation album, because we knew that they always have a couple of unknowns on it, to keep the balance of the CD. We eventually put a track together after three and a half weeks of slogging our guts out. We played it to this guy and he really loved it. So that was like, 'yes, we're onto something' — somebody likes our stuff and is willing to sign a contract to that effect. A little later, John was working at Koch Studios as an engineer for Painting By Numbers, and through

that we were given a few remixes to accompany their releases."

THREE'S A COMPANY

But Morphonic is more than a funky-assed name for three guys tinkering around in a studio in their spare time.

Thor: "Morphonic actually began life as a college project, when we decided to set about starting a production company. At the time we thought, 'we've got the studio, we've got the talent, we've got the right team, we've got the technical ability; in actual fact we've got everything we need', so we started from that point. As soon as we made that start we had projects on the go, so Morphonic had an identity from the start."

John: "There's two elements to Morphonic: Morphonic Studios Ltd, and Morphonic Productions, so when we use the studio as a production team we have to charge ourselves for the time, just to make it easier for tax purposes."

Rob: "We have investors in the studio, and we wanted to make it clear from the start that they were buying into the studio, but they couldn't really buy into *us* as such — we might go off and do different things later on, or we might stay together or whatever. That's the easiest way to make that distinction, otherwise they might want 10% of everything we earn for the rest of our lives."

It all sounds a bit like heavy going.

Thor: "Absolutely, but we can't afford not to be organised."

Rob: "We're beginning to be quite clued up on the business side of things. We've got an accountant, Alice, and for things like checking contracts we use an old one that we know to be correct, as a template."

Thor: "When you're starting up you've got to do everything on the cheap — if there's somebody you know who can do something for you, use them."

John: "It's like the brochure we're doing; we're hoping to get some time on this guy's computer, designing and printing it all off, in exchange for a couple of days in the studio. It's like a bartering tool."

Perhaps, chaps — but is mum due a couple of weeks studio time for all that washing she did last weekend?

GETTING SERIOUS

Rob: "Being a business does force you to take it all more seriously, which can be good if that motivates you. If things aren't formalised it's very easy to say, 'we'll do it tomorrow'. When it's turned into a business there is always this air of seriousness, so that's a good thing. The bad point is that I can't get any cash out without one of these two guys signing the cheque!"

Thor: "Ideally, the Morphonic bank account was created for expanding the studio. So the money the studio makes is used to make this a better place. In the future that'll mean finding premises, so we can incorporate a live room and expand the amount of work we do — without a studio bank account the money can just vaporise."

John: "I think we're quite lucky, in that we all get on so well, that's a major part of it. We do trust each other completely. I think you have to, really, to make any kind of go of it."

SMELLS LIKE COMMUNITY SPIRIT

You've got a good collection of gear: how did that happen?

Thor: "A lot of the gear in here isn't actually ours. We've struck a few deals here and there to try and expand it, so we can get better results. But that's what you have to do really — beg, borrow

John: "We're all for the community spirit thing, because there are a lot of people trying to get going without having the resources."

On the rack: note the Lloyds Bank complimentary delay time calculator.

GEAR LIST

- MACKIE 24:8:2 CONSOLE: "It's expandable, which is the main thing."
- ALESIS MONITOR 2 NEARFIELD MONITORS: "The bulk of our work is dance. People who do dance listen to it very loud, and these monitors come across as being quite loud."
- MASS 500 POWER AMPLIFIER: "We've had a few problems; the VU meters keep popping out!"
- ATARI 1040 (4Mb RAM) RUNNING *CUBASE*: "That's with a Midex that gives five Outs and three Ins, one of which has been used by the output of the Fostex D80 — when used, we run it as the master. The other inputs are taken up by the master keyboard and the JV1080. That's mainly for data dumps — we're great believers in SysEx dumps; that way everything's saved and you haven't edited your original sounds out of existence."
- EMU E64 SAMPLER: "We've got 10 Meg of RAM in there, and it comes with eight outputs — absolutely wicked machine — and excellent editing. It's the best sampler."
- FATAR STUDIO 610+ MASTER KEYBOARD
- ROLAND JV1080 SYNTH MODULE: "We're still doing our best to get the most out of the editing. It's good for layering sounds, though. You can make some luscious pads."
- NOVATION BASSSTATION RACK SYNTHS (x2)
- KORG PROPHECY SYNTHS (x2)
- ROLAND JUNO 106 ANALOGUE SYNTH
- CASIO CZ5000 PHASE DISTORTION SYNTH
- ROLAND SH09 ANALOGUE SYNTH: "Good for weird effects, but you've got to resign yourself to the fact that you're not going to get the sound back next time you turn it on."
- ROLAND OCTAPAD MIDI DRUM PADS: "Rob's a drummer, so for percussion parts it's useful for getting a more human feel."
- TASCAM DA20 DAT MACHINE
- BEHRINGER COMPOSER
- ENSONIQ DP4 MULTI-EFFECTS
- DIGITECH STUDIO QUAD MULTI-EFFECTS
- ALESIS MIDIVERB EFFECTS: "All the effects are on loan."
- TECHNICS 1210 RECORD DECKS (x2)

Mission control: Thor samples the delights of the Prophecy ribbon controller.

Rob: "Being a business does force you take it all more seriously, which can be good if that motivates you."

Rob, Thor and John (L to R) are Morphonic. Would you buy body spray on the recommendation of these men?

▶ and steal to get the gear together. For the [Ensoniq] DP4, and one of the [Novation] BassStations we did some work for Koch Studios, helping to set up a little mastering suite. Pretty easy work really, just plugging in a few leads."

Rob: "They had just broken down their main studio, which myself and John had worked in. They'd recently stopped production, and closed down their studios and this gear was lying about, not being used. We thought it was such a waste that we convinced them to strike a deal with us."

John: "We met these two guys, Matt and Charlie, they come down and take a couple of sessions a week, and for that they leave their [Roland] Juno 106. They like the arrangement, because they get a lot more done than they would in their own little setup."

Thor: "Everybody's happy."

John: "We're all for the community spirit thing, because there are a lot of people trying to get going without having the resources."

Thor: "We know another guy who has offered to lend us his Yamaha desk and [Roland] TB303 for use during mixdown. We reckon he'll try and ask for time in our studio for that, which is fair enough — the more people involved, the better."

John: "The more stuff happening in a studio the better as well. If you've got five or six different projects on the go, even if you're not personally involved, it's all revolving around the studio. So if something comes of it, you'll benefit from it anyway. We've got involved with people who think pretty much the same as we do. It works out really well. We're getting more work, and lots more interest from various quarters — having a great time and making some good tunes as well."

Thor: "When we've got time."

MORPHOLOGICALLY SPEAKING

Producing professional results from your home setup can be incredibly frustrating — fighting against faulty equipment, not enough equipment, not the right equipment... and so on. What's worse is hearing stories of people with great studios that they've got together because their father owns most of Latin America, or they've just scored £50,000 from Swindon Council for falling down an open manhole. Morphonic are a lesson to us all to stop our whingeing. Without the rich parents, or the windfall, or the high-up connections, they're making a go of things, producing professional material and running a fully functioning MIDI suite and studio. It can be done. No regrets, then?

John: "It's great, definitely, it's been brilliant."

Thor: "It's been better than plugging away on your own. There's more input, more people to carry the load."

Rob: "If you enjoy soldering, it's great." SOS

T Morphonic Productions
0802 838011/
0956 671513.

SOME OF MORPHONIC'S WORK

Black September
Album produced by DJ Ariel, Engineered and programmed by Morphonic at Morphonic Studios for Pilot Records.

Square Biz
Remix engineered by Morphonic at Morphonic Studios for Koch Dance Force.

Funny Business
Remix of title music for Channel X Television.

'The Thing'
Charity album track for Turning Point.

Morphonic EP
Soon to be completed and "probably the best EP in the world".

Recently voted "Best shop for studio's" by Evening Standard Magazine

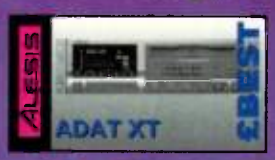
WAY OUT WEST
MUSIC COMPANY

☎ 0181 744 1040 — Worldwide Mail order — ☎ 0181 744 1050

Professional Service | We buy used gear & P/X | FREE Parking | 1 Minute from Twickenham station | Express Nationwide & overseas Delivery | W.O.W Moblie nationwide installation service | Educational Discount - £

ANALOGUE RECORDING

DIGITAL RECORDING



OUTBOARD

MIXING DESKS

PACKAGES

BARGAIN BASEMENT

More Used & Ex-Demo Equipment every month

Akai XE8 Drum Expander	£99
Akai DR4	£749
Allen & Heath CMC 24 mixing desk	£699
Allen & Heath 2416 system 8 desk	£999
Alesis Microverb 111	£139
Alesis XT Reverb	£89
Aphex Aural Exciter type B	£99
Aphex Aural Exciter type C	£119
ARX Mixxmaster	£99
Audio Logic PA88A	£99
Boss DR550	£149
E-MU Proteus 1	£285
E-MU Proteus 1XR	£299
E-MU Proteus FX	£325
Fostex 4050 sync/autolocator	£275
Fostex 812 12.8.2	£475
Fostex G24S with 8330 sync board (as new)	£6399
Fostex M80 8 track 1/4" recorder	£599
Fostex 450 mixing desk	£350
Korg prophecy	£549
Korg KEC42	£139
Lexicon LXP5	£375
Nomad Reddi-Mix	£95
Roland D110 Synth Module	£195
Roland GP16 + FC100	£350
Roland JD800	£899
Roland U110 Synth module	£219
Roland Dep 3 FX	£175
Soundcraft Ghost + M/Bridge	£3699
Studiomaster Trakmix 24:12:2 with m/bridge	£1499
Tascam DA88	£2499
Tascam 688 Midi studio	£1199
Tascam MM20 mini mixer	£99
Technics Sy-MQ8 8track Seq W/disk drive	£199
Voce Micro B Organ Module	£250
Yamaha MDF 2 midi data filer	£249
Yamaha EMP 700 Multi Fx	£299
Yamaha NS10M monitors	£275
Yamaha R1000 Digital Reverb	£99

MICS & MONITORS

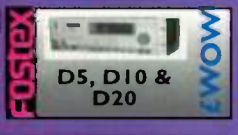
MICS

Audix OCTAVIA SENNHEISER AKG beyerdynamic Rode SHURE

MONITORS

ALESIS GENELEC TANNOY dynaudio Event Monitors PMC YAMAHA JBL

DCC/DAT

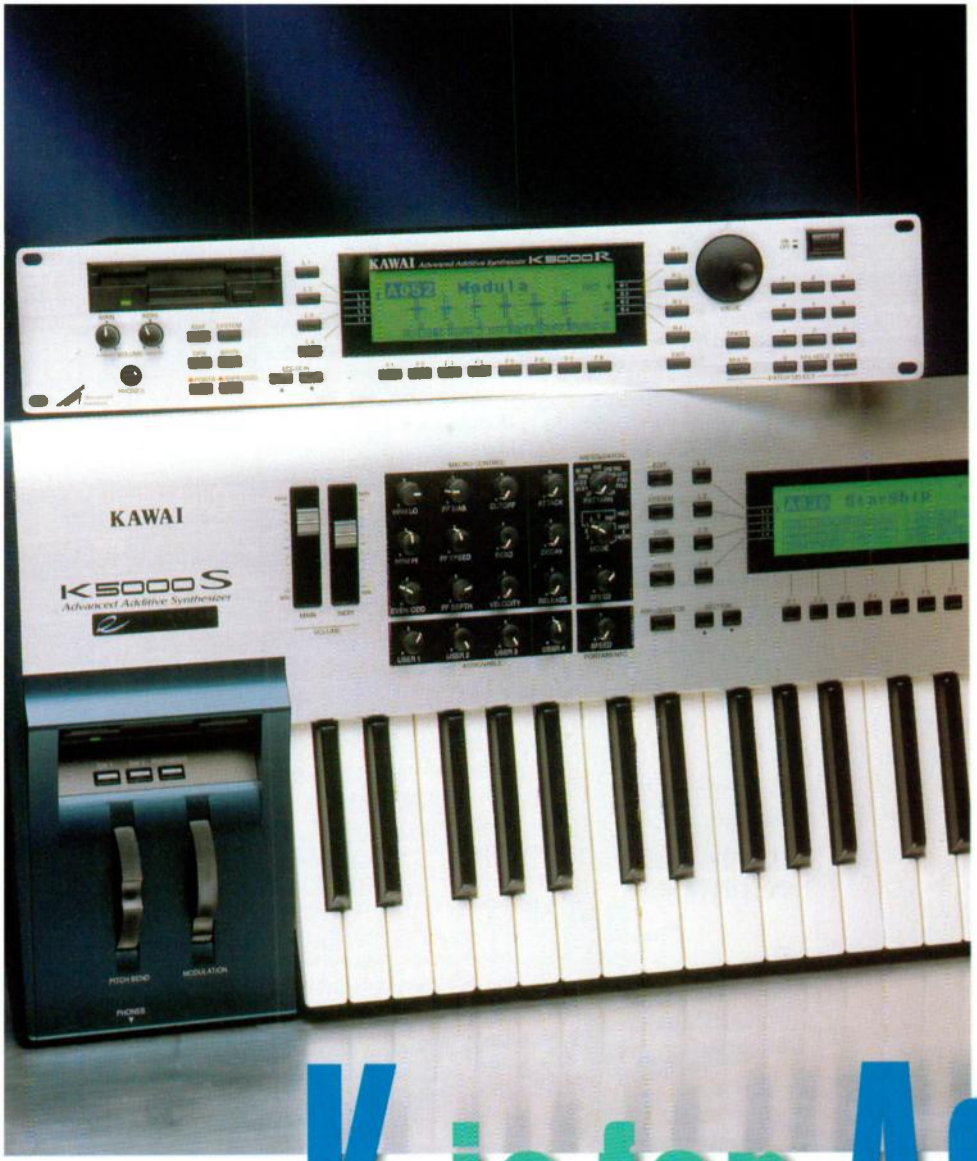


Access

47 London Road, Twickenham, Middlesex TW1 3SA
Tel: 0181 744 1040/1050 Fax : 0181 744 1095

VISA

Check out our new Hi Tech advert on page No. 243



the debit side, the R and the S have only one set of MIDI connections each, are only 4-part multitimbral (to the W's 32 parts), and lack GM compatibility; the W's PCM-based sound set, which included drums and doubled the workstation's polyphony, is also out. Both rack and synth *are* equipped with two pairs of stereo audio outs (as is the K5000W), and also retain a floppy drive.

SYNTHESIS ENGINE

Kawai's additive synthesis system — Advanced Additive — is more sophisticated than that offered by the company's '80s vintage K5. Let's start with a Single (in Kawai speak) patch; this is formed from up to six Sources — 'oscillators', if you like — and each Source can be additive or chosen from a collection of 123 attack waveform, transient and loop samples (note that these are not the comprehensive set of samples used to create the K5000W's GM and PCM patch banks). The more Sources you use in a patch, the less of the 32-voice polyphony is available, and dynamic patch memory will also fill up more quickly — there are nominally 128 memories in each of two banks, but there's not enough patch RAM to allow you to save, say, 128 six-source patches in each. Luckily, a two-bank memory expansion is available.

Advanced Additive is built around the additive Wave Set, a collection of 128 sine wave-based harmonics available in two groups of 64 (harmonics 1-64 and 65-128, so use two Sources if you want access to all 128), each with its own level and 5-stage looping amplitude envelope. Further filtering is provided for each additive Source, in the shape of a 128-band formant filter, ▶

Just a few months ago you couldn't buy a new additive synth; now you can pick from no less than three, and although they're from the same family, there are enough differences to make the choice less than straightforward. DEREK JOHNSON adds it all up.

K is for Additive

KAWAI K5000R & K5000S ADDITIVE KEYBOARD SYNTH & MODULE

pros & cons

KAWAI K5000S/K5000R

pros
- Sophisticated (but under-explained) arpeggiator.
- Real time control (on S).
- Unique additive sound.

cons
- Only four-part multitimbral.
- Manuals could be better.

summary
The K5000R and K5000S are two more aspects of Kawai's great-sounding and unique Advanced Additive synthesis, and provide viable alternatives for different purposes and pockets.

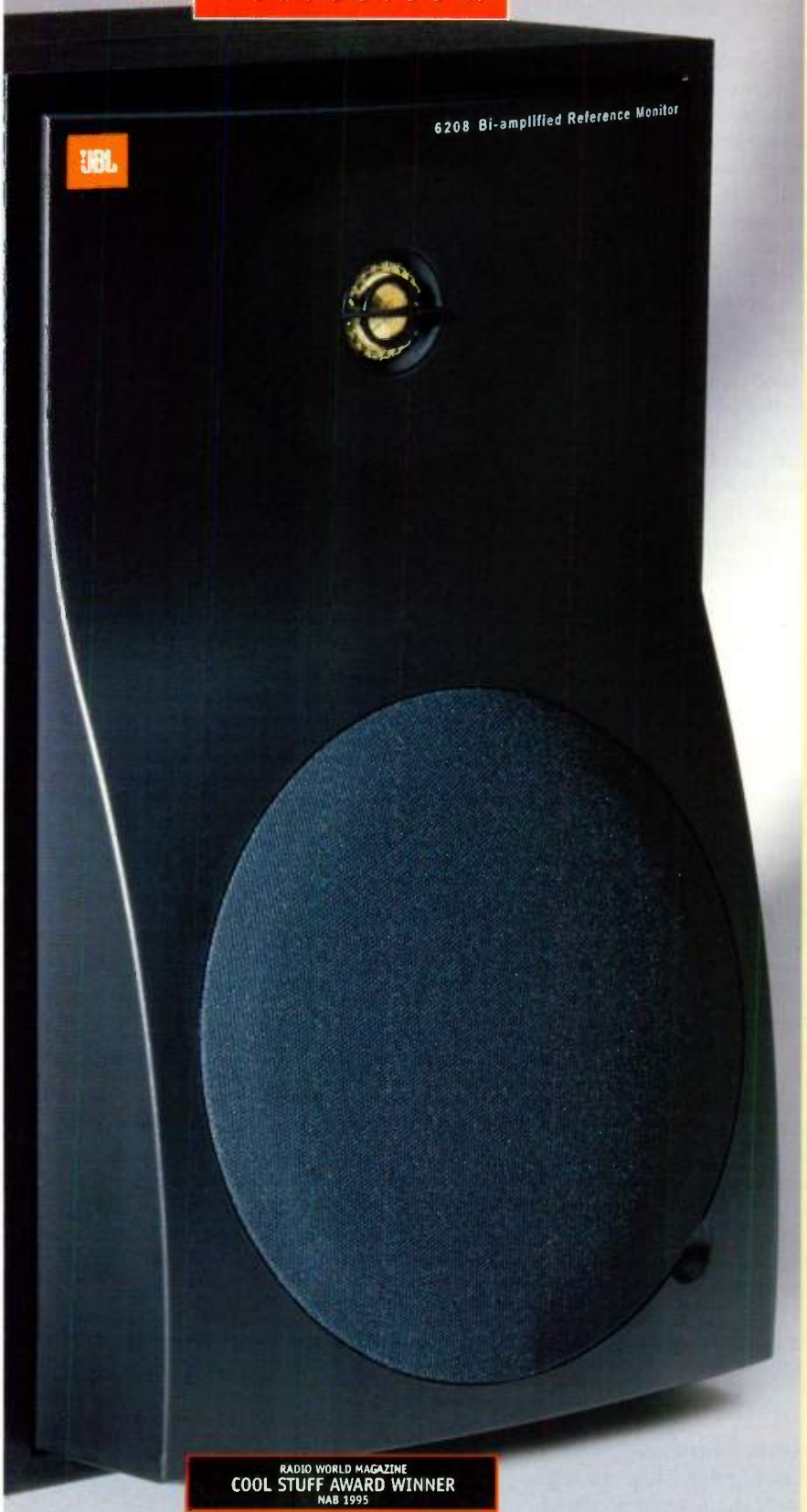
SOUND ON SOUND

When we ran our exclusive review of Kawai's K5000W additive synthesis workstation synth in January, it was mentioned in passing that sequencer-less keyboard and rackmounting versions were imminent. Both have now materialised, and they differ enough from the workstation to justify their own quick review.

The most visible differences between the K5000W and the K5000S are the absence of the workstation's sequencer and the addition of 16 real-time control knobs (Macro Controls) on the synth. Obviously, the 2U rackmounting K5000R lacks the synth's 61-note keyboard and knobs; otherwise, the two new instruments are essentially identical to each other. The K5000S and K5000R are both more and less than a K5000W. For example, both feature a sophisticated arpeggiator, and the K5000S has two programmable footswitch sockets (in addition to sustain and volume pedal sockets) plus three switches (two programmable, one activates portamento) above the wheels. On

The JBL 6208 Bi-Amplified Reference Monitor

For the power hungry with an appetite for PERFECTION.



The Best System Starts with the Best Parts.

JBL has more experience in designing and building transducers for professional studio monitors than any other company in the industry. We not only use the latest engineering and design equipment, but also the most important test device of all, the human ear. We believe in physics, not fads, so while other companies pick parts off somebody else's shelf, we create our components from scratch. And by utilizing more than 50 years of experience in transducer design, we create the perfect transducer for each system.

Multi-Radial Design - An Ideal Solution to a Complex Problem.

Combining individual transducers into a system is a delicate balance of acoustics, electronics and architecture. Our exclusive Multi-Radial baffle is contoured to bring the drivers into perfect alignment, so the high and low frequencies reach your ears simultaneously. This reduces time smear for a smooth transition between the low and high frequency drivers. In addition, the gently rounded edges of the 6208 provide controlled dispersion and balanced power response. That means even off-axis, you will hear an accurate representation with wide stereo separation and an immense depth of field.

Gold/Titanium Hybrid Dome.

By mating the materials to a large magnetic structure, the 6208 can produce extremely flat frequency response and low distortion for hours of fatigue-free listening. JBL pioneered the use of the light but rigid gold/titanium hybrid construction to provide a transient response that is quick and precise for pinpoint accuracy.

Shielded Drivers for Flexible Placement.

JBL shields all of the drivers so you can place the 6208 right next to your audio workstations without interaction. Gone are the days of compromised monitor placement in your production environment.

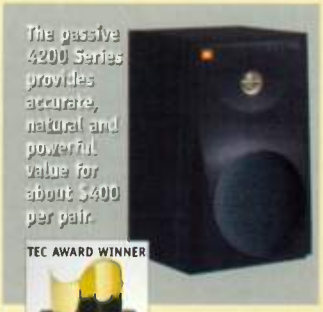
Why Bi-Amplification?

It's a simple fact, a separate amp for each speaker produces the most accurate sound. Each of the 6208's two amplifiers is designed to reproduce the assigned frequencies. And by combining the amplifiers inside the cabinet, you improve the amplifier's ability to control the speaker it's driving for controlled low end punch.

> "We played just about every type of instrument through these speakers and they reproduced it with flying colors."
>
> - Bobby Owsinski
> EQ Magazine

Active Crossovers Provide Accurate Response Tailoring.

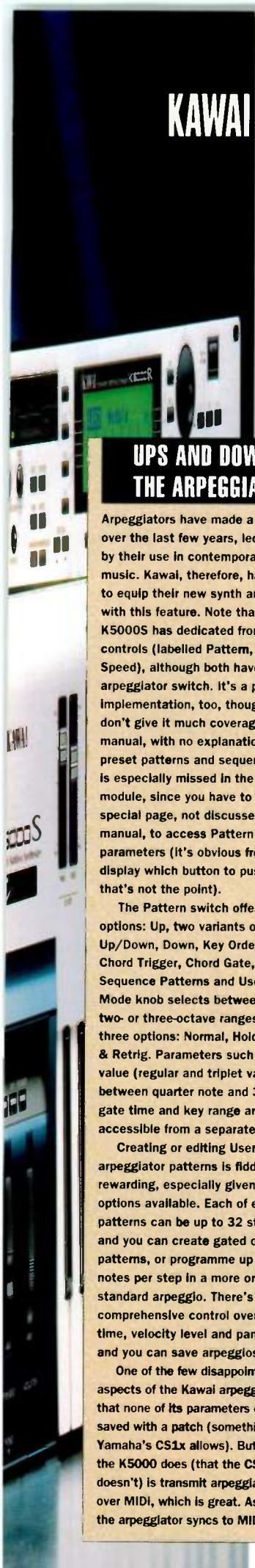
By carefully tailoring each amplifier's performance to the response characteristics of the drivers, you get the most faithful reproduction possible. By using active crossovers, power is not robbed by passive components like inductors and resistors. The result is clear, accurate sound at the highest levels.



JBL PROFESSIONAL

A Harman International Company
8500 Balboa Boulevard, Northridge, CA 91329 • USA

KAWAI K5000R & K5000S



UPS AND DOWNS: THE ARPEGGIATOR

Arpeggiators have made a comeback over the last few years, led, no doubt, by their use in contemporary dance music. Kawai, therefore, have seen fit to equip their new synth and module with this feature. Note that only the K5000S has dedicated front-panel controls (labelled Pattern, Mode and Speed), although both have an arpeggiator switch. It's a pretty good implementation, too, though Kawai don't give it much coverage in the manual, with no explanations of the preset patterns and sequences. This is especially missed in the case of the module, since you have to go to a special page, not discussed in the manual, to access Pattern and Mode parameters (it's obvious from the display which button to push, but that's not the point).

The Pattern switch offers 11 options: Up, two variants of Up/Down, Down, Key Order, Random, Chord Trigger, Chord Gate, two Sequence Patterns and User. The Mode knob selects between one-, two- or three-octave ranges, with three options: Normal, Hold, and Hold & Retrig. Parameters such as note value (regular and triplet values between quarter note and 32nd note), gate time and key range are accessible from a separate menu.

Creating or editing User arpeggiator patterns is fiddly, but rewarding, especially given the options available. Each of eight User patterns can be up to 32 steps long, and you can create gated or triggered patterns, or programme up to four notes per step in a more or less standard arpeggio. There's comprehensive control over gate time, velocity level and pan position, and you can save arpeggios to disk.

One of the few disappointing aspects of the Kawai arpeggiator is that none of its parameters can be saved with a patch (something which Yamaha's CS1x allows). But one thing the K5000 does (that the CS1x doesn't) is transmit arpeggiated notes over MIDI, which is great. As expected, the arpeggiator syncs to MIDI clock.

▶ and this can itself be controlled by envelope generators or LFOs. Whether you choose to use additive or PCM Sources, each is equipped with a comprehensive set of synth parameters, including pitch envelope generator, resonant filter, filter envelope and digitally controlled amplifier. The whole works are passed through four effects processors (offering preset configurations from a list of 37 effects, including delays, flanging, distortion, and so on), reverb (11 types) and EQ.

As you can see, there's a lot of parameters; fortunately, Kawai have provided some short-cuts, especially when it comes to managing the additive harmonics, their envelopes and the formant filters. For a start, you don't have to work on each individual harmonic or formant filter band. Kawai allow you to work on groups of harmonics (labelled Bright, Dark, Even, Odd, and so on), and you can also work on groups of filter bands. The so-called 'Morf' display offers another short-cut, whereby the K5000 creates new harmonic shapes using four Sources selected from other patches.

There's just one other programming level on the K5000R/S: the Multi, of which there are 64. Up to four Single patches can be layered, split, or assigned to separate MIDI channels to form a Multi. This is confusingly similar to what's called a Combi in the K5000W (although Combis lack the MIDI channel assign option).

MACRO CONTROLS

Now to the K5000S's Macro Controls. This 16-knob matrix offers instant real-time access to 16 parameters, live or in the studio. All 16 knobs also transmit their movements over MIDI, and these could be recorded into a sequencer for reliable playback at any time. Once a patch has been Macro-tweaked, the result, which might be a drastically different sound, can be saved as a new patch — editing doesn't get any easier than this. It's just what the newcomer needs while coming to terms with the complexity of additive synthesis.

Four of the knobs are user-assignable, and can be set to control such things as attack, decay and release times, formant filter envelope/LFO depth and high and low harmonics (called 'destinations' in Kawai-speak). Up to two 'destinations' can be assigned to each knob, with the display keeping you informed of which destinations each knob controls. With a few minor restrictions, the Macro Controls can also be used on Multis. In use, zipper or quantisation effects rarely occurred, and when they did (while tweaking at speed), they often added interesting effects.

Although the module lacks the physical knobs of the synth, the same thing can be done using the display, though parameter access makes the process slower and you can only deal with one 'virtual knob' at a time.

IN USE

Both synth and module are reasonably easy to navigate. The keyboard synth will have the edge for many, due to the Macro Controls and front-panel arpeggio knobs, although both instruments can be confusing, simply because there are so many parameters. Luckily, there are some short-cuts, and generic synth editors should have profiles soon; I've heard that an Emagic *SoundDiver* K5000 profile is currently being tested.

The display on both keyboard and rackmount is huge, and very helpful — although not large enough, it seems, to provide PCM waveform names in the DCO window; like the K1 a decade ago, the K5000 expects you to manage with numbers in the display and a name list in the manual. The eight function buttons across the bottom of the display are great, but the four buttons on either side of the display don't always line up to their respective parameters in quite the way you'd like. I also found the manuals lacking, with odd organisation, many explanations lacking depth (especially for novices), and no index. Kawai US's web site (http://www.kawaius.com) provides a couple of general articles on additive synthesis; it would have been nice to see something like this in the manual.

CONCLUSION

There hasn't been so much variety in the world of synthesis for a long time. After what seems an age of "You can have any synth you like, as long as features Samples + Synthesis", the serious synthesist now has a choice of S+S, genuine analogue, analogue under digital control, physical models of analogue, wavetable, and, thanks to Kawai, a family of additive options.

But the significant differences between the members of this family mean that for the customer the choice isn't simply between a workstation, a synth and a module. If you've got £1800 to spend and want a one-stop box for composition, the K5000W is a good bet: PCM sounds, 32-part multitimbrality, decent sequencer, and the novelty of additive synthesis. If, however, you enjoy the process of sound creation, like the idea of the dedicated edit knobs and arpeggiator, are itching to check out the possibilities of additive, and won't find the limited multitimbrality and halved polyphony a problem (most current physical modelling synths are similarly restricted), go for the K5000S — use the £400 difference to pick up another module for increased multitimbral capability. At close to a grand (£1059), the K5000R is the bargain of the family; though it lacks some of the immediacy of the 'S', everything else is still there, and it's simply the cheapest off-the-shelf additive synth you can buy. It might not be a simple one, but the choice is yours. SOS

info

£ K5000S £1399; K5000R £1059. Prices include VAT.
A Kawai Europe Centre, Europark Fichtenhain A15, D-47807 Krefeld, Germany.
T 0049 2151 37300.
F 0049 2151 391083.

MUSIC CONNECTIONS

Music Connections have grown yet again!
In order to provide the best product sales and service in the UK.
Music Connections have launched a new showroom in Leeds.
Music Connections North are contactable at 01943 850 533
or via our newly created web site: www.musicconnections.co.uk
Providing Links, sales, part-ex and reviews everything you would require is now available via the internet, you can even email us for brochure requests etc.

www.musicconnections.co.uk

Price Beat

When you see this sign call us with your quote, because we will definitely beat it! Remember all our prices include VAT unless otherwise stated.

YAMAHA MT50

SPECIAL £289

YAMAHA

YAMAHA MT4X

SPECIAL £389

TASCAM

SPECIAL £CALL

TASCAM 424

SPECIAL £POA

TASCAM 414

SPECIAL £POA

ART

PORTABLE SOLUTIONS

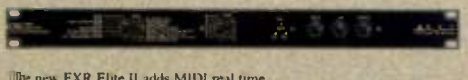
DUAL £CALL

SC2 £169

NETWORK £299

FXR £149

Both of these stereo 2 channel digital multi-effects processors feature Dual Processing and ART's ASIC audio chip, providing astounding quality at an unbelievable price. The FXR is a quick set up, plug and play processor with 255 presets.



ELITE II £199

The new FXR Elite II adds MIDI real time control, MIDI mapping and the ability to edit parameters and store your changes. It takes the proven, popular technology of the original FXR elite programmable multi-effects processor and introduces a more intuitive, more powerful interface.

THE ONLY HI-TECH & PRO AUDIO

MICS, KEYBOARDS, MIXERS, EFFECTS PROCESSORS, SYNTHESIZERS, MULTI-TRACK RECORDERS, MONITORS, AMPLIFIERS,

MUSIC CONNECTIONS

Dear Customer,
Go to your local store, get a price,
give us a call and we will beat it for you.
What could be simpler than that?
Happy Shopping

www.musicconnections.co.uk

Price Beat.
When you see this sign call us with your quote, because we will definitely beat it!
Remember all our prices include VAT unless otherwise stated.

KORG

X5D £CALL

£CALL

TRINITY £CALL

PRICE BEAT

Roland

NEW

PRICE BEAT

We can go from a JP to an MC to a JV-RD-VK

We're not sure that our competition can.

The MC303 probably the worlds greatest selling groovebox!

nord lead

RACK £795

SYNTH £995

THE ONLY HI-TECH & PRO AUDIO

MICS, KEYBOARDS, MIXERS, EFFECTS PROCESSORS, SYNTHESIZERS, MULTI-TRACK RECORDERS, MONITORS, AMPLIFIERS,

LONDON
202 NEW KINGS ROAD
CHELSEA
LONDON, SW6 4NF
TEL: 0171 731 5993
TEL: 0171 736 4771
FAX: 0171 731 2600

SOUTH
KINGSGATE
ST. MARY'S ST
SOUTHAMPTON
SO1 1NF
TEL: 01703 233 444
FAX: 01703 233 266

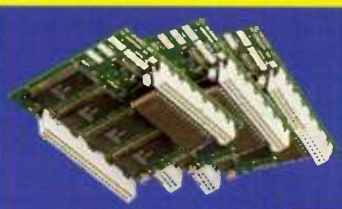
EAST ANGLIA
ROBJOHNS ROAD
CHELMSFORD
ESSEX
CM1 3AG
TEL: 01245 354 777
FAX: 01245 355 007

WEST
21 THE MALL
CLIFTON VILLAGE
BRISTOL
BS8 4JG
TEL: 0117 946 7700
FAX: 0117 946 7600

MIDLANDS
CROSBY COURT
GEORGE STREET
BIRMINGHAM
B3 1QG
TEL: 0121 212 4777
FAX: 0121 212 4877

NEW LEEDS STORE
WHARFEBANK HOUSE
ILKLEY ROAD
OTLEY, WEST YORKSHIRE
LS21 3JP
TEL: 01943 850 533
FAX: 01943 850 522

ENSONIQ



COME AND SEE THE INCREDIBLE MR RACK AND MR KEYBOARDS FROM ENSONIQ. ALSO AVAILABLE FANTASTIC NEW DANCE/TECHNO BOARDS

ENSONIQ ASR-X
We went to the masters of sampling and asked them to list the top features they would like to see in the ultimate groove machine. They said to make it easy to sample, resample and loop, include a built-in synth and some incredible effects, resonant filters, an easy to use sequencer and put it all into a portable box with pads.

IT WAS TIME TO TAKE SAMPLING TO WHOLE NEW LEVEL - So we took the best features of the famous ASR-10, added great sounding 20-bit A/D converters, made the RAM expandable to 34MB and stuffed all this into one portable table top box. We put a lot of effort into making it extremely fast and fun. Just sample, shoot it to a pad and start jamming. Never before has so much power been so easy to use.

The ASR-X is expandable in many ways. You can add up to 34 MB of RAM for sampling, add an EXP synth expansion board, or add 8 outputs or SCSI.

Every aspect of the interface was developed to be fun and easy to use. After all, you probably write your best grooves when you're having a great time. The 14 custom designed velocity sensitive pads feel great. They're fast and responsive, smooth and sensitive, just beggin to be hit.

Our new VLSI 24-bit digital signal processor with 26 MIPS of DSP power gives you incredible sounding FX. That power can be used to make your sound mysterious or bold, rich or thin, big or small. There are plenty of fun effects like Chatterbox, Vocal morph and speaker. In fact you can also use the Low-Fi processing algorithms to get that cool muffled sound.

AKAI

As we are the UK's largest AKAI retailer you can be sure that you will find units on show and on demo in all of our MUSIC CONNECTIONS stores.

YAMAHA

If it's YAMAHA you want then we've got it, all the latest hi-tech and pro-audio equipment in stock and on show. So if you want one of YAMAHA's great new toys even the ANIX synthesizer give us a call!

ESI-32
£CALL

ESI-32
EMU are a name synonymous with sampling, the ESI-32 is as revolutionary in it's own way as the now legendary Emulators, delivering a sampler with the power and features of a professional unit but at a previously unheard of low price. With 32 note polyphony, 16 part multi-timbrality, 32 4-pole resonant filters, timestretch, 10-octave pitch transposition, parametric EQ and an excellent MIDI spec the ESI-32 packs a powerful punch.

E4X
For the big boys

E4X
£CALL

RETAIL CHAIN IN THE UK TODAY

UNDCARDS, DRUM MACHINES, HARD DISK RECORDING, COMPUTER SOFTWARE & PERIPHERALS, AUTOMATION, STANDS, ETC...

MUSIC CONNECTIONS

Music Connections have grown yet again!
In order to provide the best product sales and service in the UK.
Music Connections have launched a new showroom in Leeds.
Music Connections North are contactable at 01943 850 533
or via our newly created web site: www.musicconnections.co.uk
Providing Links, sales, part-ex and reviews everything you would require is now available via the internet, you can even email us for brochure requests etc.

www.musicconnections.co.uk

DD8 £CALL

EMAGIC £CALL

AKAI

WE HAVE SUPERB PACKAGE DEALS AVAILABLE ON AKAI PRODUCTS CALL FOR DETAILS.

PRICE BEAT

DR16 £CALL

emagic

POINTS OF INTEREST:

THE CARD - INCREDIBLE POWER:
At the centre of the PARIS system is the powerful EDS-1000 card. This PCI card not only manages all audio I/O but also packs heavy duty signal processing power. It uses six of ENSONIQ'S most powerful ESP-2 custom signal processor chips to do an entire studio's worth of work.

THE EDS-1000 PROVIDES:
The EDS-1000 provides mixing for 32 channels of audio with sends to as many as 16 mono or eight stereo aux buses, 20 inputs and 20 outputs with full 24-bit resolution, 24 streams of 24-bit audio data, 32 digital parametric EQ's simultaneous multiple effects and a 175-point patchbay.

TWO PLATFORMS, ONE SOLUTION:
PARIS works identically on both Pentium PC and PowerPC Macintosh computers - and the same card plugs into both. Unlike older ISA and Nubus cards, the EDS-1000 card takes advantage of the huge bandwidth of the PCI bus, which allows it to play back 24 streams of digital audio, all without taxing the computer's main processor.

EFFECTS:
PARIS comes with a library or world class reverbs, compressors, EQ's and popular digital effects right out of the box. And they all run in real time! For even more variety and special applications, additional libraries and third party plug-in modules will be available.

ENSONIQ PARIS™
20-bit Multitrack Recording system

PARIS is the most advanced digital audio recording system ever developed. PARIS seamlessly intergrates digital audio recording, object-orientated editing, digital mixing with automation, real-time effects processing and MIDI sequencing into an intuitive and flexible environment. PARIS grows to meet your needs with a dedicated control surface and a family of expandable input/output modules. Powered by ENSONIQ DSP technology on a cross platform PCI card, PARIS delivers a total audio recording solution at a revolutionary price.

PARIS £POA

THE ONLY HI-TECH & PRO AUDIO

MICS, KEYBOARDS, MIXERS, EFFECTS PROCESSORS, SYNTHESIZERS, MULTI-TRACK RECORDERS, MONITORS, AMPLIFIERS,

LONDON
202 NEW KINGS ROAD
CHELSEA
LONDON, SW6 4NF
TEL: 0171 731 5993
TEL: 0171 736 4771
FAX: 0171 731 2600

SOUTH
KINGSGATE
ST. MARY'S ST
SOUTHAMPTON
SO1 1NF
TEL: 01703 233 444
FAX: 01703 233 266

EAST ANGLIA
ROBJOHNS ROAD
CHELMSFORD
ESSEX
CM1 3AG
TEL: 01245 354 777
FAX: 01245 355 007

WEST
21 THE MALL
CLIFTON VILLAGE
BRISTOL
BS8 4JG
TEL: 0117 946 7700
FAX: 0117 946 7600

MIDLANDS
CROSBY COURT
GEORGE STREET
BIRMINGHAM
B3 1QG
TEL: 0121 212 4777
FAX: 0121 212 4877

NEW LEEDS STORE
WHARFEBANK HOUSE
ILKLEY ROAD
OTLEY, WEST YORKSHIRE
LS21 3JP
TEL: 01943 850 533
FAX: 01943 850 522

digidesign®

ProTools £CALL

If you can use Pro Tools Mackie's HUI audio console can make your productivity and your creativity!

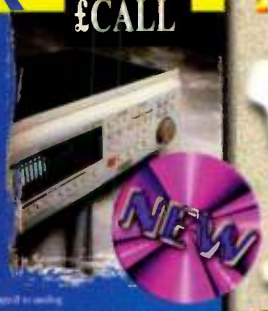
Now you can literally get your hands on ProTools digital audio workstation software.
Mackie Design's HUI is designed to control and respond to Digidesign's ProTools Version 4.0 and in the near future, DAE compatible software too. HUI lets you mix via a real, tactile control surface complete with motorized faders ...rather than with a mouse or a undirectional fader pack. Perform real-time, hands-on multi-channel fades, mutes, select and adjust sends, create subgroups, and change dynamics. In short : track and mix down just the way you would on a large, automated console, yet with complete bi-directional interaction with ProTools 4.0. HUI will immediately reflect all standard mixing values, functions and pointers.
HUI controller architecture supports standard MIDI protocol in either 7-bit or higher resolution 9-bit applications as well as utilizing simple controller and note values. Rear panel I/O includes analog jacks (three stereo audio pairs), a footswitch jack, ADB mouse thru, MIDI in and out and RS422 port for direct computer connections.

HUI £CALL

AUDIOMEDIA III
now available call for details

FOSTEX

D-90 £CALL



FOSTEX D-90

- CD Quality recording and playback
- Removable Front Panel Memory
- Unique 'Virtual Reels'
- Cut, Copy, Paste & Move Editing
- 8, 16 or 24 Tracks
- Analog & Digital I/O
- Flexible Locate Functions

FOSTEX D-90 8

Some digital recorders ask you to make do with 12 bit recording, some with compression, some even expect you to accept inferior sample rates.
Professionals don't accept these 'cost cutters' so why should you?
The fact of the matter is that CD quality recording demands full linear 16 bit resolution digital to analog conversion at a sample rate of 44.1kHz.
A specification which the Fostex D90 8 meets with ease. With it's own 32 bit RISC CPU, this incredible machine gives 8 tracks of CD quality recording and playback, to and from an internal 540 MB hard drive which is upgradable.
Non-touches include 4 track simultaneous recording, cut, copy, move and paste audio with full re-edit only undo & redo, RTC (Real Time Code) sync facilities, 8 memory locations for jumping to songs or sections, a handy dual function joystick which processing digital scrub without pitch change. Auto locate to ADR D and ADR D-ad, archiving via DAT and individual channel outputs. Yet with all this sophistication it's easy to use, adding new meaning to the cliche 'one-eyed pilots 'egotist' studio'.

D-160 £CALL

PRICE BEAT

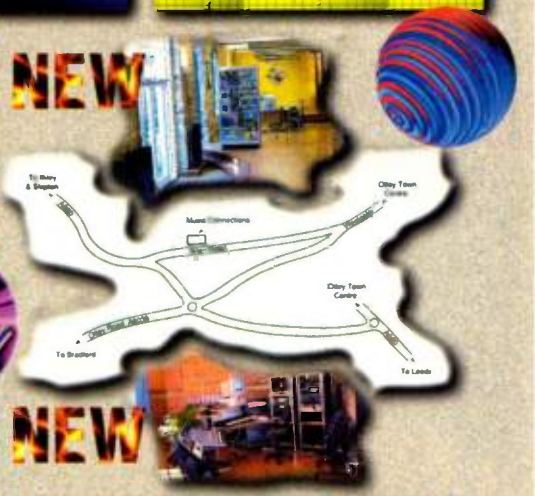
Roland

ROLAND VS-880

For anyone who's ever felt the limitations of tape-based multitrack recording, the VS880 is the product you've been waiting for. Poor sound quality, limited tracks, troublesome effects access and MIDI sync problems need no longer be part of your recording process. In the past, the only way to resolve these problems was to spend big bucks on complicated, multi-component systems. So maybe you had to settle for less. Or maybe you waited, hoping that the 'next big thing' would have all the answers. Congratulations... your patience has paid off!

VS-880P £CALL

PRICE BEAT



DYNATEK ATTENTION ALL SAMPLER OWNERS!

Dynatek bring you the ultimate mass storage device: a combined quad speed CD-R680M and 650 MO drive in one half-rack tabletop unit. With 650 Meg MO cartridges now retailing at a measly £39.00 this has got to be the most cost effective and reliable solution to all your storage problems. Mac owners can also use it as a standard CD player! Includes all software, SCSI cable and cartridge. Compatible with all current samplers.

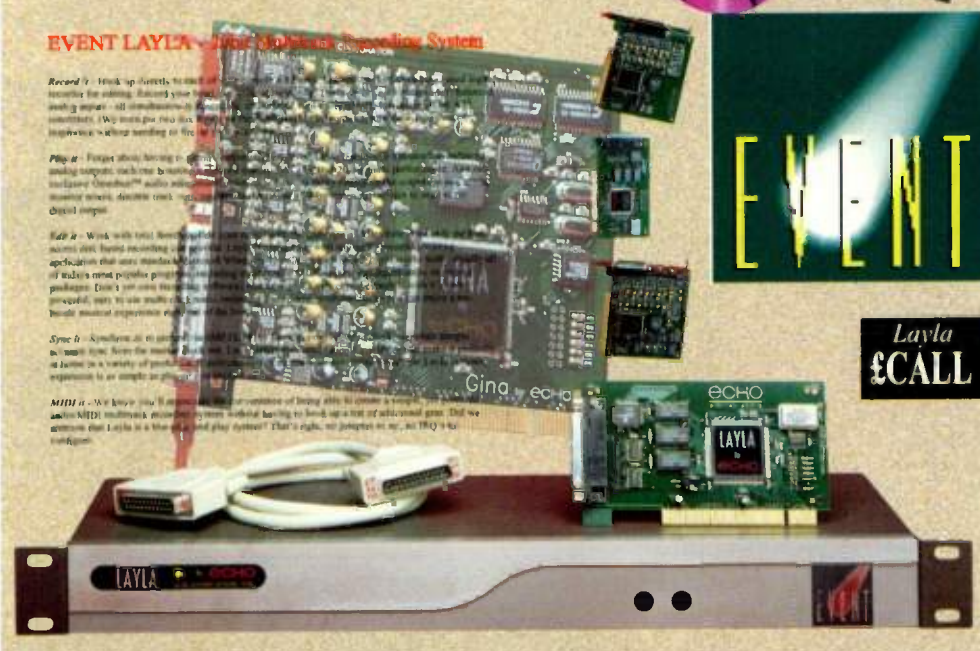
RECORDABLE CD-ROMS
SUPPORTS DIGIDESIGN MASTERLIST PRO.
DIGIDESIGN CD-ROMS WORK WITH ALL MUSIC APPLICATIONS (UNLIKE CHEAPER IMITATIONS!
RECORDABLE CD-ROM AT UNBELIEVABLE PRICES!
GET THE AMERICAN CRAZE START RECORDING ON CDR TODAY, YOUR MASTERS WILL LAST A LOT LONGER THAN YOUR DAT'S WILL.

CDR 200 £395
Dual speed record, Quad speed read inc. software, cables & discs

CDR 400 £595
Quad speed read/write state of the art technology
(inc. cables, software & discs)

CUSTOM RACKS AVAILABLE TO YOUR SPECIFICATION. CALL FOR DETAILS.

EVENT LAYLA



Layla £CALL

KORG 1212I/O

KORG SOUNDLINK DRS

The 1212I/O PCI Multi-channel audio interface for Soundlink DRS features 12 inputs and 12 outputs configured as two analog I/O's, an S/PDIF I/O and an eight channel ADAT optical I/O for true multi-channel recording with PC. All I/Os can be used simultaneously for maximum interfacing flexibility.

RETAIL CHAIN IN THE UK TODAY

SOUNDCARDS, DRUM MACHINES, HARD DISK RECORDING, COMPUTER SOFTWARE & PERIPHERALS, AUTOMATION, STANDS, ETC

MUSIC CONNECTIONS

Dear Customer,
Go to your local store, get a price,
give us a call and we will beat it for you.
What could be simpler than that?
Happy Shopping

www.musicconnections.co.uk

Price Beat.
When you see this sign call us with your quote, because we will definitely beat it! Remember all our prices include VAT unless otherwise stated.

KORG 168RC

The 168RC is the first truly affordable fully digital 8•BUS recording console. Use it with your ADAT or other digital recorder equipped with the ADAT optical interface to create the best sounding recording's you've ever made.
CALL FOR DETAILS!

SOUNDTRACS

TOPAZ
CALL FOR STUNNING TOPAZ PACKAGE DEAL

TOPAZ

A dedicated multitrack recording console must provide the following: Superb audio performance, exceptional equalization, versatile monitoring, comprehensive patching and 1st class ergonomics.
All are in abundance in the stunning new Topaz Project Studio Console from Soundtracs.

YAMAHA

03D £CALL

YAMAHA 03D

If you're ready for a compact,comfortably priced, full-featured digital mixer - one especially made for professional project and post production studios relying on modular digital multitrack recorders such as TASCAM, ADAT, AES/EBU and YAMAHA digital formats - then you're ready for the 03D Digital Mixing Console. Nestled between the popular ProMix 01 - famed for bringing affordable digital mixing to the masses - and the award winning, industry standard 02R Digital Recording Console.

PROMIX £CALL

YAMAHA PROMIX 01

Does your existing mixer make mixing seem hard?
Then YAMAHA, the company with many ideas, would like to tell you about PROMIX 01 - the mixer with memory.

02R £CALL

YAMAHA 02R

Out on it's own in a crowded marketplace. Visit our stores to see why the 02R has caused quite a sensation in the mixer market.

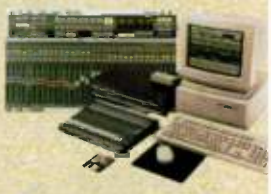
MACKIE.

Still the world leader in small mixers the VLZ range includes 1202, 1402, 1604, SR24, SR32 and LM3204.
These consoles offer the highest audio and build quality with easy to use features that take the effort out of superb mixing.

Don't forget the Original Mackie 8-BUS

Still one of the leading mixing consoles in the world for reliability, sound quality, ease of use and ergonomics.

Put this together with our amazing price deals and you've got a serious machine at a serious price.



CALL FOR DETAILS!

COMPLETE MACKIE RANGE AVAILABLE AT ALL STORES!

DAT RECORDERS

PRICE BEAT

PANASONIC
TASCAM
DA-20/30

DIGITAL 8•BUS

- 48 True channels for tracking, overdub & mixdown Jitter free, touch-updateable motorized faders.
- 12 aux sends per channel.
- 10 fade & mute groups.
- 24-bit output.
- 32-bit processing.
- Direct assign.
- Dynamic & snapshot recall of all parameters.
- Multiple simultaneous digital effects, dynamics & EQ.
- V-pot virtual rotary controls.
- SVGA monitor output.
- Mouse & keyboard inputs.
- Built-in hard disk & floppy drive.
- Instantly upgradeable DSP effects.
- Dedicated transport controls & jog shuttle.
- Built-in multifunction meter bridge.
- Powerful CPU with 8 megs of memory.
- Record-ready button on every channel.

and that's just a preliminary spec list!

DiGiTaL!

THE ONLY HI-TECH & PRO AUDIO

MICS, KEYBOARDS, MIXERS, EFFECTS PROCESSORS, SYNTHESIZERS, MULTI-TRACK RECORDERS, MONITORS, AMPLIFIERS,

LONDON
202 NEW KINGS ROAD
CHELSEA
LONDON, SW6 4NF
TEL: 0171 731 5993
TEL: 0171 736 4771
FAX: 0171 731 2600

SOUTH
KINGSGATE
ST. MARY'S ST
SOUTHAMPTON
SO1 1NF
TEL: 01703 233 444
FAX: 01703 233 266

EAST ANGLIA
ROBJOHNS ROAD
CHELMSFORD
ESSEX
CM1 3AG
TEL: 01245 354 777
FAX: 01245 355 007

WEST
21 THE MALL
CLIFTON VILLAGE
BRISTOL
BS8 4JG
TEL: 0117 946 7700
FAX: 0117 946 7600

MIDLANDS
CROSBY COURT
GEORGE STREET
BIRMINGHAM
B3 1QG
TEL: 0121 212 4777
FAX: 0121 212 4877

NEW LEEDS STORE
WHARFEBANK HOUSE
ILKLEY ROAD
OTLEY, WEST YORKSHIRE
LS21 3JP
TEL: 01943 850 533
FAX: 01943 850 522

PreSonus Audio Electronics

DCP-8 £749 — FACTORY DIRECT — ACP-8 £599

The DCP-8 is an eight channel, digitally controlled analog dynamics processor, plug it into the inserts of your mixer, MIDI it up to your sequencer and it will give you a compressor limiter, a noise gate, automated fader levels, automated mutes and glitch free real-time control of parameters (even compression ratio) across all eight channels. Settings may be saved as a snapshot into one of the 100 user memories. A DCP-8 environment is available for EMAGIC Logic.
Presonus will make you a custom DCP-8 if you have a specific need that is not addressed in the stock unit, how's that for service!

The ACP-8 is 8 high quality compressor gates housed in a steel 2U rack mount unit. Each compressor allows control of threshold, ratio, attack, release and output gain. Each is individually selectable for hard or soft knee, peak or auto compression. Each gate features threshold, release and attenuation controls. It's all here!

NEW

NEW

Focusrite

GREEN £CALL

GREEN RANGE
A dual Mic Preamp, parametric EQ and compressor combine to make Focusrite the range to suit all needs.
NEW COMPRESSOR/LIMITER & CHANNEL STRIP AVAILABLE.

lexicon

MPX-1 £CALL

DUAL MULTI-PROCESSOR EFFECTS
Two separate DSP processors for awesome effects power. Uncompromised Lexicon reverb and ambience effects even in combination with any other effects. (Pitch, Chorus, EQ, Mod, Delays)

YAMAHA

REV500 £CALL

The REV500 is an extremely loved digital reverb which can hold it's head up confidently in any company. In light of it's price, however it really is something special and certainly worthy of an audition. It may not represent the ultimate in reverb simulations, but it's not very far off and certainly offers an affordable and worthwhile upgrade from it's ancestors.

JOEMEEK

VC3 £CALL

VC3 Pro Channel
The Joemeek "Sound" philosophy on a budget. This box is stunning! A classic high performance microphone pre-amplifier, Joemeek optical compressor and Joemeek enhancer. The Joemeek VC3 Pro Channel is essential when warming up digital sound, playing live or any function which demands the highest quality signal processing on a budget. The Joemeek VC3 Pro Channel will out-perform many similar boxes costing 3 times the price.

SPL

VITALIZER
The unrivalled Vitalizer equalization system has been created using a highly complex system of variable, inter-active filters and sophisticated controlled phase shifters. These are under the control of a specially designed analogue computer that responds to both the dynamics and frequency content of the input signal. Specially developed to be compatible with the way the human ear perceives sound, the Vitalizer ingeniously re-shapes the entire sound spectrum, so it appears louder, more detailed and commercially appealing.

Rola

SX-700 £CALL

SX-700
Here underlies the SX-700 Studio Effects Processor, a 1U rack-mount unit that features standard spatial effects like reverb and delay, the latest four voice Harmonist (intelligent pitch shifter) and other modulation effects, as well as RSS 3-D effects that can place your sound anywhere in a three dimensional field. Overall, a pure more spatial processing at your fingertips than a whole slew of dedicated effects. And the SX-700 delivers better performance and a more user friendly set than ever before.

CAD

FACTORY DIRECT

E-200 £449

E-100 £199

The introduction of the Equitek series microphones signaled the most significant improvement in microphone technology in decades. The extraordinary transparency resulting from our unique servo design and exceptional flexibility have created a new 'bench mark' for cost and performance. These mics have received stunning reviews in all pro-audio and hi-tech magazines why not come in and let your ears be the judge!

E-300 £699

ENSONIQ

DP-PRO £CALL

DP PRO
For years ENSONIQ has been widely recognised for their award winning effects processors. With the DP4+ we gave the audio industry the best sounding most flexible multi-effects processor ever. Now we are raising the standard again with the DP PRO, a 24-bit true stereo effects processor.
The DP PRO is an all new, fully professional dual effects processor. It is a true stereo system powered by two of our generation ESP-2 digital signal processors running at sample rates up to 48kHz with a dynamic range better than 100dB. It is equipped with high resolution 20-bit converters and super low noise circuitry for maximum performance 24-bit digital I/O option.

DP2/4+
Award winning processors from Ensoniq, for years the best sounding and most flexible multi-effects processors in the industry.

DP £CALL

RETAIL CHAIN IN THE UK TODAY

OUNDCARDS, DRUM MACHINES, HARD DISK RECORDING, COMPUTER SOFTWARE & PERIPHERALS, AUTOMATION, STANDS, ETC.

MUSIC CONNECTIONS

Music Connections have grown yet again!
In order to provide the best product sales and service in the UK.
Music Connections have launched a new showroom in Leeds.
Music Connections North are contactable at 01943 850 533
or via our newly created web site: www.musicconnections.co.uk
Providing Links, sales, part-ex and reviews everything you would require is now available via the internet, you can even email us for brochure requests etc.

www.musicconnections.co.uk

PART-EX DEALS

CHELSEA

YAMAHA TX802	£350
ROLAND D70	£550

BIRMINGHAM

YAMAHA SY35	£275
ROLAND JUNO 1	£275
KORG 01 W PRO C/W CARD	£1049
GEM S3 TURBO	£899
ROLAND JV80	£449
ROLAND A30	£199
YAMAHA SV85	£599
ROLAND JV1080 (BOXED MINT)	£699
ROLAND M-VS1 VINTAGE	£199
ROLAND U110	£199
ROLAND D110	£175
KORG WAVESTATION AD	£699
EMU PROTEUS 3 WORLD	£225
AKAI XE8 DRUM MODULE	£99
KORG 05 R W	£250
ROLAND DS330 DR SYNTH	£199
KORG S3 DRUM MIC	£99
DIGITECH VOCALIST VHM5	£250
LEXICON LXP5	£CALL
YAMAHA DMP11 MIXER	£349
AKAI ASQ 10 SEQUENCER	£CALL
MACKIE 1604 MIXER	£450
ALLEN & HEATH GS3 16/6/16/2	£749
AKAI MG14D 12 TRACK	£699
DRAWMER M500 DYNAMICS PROCESSOR	£495
ROLAND RSS10 FX	£799
40U STUDIO RACK	£99

BRISTOL

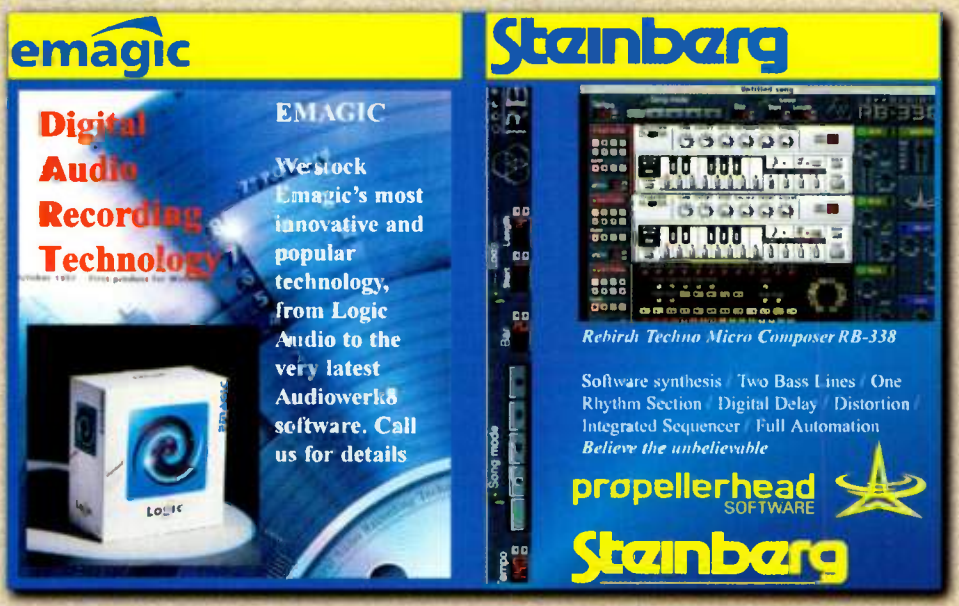
MACKIE LM32 MIXER	£650
KORG A3 MULTI-FX	£300
EMU PROTEUS 2 ORCHESTRAL MODULE	£350
EMU MPS KEYBOARD	£500
FOSTEX E8 8 TRACK	£400
TASCAM TSR8 8 TRACK	£1100
AKAI MPC60 (FULLY EXPANDED) SAMPLER SEQUENCER	£1200
ROLAND JV880 SOUND MODULE	£400
CASIO FZ1 SAMPLER SYNTH - HUGE LIBRARY	£500
EMU E64 64MB JAZZ DRIVE & 2 CARTS	£2300
SAMSON MPL2242 MIXING DESK	£500
AIWA XDS1100 DAT MACHINE	£450
EML PROTEUS 1 MODULE	£200
ROLAND D50 SYNTH	£400
EML E64 32MB	£1900

CHELMSFORD

ROLAND D50	£399
GEM WX2	£499
KORG POLY 800	£150
KAWAI K1M	£149
ALESIS ADAT XT	£1650
JL COOPER PPS SYNC	£69

SOUTHAMPTON

SOUNDCRAFT SPIRIT 24 LIVE CONSOLE	£800
NEUMANN VALVE MIC	£CALL
ROLAND CR8000 + KENTON MIDI	£300
MACKIE 1604	£550

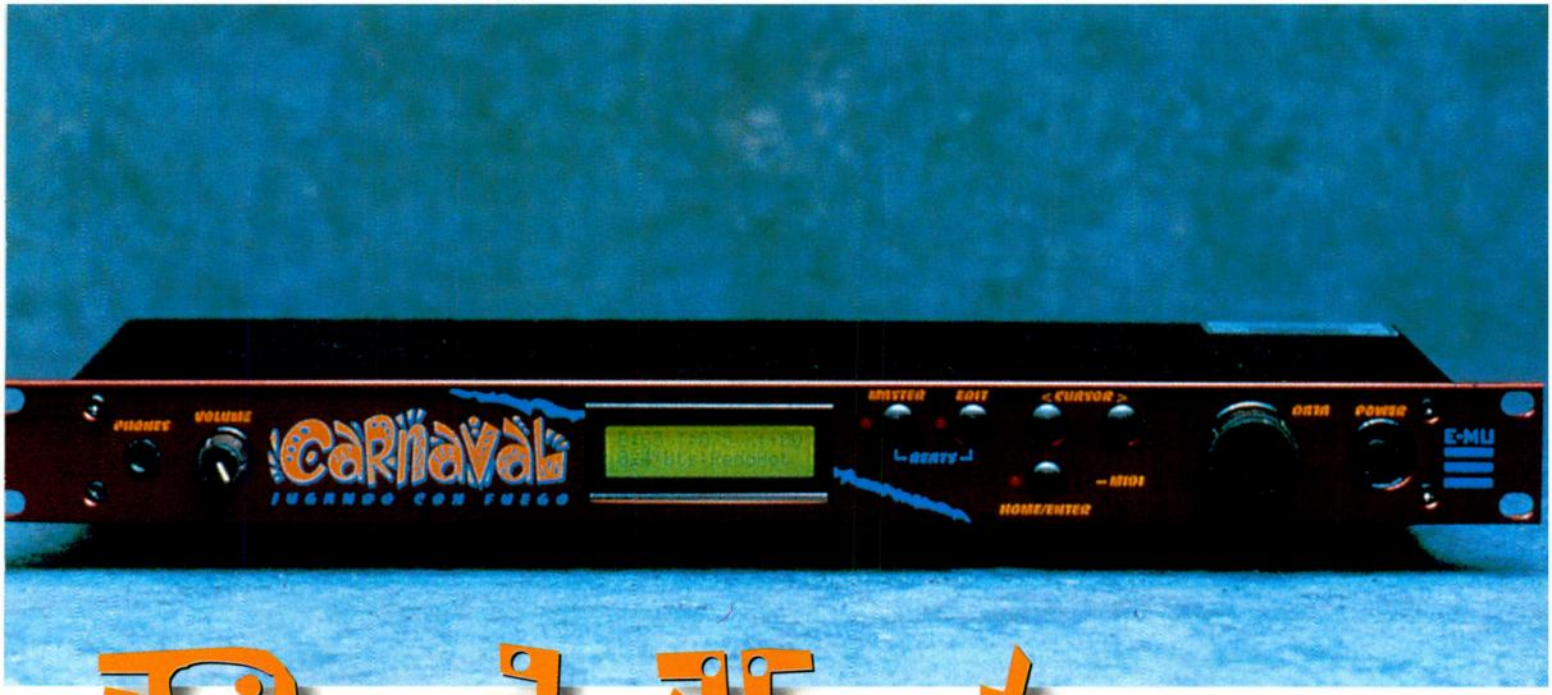


MASS TECHNOLOGY

When you want more than a plain black box in the bottom of your rack, there's only one amp to choose.
The leading edge in looks and design

THE ONLY HI-TECH & PRO AUDIO

MICS, KEYBOARDS, MIXERS, EFFECTS PROCESSORS, SYNTHESIZERS, MULTI-TRACK RECORDERS, MONITORS, AMPLIFIERS,



Red Hot & Dance

EMU CARNAVAL LATIN SOUND MODULE

Given the size of the Spanish-speaking world, it makes good commercial sense to produce a Latin-style sound module — but only if it's sufficiently authentic to sell to those in the know and sufficiently versatile to be attractive to other musicians simply looking for a bit of spice in their rack. CHRIS CARTER and JOE ORTIZ play with fire...

I was quite excited about getting my hands on the Carnaval, partly because I had a very enjoyable (though brief) encounter with an Emu Orbit last year. Coincidentally, the Carnaval arrived with the new Orbit V2 in tow, so I was able to make some interesting comparisons between the two. But I'm afraid, dear reader, that you'll have to wait for one of my esteemed colleagues to review the V2 in full next month. Meanwhile, back in Rio...

The Carnaval follows a slightly predictable Emu path, repainting and relaunching sound modules with new samples and 'Beat' patterns for specific musical styles. In the case of the Carnaval, it's Latin music. What next? The Hoe Down country and western module?

CARNAVAL TIME

In common with the new Orbit V2 and the Planet Phatt [reviewed *SOS* June 1997] the Carnaval is a 32-voice polyphonic, 16-part multitimbral MIDI synth-cum-sample player. There are 640 performance presets (384 ROM and 256 RAM), 100 Beat loops, 28 user-programmable Beat songs and 400 or so raw samples. In addition to this arsenal of sounds, there are all the usual Emu bells and whistles — 32 resonant filters, Z-Plane filtering, X-Factor Beat control, MIDI sync-able LFOs and six assignable audio outputs — but, unfortunately, still no effects to speak of.

Navigating your way around the Carnaval is straightforward enough, though a little long-winded. There are two cursor buttons that move the blinking cursor across the screen, and a stepped data knob to alter parameter values. As with other Emu modules, the Carnaval can operate in one of four modes. The default mode is Play, but pushing the Master button brings up a global control menu; the Edit button allows you to enter the deeper sound Edit mode; and pressing both Master and Edit buttons together switches the machine into Beats mode. Personally, I'd like to have seen a couple of +/- incremental buttons for editing and a dedicated Bank button for easier navigating through patches — it's too easy to zoom past the patch you want using the data wheel, which then means dialling your way back to relocate it. Using a MIDI keyboard to select patches would be another solution to this problem.

TURN UP THE HEAT

Emu have given the Carnaval a pretty wide remit, considering the different types of Latin styles there are. They've done a pretty good job of it — and then some — by expanding the range well beyond traditional Latin percussion. Styles covered by the Carnaval include Latin, Salsa, Songo, Merengue, Cumbia, Banda, Brazilian, Tejano, Afro and Jazz. Quite a list — and I haven't listed the more obscure hybrid styles, either. But that's not all: in Beats mode there are patterns and styles for Techno, ▶

Emu Carnaval

pros & cons

EMU CARNAVAL £899

pros

- Hundreds of great-sounding presets and samples.
- Expressive, versatile filters.
- Beats mode a nice bonus, particularly with the ability to send patterns to an external MIDI sequencer.
- Six configurable audio outputs.
- Looks good.

cons

- Specialised Latin tag may limit appeal.
- No effects.
- Basic, sometimes cryptic display.
- Overpriced.

summary

A great-sounding module for a specialised market but capable of successfully crossing over into many other styles of music. If you can justify the high price, get one to add a bit of spice to your rack.

SOUND ON SOUND

Euro, Funk, Bhangra, Brazilian Pop, Latin-Techno, Latin Dance, Latin-Jazz, Mexican Pop and Afro-Cuban! As you can see, there's a pretty impressive selection of styles to choose from.

GRRR, YEEOW, CHACHUCHA

Many of the sounds and presets are grouped into categories similar to those above, but there isn't room to list all 640 here. However, I'll cover a few of them to give you an idea of how the Carnaval differs from the Orbit V2 and the Planet Phatt.

For a start, there are 40 or so very non-Latin synth presets, including cheesy Depeche Mode types, warped sweeps, grungy types, raw square wave, sawtooth and sine wave, smooth tones and beefy Minimoog types. There are also 20 to 30 bass samples, ranging from some very convincing acoustic and upright types, through lots of good synth basses, to digital DX types and even a few gut-wrenching sub-bass tones. There are countless pads, washes and strings, flutes and various pianos. Guitars are everywhere — acoustic, electric, 12-string, nylon, steel and so on. As you might expect, there's an overwhelming number of brass sounds, including samples of individual instruments, and some powerful stabs and takes from big bands and brass ensembles. The 20 or so 'sync'ed LFO' presets offer some impressive effects, ranging from quirky, rhythmically filtered synths to slowly evolving ambient pads. The SFX section is also splendid, and includes random bleeps, eerie portamento'd sweeps, weird reversed sample snippets, strange ethereal loops, and ambient washes with embedded sequences. The vox category features lots of multiple shouts, chants and phrases along the lines of "ChaChuCha", "Eh!", "Rrrrr", and "Salsa". [*See 'Carnaval — an American Puerto-Rican's Perspective' box for more on this.*] There's also a slightly creepy, looping manic laugh that sounds like something from a horror film when played lower down the keyboard, or like a mad scientist at the other end of the scale — great stuff!

CRASH, BANG, WALLOP

But the vast majority of raw samples in the Carnaval concentrate on percussion, with only about a third covering musical sounds, which is to be expected on a Latin module. About 75% of the performance presets have been programmed for melodic instruments, however, with the majority of the remaining presets programmed as Beat kits. About 30 drum kits have been specifically programmed for the Emu/Kat range of MIDI percussion controllers, and there's even a couple

CARNAVAL — AN AMERICAN PUERTO-RICAN'S PERSPECTIVE

Hola! Me llamo José Ramon Ortiz and I've been asked by *Sound On Sound* to give my two centabos on Emu's new Latin groove module, Carnaval.

When I first began playing around with the Carnaval (skipping the manual, naturally, and blindly pushing buttons), I thought it was a pretty clever but gimmicky box of tricks. A more thorough peek behind the few front-panel buttons proved to be rewarding: the Carnaval sports some excellent and well recorded percussion voices. Latin percussion is not easy to record or sample, because it's necessary to capture not just the sound of the instrument, but the player and the space the player and instrument occupy in a soundfield — even when it's a mono recording.

The Carnaval's congas and bongos, in particular, have certainly benefited from a combination of close and distant microphone technique to give them clear transients, while ambient miking adds the roominess needed to make the sound come alive. The claves, woodblocks, cowbells, shakers and cabasa would complement virtually any style of music. The surdo and other large drum samples are toppy enough to cut through the busiest of tracks, while retaining body in the low end. I felt as though I was playing the instrument, not the keyboard. Some of the timbale samples really sparkle and, when using some of the performance patches, I was in salsa heaven, playing rolls and flams for over an hour!

Quica is always a funny instrument to capture, as it always sounds too 'vocal', with not enough of the 'finger element'. If you know what this instrument looks like and how it is played, you'll know what I mean. The acoustic bass sounds are good but, having played a 'baby' bass in my days, I wasn't totally convinced by the sound of this one. Is it supposed to be a wooden acoustic upright or an Ampeg fibreglass-bodied five-string baby bass?

The vocal samples are authentic enough, with that virtually-impossible-to-imitate hispanic tone. Care must be taken to ensure that these samples are not over-used. They're phrases that I grew up with, and still use myself on personal projects, though. For the uninitiated, a brief explanation of what these vocal phrases mean might be in order. Although Latin music has a reputation for dealing with real-life, everyday issues — love, sex, money, jealousy, envy, hard and good times — there are the odd bits of verbal nonsense that have become a trademark of the more upbeat Latin styles. These phrases would be comparable to, say, James Brown, when he says HUH, OW, HIT ME and so on. Think of it as Spanish Jive talk.

- "Carnaval": usually means what it says.
- "Cumbia": would sound totally out of context if you stuck it in a cha cha.
- "A gozar": fits almost anywhere, as it means you're going to have a jolly good time, but don't use it on a ballad.
- The laugh: is usually placed in a bass and guiro section of a Latin track before a buildup.
- "Cha ku cha": a vocal percussive riff.
- "Que Rrrrico:" how rich — a more hip translation would be "way cool".
- "Arrrrrr": the percussionists in our bands in New York would do this when they spotted their prey for the night!
- "Salsa": Sauce — not the kind of phrase that comes to mind when performing a ballad.
- "Merengue": best used when actually doing a merengue, which no self-respecting Latin band would omit from their repetoire.
- "Baya": Cool, easy, enjoy, get into this...
- "A bailar": get dancin'.
- "Como": Say what?

I suppose it would be silly to question the inclusion of instruments such as the Chapman Stick or TB303 in what is supposed to be a Latin percussion groove module. It's the 1990s, however, and almost anything goes nowadays. From an educational viewpoint, Carnaval will introduce many people to both the delicate and the bolder elements of Latin and salsa music. Jazz features heavily in the scheme of things too, so the benefit could be two-fold, and this can only be a good thing.

Once I found my way into the preset grooves section, I was pleasantly surprised. Most of the grooves are highly authentic, and while I'm not a dancer by any means, they more than got my toes tapping.

- Tres Dos: excellent, displaying the loose, laid-back nature of this groove faithfully.
- Plena: very good use of the guiro and congas on this one.
- Guaracha: simply oozes feel. Unmistakeable.
- Motuno: similar to cha cha. Used more as a link or solo section in a typical Latin piece.
- Mambo: you'd die and come back a few times jamming over this one. The improvisational possibilities are staggering.
- Batucada & Carnaval: tweak up the tempo on this one, fill your tank and point your car towards Rio.
- Coolio: no business being anywhere near this box.

The only thing that can let a groove down a little are the maracas samples, which aren't 'loose' enough. But it's a minor gripe, considering the high quality of most of the other sounds.

José Ramon Ortiz — aka Joe Ortiz of Heavenly Music — has been a Latin musician for well over 25 years and has worked as guitarist, pianist, upright bassist and percussionist with such salsa luminaries as Ruben Blades, Ricardo Marrero and David Valentin.

TRUE
STEREO
ZOOM STUDIO 1204
ZOOM STUDIO 1202
CATCH US IF YOU CAN
Zoom are the undisputed market leader for high quality guitar effects, and have a proven reputation for providing unbeatable value for money. The Zoom Studio 1202 and the new Zoom Studio 1204 mark Zoom's increasing presence in the Studio Effects Market. These products from the Studio Range are perfect for Professional and Budget Studios alike. Outstanding quality, robust design and solid reliability also make the Zoom Studio 1202 and the new Zoom Studio 1204 great workhorses for both PA and Sound Reinforcement applications.
Zoom Studio 1202 - £149.95 inc. and Zoom Studio 1204 - £199.95 inc.
For details of your nearest Zoom stockist please call . . .
Zoom - Price is our only Compromise
Exclusive Distribution Ltd
Unit 10 Furmston Court
Icknield Way
Letchworth
Herts SG6 1UJ
01462 481148
Fax: 01462 481149

Emu Carnaval

of GM drum kits.

The easiest way to start playing around with percussion sounds is to dial up one of the three Master Kits — Salsa, Brazil or the AllTraps kit — which together contain every percussion sound available on the Carnaval. Emu say that they've tried to include multisamples of all the important percussion instruments so that they can be played as authentically as possible. They've also included a few instruments, such as the Tambora, which are often heard in Latin music but rarely included in drum machines or modules. I found the best way to experiment with the percussion kits was by hooking up my Roland Octapad — not quite a Kat, but still more expressive than a keyboard.

I couldn't even begin to review the percussion sounds in depth — there are just too many — and my best advice is to pop along to an Emu dealer, dial up the Master Kits: I062/P000/0 (Salsa), I063/P001/1 (Brazil) and I061/P003/0 (AllTraps) and have some fun trying out the sounds. Overall, the samples and kits sound pretty good — punchy and bright, with quite a few variations and types. Emu haven't skimped on memory, either: some of the sounds are quite long and don't suddenly cut off, although a few do begin looping a little too soon.

FEATURES LIST

- 16-part multitimbrality
- 32-voice polyphony
- 32 6-pole VCFs
- 640 presets (384 ROM, 256 RAM)
- 100 preset Beat Patterns
- 28 user-programmable Beat songs
- 3 stereo outputs (6 polyphonic submixes)
- MIDI In/Out/Thru

LATIN LOVER?

In a way, Emu have done the Carnaval a disservice in calling it a Latin sound module, because it encompasses a much wider range of sounds and styles than this tag implies. However, if your inclination is toward Latin styles, the Carnaval is an obvious choice because this is what it does best, and there's very little else available quite like it. On sound and MIDI facilities alone I have no problem with it — great filters, plenty of polyphony. Emu have, as usual, produced a quality piece of gear, but here's the rub: I have some misgivings, not just about the Carnaval but also about the Orbit and the Planet Phatt. For a start, why no effects? Even dinky little GM modules have delays and reverbs, and a few integrated effects would add such a lot to the overall sound and make these machines awesome. Another gripe I have is the basic 2-line, 32-character display. This is a real inconvenience — as the saying goes, it's like trying to decorate a room through a letter box. Alesis, Roland and Yamaha all use much better and more informative displays on their current 1U rackmount modules. Another problem I have is the overall concept of these units, which harks back to the original Proteus — repackaging of essentially the same machine with a new badge and new samples. This isn't too bad really, but when they keep producing such great-sounding modules, how on earth is a struggling musician supposed to keep up? I think a much better and more cost-effective approach is the one Quasimidi and Roland have adopted, using optional plug-in voice boards. But my biggest problem with the Carnaval is the price of £900 (less a quid), which I think is too much considering the the facilities on offer. If it were £150-£175 cheaper I'd consider buying one myself. Because of these points, I feel I can't wholeheartedly recommend the Carnaval, but try and get a demo of the machine, and if you like it and think it justifies the price, I have no doubt that you'll have a lot of fun with it. SOS

> "...if your inclination is toward Latin styles, the Carnaval is an obvious choice."

FEEL THE KARAOKE BEAT

I have always had mixed feelings about the Emu 'Beats' mode. I appreciate that it can yield some instantly useable rhythms, and I think the X-Factor control for stepping through different Beat kits is a great idea, but I find things start to sound a little 'samey' after prolonged use. This is probably due to the Beat patterns not being editable. I'm always hankering to tweak them a little — which, of course, you can do by recording them into a MIDI sequencer, but not within the Carnaval itself. I worry that all the other Emu Orbit/Planet Phatt/Carnaval users out there might decide to use one of the Beats I've decided to use on a commercial release, and we'll all end up sounding the same. This said, the Beats offered by the Carnaval are, subjectively, at least as good as the Orbit and the Planet Phatt and are a lot of fun to mess about with, for inspiration. Some good ones to try, if you get the chance, are:

- B:02, B:32 & B:34 — You could be standing right there at the Rio Carnival.
- B:06 — A techno groove plus a gut-wrenching sub bass.
- B:07 & B:31 — Gloria Estefan without the vocals.
- B:40 — Slow and sexy Latin lurve vibe.
- B:43 — Imagine if Yello were a club band in Blackpool.
- B:43 — At Blackpool without Yello.
- B:50 & B:54 — Good impressions of alpine folk music.
- B:51 — Simply Red without Mick Hucknall.
- B:71 — The Barry Manilow band without Bazza.
- B:72 — Euro-disco on heat.
- B:86 — A Bhangra/Techno groove.
- B:73 — An uncannily accurate version of 'Hey Macarena', without the Los Del Rio vocals. Try and stop yourself singing along.

With the ability to chain some of these very convincing and often instantly recognisable Beats together into songs (28 user-definable), the Carnaval becomes the first 1U rackmount MIDI module I have come across, from Emu or anyone else, that could pass itself off as a self-contained Karaoke machine. Is this a good or bad thing? That's not for me to say, but it could be a very useful facility for some cabaret bands or solo singers.

FURTHER INFORMATION

The Emu Orbit and Planet Phatt are functionally identical to the Carnaval. For a comprehensive appraisal of their deeper workings, and those of a couple of related instruments, check out these issues of *SOS*.

- Planet Phatt: June '97.
- Orbit: June '96.
- trapKAT drum controller: July '95.
- KAT dk10 drum controller: June '93.
- Launch Pad: Oct '96.

info

£ £899 including VAT.
A Emu UK, Suite 6, Adam Ferguson House, Eskmills Park, Musselburgh, East Lothian EH21 7PQ.
T 0131 653 6556.
F 0131 665 0473.
W http://www.emu.com

ALL THE LEADING STANDALONE HARD DISK RECORDERS ARE AT R&W

Sshl We'll beat ANY price on Fostex D90 & D160

As you'd expect from R&W we are appointed official agents for ALL the leading brands of Hard Disk Recorders. This means we are able to give you the benefit of a balanced and considered opinion of each and EVERY machine out there. With no bias.

We are also best placed to advise you on which system most closely meets your particular requirement and preferred way of recording. At R&W we promise much more than a brown box Hard Disk sale. And we deliver. Give us the opportunity to help you and if you are disappointed we'll refund you.

Call for best advice and price for AKAI DR8 & 16

Why is the E-mu Darwin is in a class of its own? We'll tell you. No bull. Just the facts.

The best advice and price is at R&W.

NEW LOW PRICES ON TASCAM DATS

DA30 BEST SOUNDING DAT

£975

Listen to Tascam's DA30 DAT Recorder next to any other brand of DAT machine and hear the difference.

The secret is in its unique AD and DA convertors. They are really 'musical' sounding. Thus they ensure your valuable masters actually sound better. Add to this Tascam's famous workhorse build quality and long feature list.

AT R&W YOU CAN NOW SAVE £51 OFF THE DA30 LIST PRICE OF £1199!

DA30 Budget DAT

£639

Tascam's most recent studio DAT recorder. At a price more associated with delicate HI-FI DATs. The difference is that this machine is heavier duty by far. And it comes with some unique features. You can record a 60-character message at the start ID of each track and this is displayed as the track plays. You can turn off SCMS copy limiting without the need for a modification. It even comes fitted with 19" rackmounts as standard.

DA30 NORMALLY COSTS £799. NOW YOU CAN SAVE 19% AT R&W!

Portable & Affordable

£1227

The Tascam DA-P1 is the world's lowest-cost professional portable DAT recorder. With the sort of facilities you expect in a studio DAT. Along with XLR microphone inputs and 48V phantom power for condenser mics, plus a built in record limiter to ensure your recordings don't distort at those unexpectedly high points that always happen when you're recording your most important work on location.

A DA-P1 NORMALLY COSTS £1499. NOT AT R&W !! DOESN'T SAVE 17%!

THE R&W MONITOR SYSTEM RECIPE

Take a pair of Soundcraft Absolute Zeros
Pour in an Omniphonics Footprint
Add music to taste
DELICIOUS!

Save 21%! Just £477 inc VAT at R&W.

TICKET'S LOW COST Pop/Stopper™

Pop/Stopper™ simply cancels any unwanted p-pops and breathing noises whilst retaining all the detail and subtelty of the vocalist's performance.

Pop/Stopper™ ensures you get a more relaxed performance from the vocalist because the worry of p-popping is removed.

Pop/Stopper™ employs twin membranes of a durable and acoustically "invisible" fabric separated by a 12.8 mm air space, to provide low frequency suppression and superior transparency throughout the vocal bandwidth.

Pop/Stopper™ costs only £39.95 inc. VAT

CLEAN UP YOUR POWER LINES

Admit it. Your outboard kit runs off cheap power adaptors and unfiltered AC cables. Untidy, unsafe and noisy. The solution is a **POWERLINE** from Ticket Audio. Available in 1U and 2U versions **POWERLINE** provides multiple filtered AC mains outlets, multiple 9V AC outlets and regulated variable DC outlets. **POWERLINE** therefore gives you one centralised power source with conditioning to protect your valuable equipment from surges and your recordings from noise. Front panel LEDs show power status and warn of fuse failures and wiring errors. High and low voltage supplies are activated from a single front panel switch. Safe and secure.

Clean up your power. You need a **POWERLINE** from R&W today!

POWERLINE from just £229 inc. VAT

HUGE SAVINGS ON GHOSTS @ R&W

Soundcraft's Ghost is well and truly spooking the 8-buss market. Pound for pound, Ghosts have easily got more highly desirable bells and whistles than the rest and audio-wise it's a killer. We've got some amazing Ghostly deals at R&W. Call us now!

Ghost LE-32

£2995

Ghost LE-24 (Standard version, no automation) £2495 inc. VAT
Ghost LE-32 (Standard version, no automation) £2995 inc. VAT
Ghost 24 (with MIDI Mute Automation & Machine Control) £Phew!
Ghost 32 (with MIDI Mute Automation & Machine Control) £Pardon?

NEW LOW PRICES ON R&W CDR BEST SELLERS

Pioneer PDR-05

£999

Professional and Hi-Fi CDR are always in stock at R&W. We're now offering the Pioneer PDR-05 for £850 plus VAT, plus two Marantz pro machines - the CDR615 at just £1187 plus VAT and their CDR620 with FREE Remote for only £1599 plus VAT. The best CDR advice & price is at R&W!

Marantz CDR615

£1395

Pro-Audio on a PC? R&W HAVE ALL THE ANSWERS

Soundscape
Audiowerk8
tripleDAT
RED ROASTER
Digital AUDIO
. . . and many more.

Multitrack recording, editing, CD mastering. R&W have the knowledge and expertise to get you going. Let us preconfigure one of our R&W high-spec PCs for you with all the software you need.

So you can get to work, hassle-free, from day one.

R&W Preconfigured Pro-Audio PCs

CLASSIC LANGEVIN CR3A

NEW LOW PRICE!

You'd normally expect to pay well over £1,000 for a large condenser cardioid studio microphone, particularly when it has a 1inch x 6 micron gold-plated diaphragm, -10dB pad switch and bass roll-off as well and extremely low noise discrete amplifier circuitry.

And then you'd expect to part with even more of your money for pop filter and shock-mount suspension.

Not with the Langevin CR3A - all the above are *standard* features, yet you can buy it from R&W for just £385 inc VAT.

- FREE Ticket Pop/Stopper™ (See left)
- FREE Mount, Suspension, Foam Windshield & Case
- Classic studio performance.
- Your money back if not impressed.

Now only £385 inc. VAT

APOGEE ADAT TO DA88 INTERFACE

New from Apogee, here's a real problem solver for you. The FC8 Digital Format Converter allows cost-effective transfer of 8 channels of audio between ADAT & DA88/DA38 recorders. Either machine can act as master or slave. With an FC8, an ADAT and a DA88 will perform as if they were two ADATs or two DA88s. Transparently. And for modest cost.

2 NEW MiniDisc PORTASTUDIOS

£925

Yamaha & Tascam, the inventor of the cassette Portastudio, have now taken the concept onto the MD (MiniDisc) format. With the triple advantages of non-linear digital multitrack recording on cheap and very small, portable media, these two feature-rich 4-track machines are now the new face of entry level recording.

£750

Both units allow up to 37 minutes of 4-track recording per disc (more than a C60 cassette), and provide comprehensive mixing and MIDI features. Here are the basics - Tascam 564: 8-inputs, 3-band sweep EQ, Shuttle search, Bounce Forward, MTC out & MIDI Clock. Yamaha MD4: 4-inputs, 3-band EQ, MTC out, Quick Locate, flexible editing, clear LED control display. Only the Tascam has a digital out. Official costs are £1099 for the Tascam 564 and £899 for the Yamaha MD4. But we're doing much better than that.

• Ask us for some FREE MiniDiscs with these too! •

NEW LOW PRICE!

Tascam RRP £2999
R&W OFFER Price £1999 Inc. VAT!

NOW PAY UNDER £2k FOR A DA38

We have obtained a further limited number of this excellent recorder and have managed to reduce the price to an all-time low of just £1701 plus VAT. Too good to miss.

Remember, with a DA38 your digital recordings are made on a compact, easy-to-store, WELL PROVEN Hi-8 tape format. No danger of expensive hardware crashes here!

Just one reason why loads of pros still prefer it over the more pernickety - and less robust - recording methods around these days. GET IT AT THIS PRICE WHILE YOU CAN!

tc's WIZARD M2000 & FINALISER

Wizard £1639 M2000

tc's Wizard M2000 digital Multi-Effects processor and Finaliser Mastering Dynamics processor are simply flying out of the door at R&W.

Two great tools for creating and finishing your masters to perfection from the recognised masters of studio effects & dynamics processing.

Wizard £1999 Finaliser

THEY'RE ALL AT R&W!

First there was the ProMix-01 - still selling, still a great little problem solver. Then there was the magnificent 8-buss 02R. Undoubtedly the most sought-after console of the decade, and destined to be on every-one's wish list well into the future. And now comes the new, smaller 4-buss 03D, the affordable solution to virtually every project studio's mixing problems. A fully automated, programmable mini-console with 26 inputs (8 of them digital), two on-board effects processors and in-built mouse-driven LCD computer screen.

01

£1639

£5995

02R

03D IS HERE!

03D

£2999

ALL YAMAHA DIGITAL DESKS IN STOCK NOW!
BEST ADVICE! BEST PRICE! BEST SUPPORT!

THE CREAM OF SAMPLERS

Say the magic word "Sampler" down the 'phone and our resident sampler guru, Simon Sampler (yes), will give you the word on the latest E4X and E4X-Turbo Emulators from E-mu Systems. Very tasty beasts, these. The cream of the sampler crop. And there at R&W now.

NEW R&W CATALOGUE

Our new 200-page catalogue is out soon. It's our most comprehensive line-up ever. Please call to reserve your copy now.

RAPER & WAYMAN
Professional Audio

THE BEST ADVICE & PRICE IN PRO-AUDIO

Tel: 0181-800 8288

Fax 0181-809 1515 EMAIL: r+w.proaudio@dial.pipex.com
Unit 3, Crusader Estate, 167 Hermitage Road, Manor House, London N4 1LZ.

MasterCard · Access · VISA · TRANSAX

Multi Story

MULTI-EFFECTS EXPLAINED

PART 1: To start off this short series on multi-effects programming, PAUL WHITE explores the key building blocks found in today's versatile units.

A little over a decade ago, effects units were mainly dedicated devices; you'd buy a reverb unit that produced only reverb, a digital delay line for delay or echo effects, a pitch-shifter for transposition effects, and so on. This meant that we got to know the parameters relating to the various effects pretty well, but then along came the multi-effects unit, offering all the above, and more, in a variety of configurations. With the multi-effects unit came presets and easy edit options, which meant that a lot of newcomers to recording skipped over the essentials of effects creation. But creating a multi-effects patch is a skill in its own right — you need to know how the different effects are created, and how they interact with each other, depending on their position in the signal chain. For the benefit of those who haven't studied the workings of effects before, I'm going to start by looking at the main effects types.

REVERBERATION

Reverberation is now a very familiar effect and has been discussed at length within these pages on numerous occasions, so I'll get through the essentials as quickly as possible. Natural reverb is created when sound reflects around a confined space such as a building, and the resulting reflection patterns are immensely complex. For example, a single handclap in a cathedral can generate thousands of reflections within the first second, and the complexity continues to increase while the reverb decays, as each reflection is re-reflected from multiple surfaces. The first set of reflections from the walls and ceilings is known as Early Reflections; their pattern provides strong psycho-acoustic clues to the nature of a space, even when you can't see it. In a large hall, the first few echoes may well be quite distinct before they build up into a dense reverberation, whereas in a smaller room the distances are much shorter, so the reverb density builds up far more quickly.

Though they're technically quite complicated, the low cost of DSP chips (Digital Signal Processors) has brought us a whole range of affordable reverb and multi-effects devices. These invariably have stereo outputs which create a wide, spacious effect, even when the input signal is in mono.

The most obvious parameter of reverb is the time that it takes to die away (decay) after a percussive sound such as a handclap or drum beat. For contemporary music production, decay times of between one and three seconds are the most useful, though most units have a far wider range, to allow the creation of special effects. Reverb settings with strong early reflections and a fairly fast decay are an effective way of creating a wide stereo effect from a mono source, such as a voice or instrument, recorded with a single microphone.

In a large space, there is a delay between the original sound and the first reflections being heard — it takes around a tenth of a second for a sound to travel to a wall 50 feet away and then bounce back to the listener. Most reverb units have a pre-delay parameter, and the effect of adjusting this is to vary the apparent size of the room without changing the overall decay time. It also helps give a mix more clarity, by leaving a breathing space between the original sound and the reverb that follows it. Reverb treatments are based on algorithms (in this case, a mathematical model simulating the reflective properties of a room), and a typical unit will include algorithms for halls, rooms, chambers and plates (a plate is a mechanical studio reverb device based on a large metal plate), as well as non-natural reverbs, such as gated and reversed versions. Figure 1 shows how reverb develops from a percussive sound.

Soft furnishings in a room will absorb more high-frequency energy, hence reducing the high-frequency decay time, but a tiled room or stone cavern will reflect well at high frequencies, resulting in a very bright reverb. To emulate these environments, the basic algorithms include parameters for adjusting the relative HF and LF decay times. Brighter sounds work well with drums, electric guitars, acoustic guitars and pop ▶

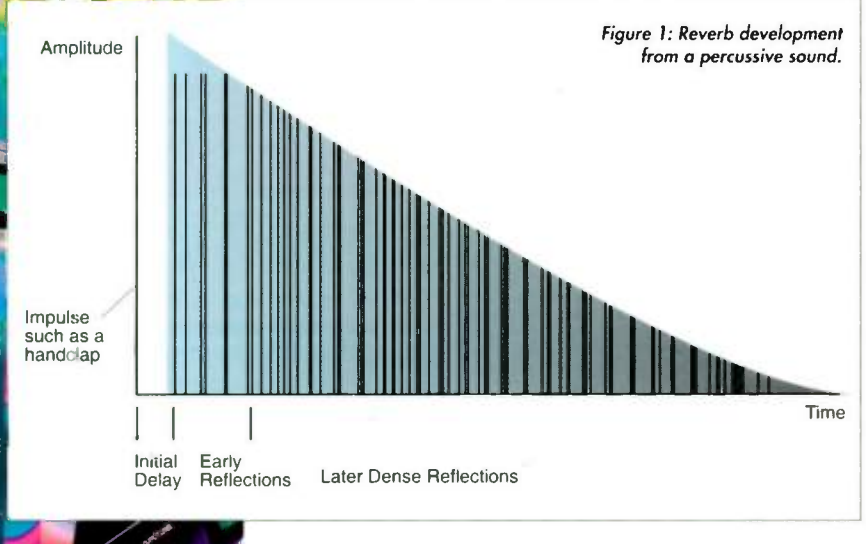


Figure 1: Reverb development from a percussive sound.

REALPIANO PRO Series

Only for professionals.

PRO1 · PRO2 · REALPIANO Expander

The dream has come true.

"The PRO2 has by far the best Grand Piano sound and feel I have ever experienced in any digital keyboard - and I have tried them all. It is an essential part of my kit and I use it in every performance."
Keith Emerson

GEM by GENERALMUSIC

For your information:
Generalmusic Distribution (UK) Ltd
Unit 177, John Wilson Business Park
Chestfield, Whitstable, Kent CT5 3RB
Tel: 01227 272500 **Fax:** 01227 272850
Email: gmuk@gmusic.demon.co.uk

▶ vocals; more classical acoustic instruments often work better with a more natural-sounding reverb.

Gated reverb was probably one of the first multi-effect treatments, as it was first achieved by miking a drum kit in an extremely live room, then using a noise gate to cut the reverb off abruptly at the end of each beat. Examples of this treatment are to be found on many early Phil Collins tracks, though the effect is less fashionable in this context today. Most multi-effects devices and reverb boxes provide gated reverb as a single algorithm, though some still allow you to create it from separate reverb and gate 'blocks'.

Reverse reverb is a burst of early reflections starting off at a low level and gradually increasing, before ending abruptly. This reverse envelope is responsible for the reversed illusion the effect creates. Figure 2 shows the envelopes of gated and reverse reverb.

DIGITAL DELAY

Digital delay is the successor to the tape-echo unit, a special type of recorder using one record head and between one and four replay heads. A continuous loop of tape was used on most machines to prevent the tape running out part-way through a performance, and the principle was simply that any input signal was recorded, then played back a short time later via the replay heads. An erase head then cleaned the tape before returning it to the record head. The delay time was set by the tape speed and the head spacing; the inclusion of a variable speed control, and on/off switching for the replay heads, made various delay effects possible. Repeat echoes were achieved by feeding some of the output signal back to the input (as shown in Figure 3).

Digital delay, or DDL, is one of the key elements of a modern multi-effects unit, and performs essentially the same task as the tape-loop echo machine used to, but there are no tapes to wear out and the range of adjustment is far greater. It's also possible to modulate the delay time to create effects such as chorus, vibrato, flanging and phasing. Whereas most tape echo units were mono, today's digital effects are invariably stereo. A typical DDL effects block offers variable feedback, to produce multiple decaying repeats, and some offer multi-tap delay, so several repeats at different delay times can be created. This is directly analogous to the multiple heads of the tape-loop echo; feeding back some signal from all the taps makes the density of the repeats build up very quickly into a kind of pseudo reverb. Figure 4 shows how a multi-tap delay operates.

Further interest can be created by arranging for the repeats to come from alternating sides, or by feeding some of the left-channel output back into the right input and vice versa. These options are usually presented in the form of 'algorithms', where the routing is set, but the user generally has control over the values of various parameters, including delay time and feedback. There's also a mix parameter or control on most multi-effects units, which allows you to adjust the balance between the original sound and the delayed sound.

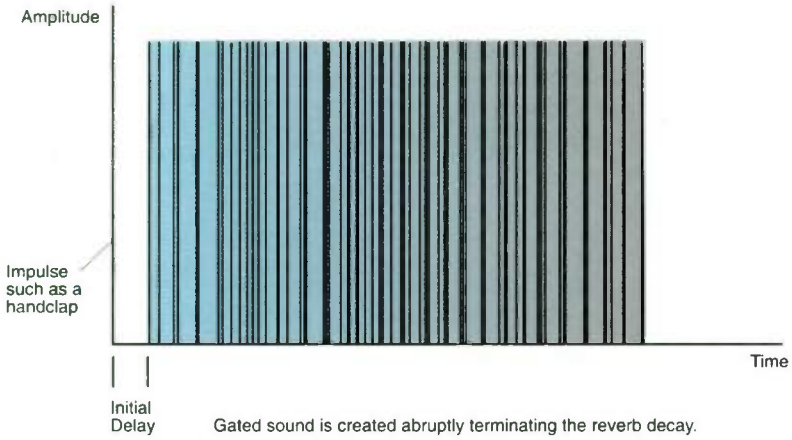
DELAY EFFECTS

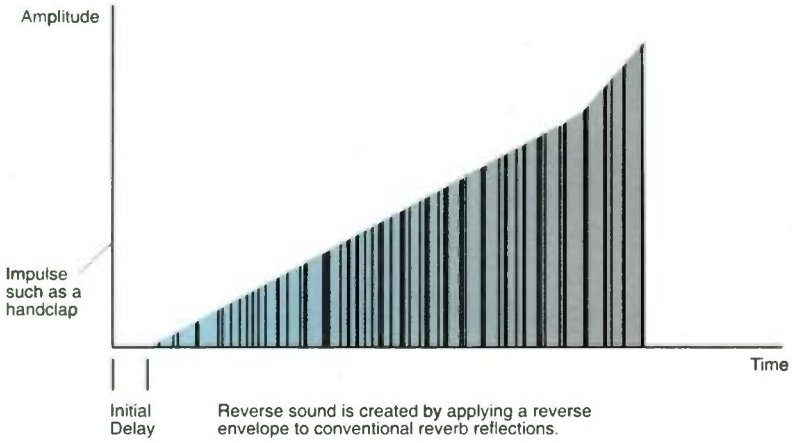
The simplest DDL effect is a single repeat using no modulation and no feedback; the delay time can be varied up to the maximum range of the unit. Short delays of between 30 and 100ms are used to create slap-back echo effects or pre-delays for reverb effects, while longer delays produce a distinct single echo. Echoes timed to coincide with the tempo of the song can sometimes be effective.

You can get multiple, equally spaced, delays by increasing the feedback value. At longer delay times, you'll hear the familiar repeat echo effect but as the delay time is shortened, you'll notice that the echo effect disappears and is replaced by a metallic resonance, sometimes called tunnel echo. The frequency of resonance depends on the delay time; increasing the feedback will maximise this resonant effect. Several good examples can be found on the more adventurous dance records and dance-loop sample CDs.

Using a multi-tapped delay lets you create a less rhythmic echo; for the best effect, the delay times of the various taps should not be set to exact multiples of each other. Adding feedback causes the echo decay to become quite complex, and ▶

Figure 2: Envelopes of gated and reverse reverb.





SOUND DIVISION
WORLD OF DANCE

EUROPE'S No1 DANCE TECHNOLOGY SPECIALISTS

SOUND DIVISION
WORLD OF DANCE

PRESENTS FOR THE SECOND SENSATIONAL YEAR

in association with DJ Magazine

DANCE TECH 97

DANCE MUSIC TECHNOLOGY FOR TOTAL CREATIVITY

an exclusive hands-on exhibition dedicated to DJs, Remixers & Producers

ENTER THE CREATIVE WORLD OF DANCE MUSIC PRODUCTION

See, hear and demo the latest state-of-the-art dance music production tools from the worlds leading equipment manufacturers:-

Yamaha	Alesis	Sennheiser	Technics	Vestax
Roland	Soundcraft	JBL	Intimidation	Pioneer
Akai	Steinberg	Cerwin Vega	Gemini	Denon
Emu	Novation	Spirit	Kam	Stanton
Korg	Red Sound	E-Magic	Ecler	Ortofon

sponsored by Vestax

sponsored by YAMAHA

SUNDAY 20th JULY - 11AM to 6PM

at

COMPLEX CLUB

1-5 PARKFIELD ST (off Liverpool Rd), ISLINGTON, LONDON N1

nearest tube station: ANGEL (Northern Line)

SPECIAL GUEST APPEARANCES BY TOP DJs & REMIXERS TO BE ANNOUNCED SHORTLY

FREE £50 VOUCHER FOR EVERY VISITOR TO SPEND AT DANCE TECH 97

Admission price £5 on the door (£4 in advance) - Licensed Bar

Avoid the queue and the waiting - buy your tickets in advance - Tel 0171 700 6677 and for further info

VOCODER

A vocoder is a special type of multi-band filter that automatically mimics the frequency-spectrum characteristics of a signal being fed into its control input. You can visualise it as a graphic EQ that's able to listen to any signal, and constantly adjusts its fader settings to match the spectral content of that signal. When a signal is passed through the vocoder's filters, it takes on the same spectral characteristics as the control input, which is how the effect of talking keyboards is produced — but there are far less clichéd ways of using vocoders. For example, you can trigger them from more rhythmic sounds to turn a pad synth into a melodic rhythm. Some of the better sample CDs make extensive used of vocoders in unusual and interesting ways, so check out a few of these for inspiration.

this effect is popular on electric guitar (from the Shadows to U2), on vocals, and on instruments such as synth lead lines, sax and flute. As we'll see later in this feature, combining delay with reverb often produces the most interesting results.

MODULATED DELAY EFFECTS

Modulating the delay time using an LFO makes the pitch of a delayed signal waver both sharp and flat at the rate set by the LFO speed. The depth of modulation determines how far sharp or flat the sound goes. The simplest modulation effect is pitch vibrato, where only the processed (sometimes called 'wet') sound is used — the original, unprocessed ('dry') sound is turned off using the mix parameter. The sound you hear from the output will be delayed slightly, but if the delay time is set to less than 10ms, it will be too short to notice. If you set a modulation rate of, say, 4Hz, then turn the depth control up slowly, you should hear the sound being processed take on a wavering effect, not unlike that produced by the mod wheel on a synth.

• PHASING

To convert vibrato to phasing, set the mix parameter to give equal amounts of dry and delayed sound and experiment with delay times between 1 and 10ms. As you adjust the modulation speed and depth, you'll hear the individual harmonics that make up your sound moving in and out of phase with each other, which has the effect of filtering the sound in a very dynamic and complex way. This is known as comb filtering, because a frequency graph would show lots of narrow spikes and troughs, rather like the teeth of a comb. As the delay is modulated, these 'teeth' move up and down the audio spectrum, and you'll probably recognise the effect as being similar to what you get from guitar phaser pedals. You can vary which harmonics are affected by changing the basic delay time; the shorter the delay time, the higher the frequencies that are affected, and vice versa. If your unit has a feedback invert function, try switching this in, as it too affects the harmonic structure of the effect.

In the context of a multi-effects unit, modulation effects are likely to have their own algorithms, rather than relying on the user to create the effect from scratch using a general DDL block. Irrelevant parameters will be normally be excluded and the delay-time range restricted to that relevant to the particular modulation effect being created. This helps steer the non-experienced user in the right direction, and may allow some other non-standard parameters to be added by the manufacturer.

• FLANGING

Flanging was first created by simultaneously running two tape machines carrying copies of the same music, then mixing the two outputs. If the two machines are perfectly in time (sync), with each other the two signals add normally, but if the timing between the machines drifts for any reason, you hear a phasing effect due to comb filtering. By deliberately slowing down one machine and then the other, using hand friction on the supply reel, you can control the phasing effect, though it takes some practice to get it right.

Flanging can be simulated digitally, though the result is never exactly the same as you get from doing it the hard way. DDL flanging doesn't exactly duplicate tape flanging because the delay can never pass through the zero-delay point, as it does when one tape machine overtakes the other. It's possible to fake this so-called 'through-zero flanging', though, by using two DDLs. This is achieved by setting a fixed short delay on one DDL, then arranging for the second DDL's delay time to be modulated either side of this value. The settings for flanging are similar to those used for phasing, except that longer delay times — typically 10 to 50ms — are used, and the feedback value increased to make the effect more resonant. On more sophisticated units, it may be possible to modulate the delay using some source other than the LFO — for example, the input signal's envelope. This can help make the effect less obviously repetitive, and hence more like its tape counterpart. Extensively used in the psychedelic '60s, flanging is making a bit of a comeback in dance music, but if overdone it can become a cliché, so it's often best combined with other effects, as will be described later.

Inverting the phase of the signal fed back to the input allows different harmonics to be accentuated by the filtering process, just as it does with phasing. Try both options and see which you prefer.

• CHORUS

The chorus effect is essentially the same as vibrato, but with an equal proportion of the dry sound mixed in. The idea is to produce the illusion of two instruments playing together, where the ensemble effect is created by slight timing and pitch differences. By setting a longer delay time than for vibrato, between 30 and 150ms, say, you can make the effect of the timing differences

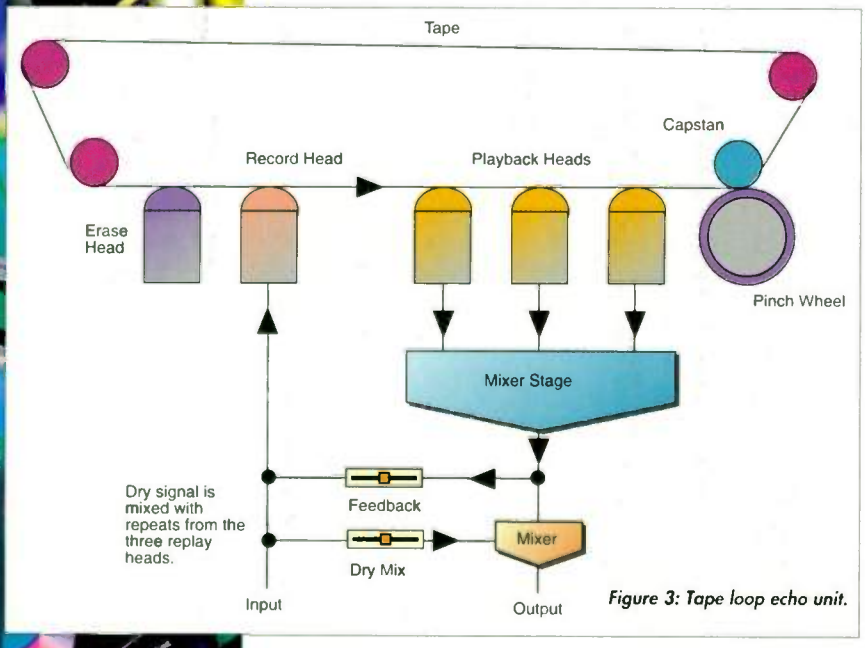


Figure 3: Tape loop echo unit.

SUPER BASS STATION

ANALOGUE SOUND
HEAR THE DIFFERENCE

- Two main Oscillators and Sub Oscillator
- External Signal Input with AutoTrigger
- Ring Modulation and Oscillator Sync
- White Noise Generator
- 12db/24db Analogue Resonant Filter
- Analogue Chorus, Stereo Panner and Distortion Effects
- Rotary Controls Transmit MIDI Controllers
- Arpeggiator with Trigger Clock Out
- Both LFO's and the Arpeggiator Sync to MIDI Clock
- Over 100 Arpeggiator Patterns - TB303* types with slides through to 9/8 and Shuffle

Recommended Retail Price £449

The new Novation Super Bass Station features all the Classic methods of Analogue Subtractive Synthesis with Two Main Oscillators plus a new Sub Oscillator, Oscillator Sync, Ring Modulation, a White Noise Source and an External Audio Input. The Mixer Section makes it easy to combine these sources together. The Analogue filters offer selectable, 12db or 24db, cut-off curves making it easy to faithfully recreate anything from a TB303* to a more traditional synthesiser sound.

The Super Bass Station has 50 ROM and 150 RAM Program locations. All the knobs transmit MIDI Controllers for easy recording of any movements in real-time on a sequencer. Additionally there is an Analogue Distortion Effect with all the warmth analogue can deliver plus a Stereo Analogue Chorus that not only fattens up the sound but also provides boost to the bottom end. The Stereo Panner can be assigned to LFO's and Envelopes. The LFO's and Arpeggiator can sync to MIDI Clock. When syncing to MIDI Clock it is possible to have different signatures assigned to either LFO or the Arpeggiator for really complex movements of sound. The Analogue Trigger Output generates trigger pulses from the incoming MIDI Clock and there is a built in MIDI to CV / Gate Converter. Trigger signals are generated from the External Audio Input allowing an external signal to be processed automatically by the internal Filters and Envelope Generators without the need for MIDI note or Gate signals. Super Bass Station - Analogue Sound - Hear the difference.

Also from Novation - The DrumStation - Featuring Classic TR909* and TR808* drumsounds with realtime control. RRP £ 449.

Please send me information on the Novation Super Bass Station.

Name

Address

Post Code

novation

Westacott Business Centre (A4), Maidenhead Office Park,
Westacott Way, Maidenhead, Berkshire, England. SL6 3RT.
Tel:+44(0)1628 828888 Fax:+44(0)1628 825599

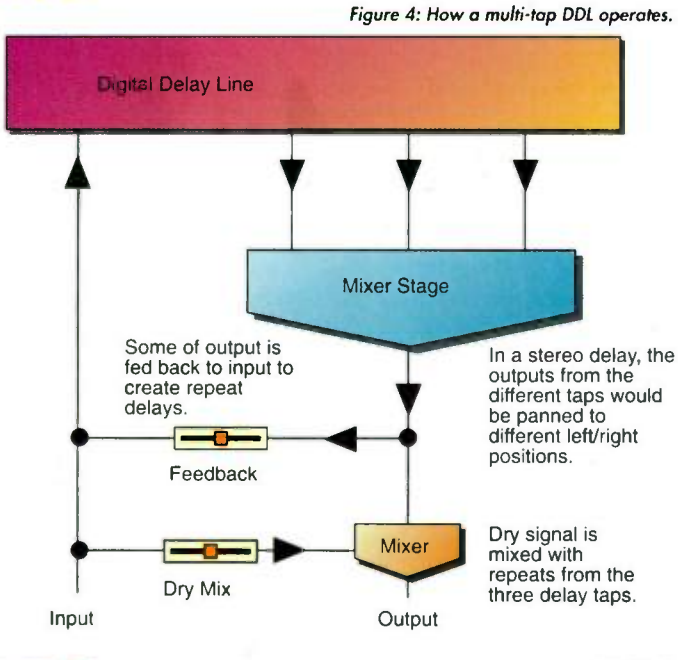
between instruments more pronounced. You can also use very gentle modulation on even longer delays to create a combined chorus and echo effect. The modulation speed is usually set in the range 2-6Hz and the depth set by ear so as not to sound too out of tune. The longer the delay time, the less depth will be needed. More sophisticated chorus effects blocks may include multi-tapped algorithms, which produce the effect of multiple chorus devices operating at the same time.

Chorus was first used on electric guitars and synth string machines, but it can be used on virtually anything, from fretless bass to synth pads. However, it doesn't usually work too well on vocals: the effect is too regular to sound entirely natural. Though most chorus effects now come as stereo, you can fatten up a mono chorus by panning the original, untreated sound to one side and the modulated delay to the other. The result is a moving wide sound source that seems to hang between the speakers.

ROTARY SPEAKERS

Many multi-effects units include an algorithm to simulate rotary speaker cabinets, devices originally used by organ players to add an interesting chorus/vibrato to their sound. The cabinets work by means of a rotating baffle around the bass speaker, and a rotating horn to carry the high end. A motor-and-pulley system provides two operating speeds; because of mechanical inertia, the system takes a finite time to switch between these two speeds. In a multi-effects unit, the effect is usually created by a combination of modulated delay and filtering but, as far as the user is concerned, there may only be 'fast', 'slow' and 'off' speed options to select from. The inertia effect is simulated by using a special LFO that changes speed over a period of a second or so rather than instantly, and the skill of using a rotating speaker (or emulation) is to operate the speed change at appropriate points during the performance to provide the right feel. This effect also works well on guitar, synth pads, and sometimes even on voice.

Figure 4: How a multi-tap DDL operates.



RESONANT CHORDS

Pioneered by Lexicon, the resonant-chord effect is achieved by using several delay lines, each set to a very short delay with feedback, and each tuned to resonate at one note of a musical chord. Any harmonically rich sound fed into these resonant delays will 'ring' at the appropriate notes, and if you use MIDI control to change the pitch at which the delays resonate, the ringing-chord effect can be played from a keyboard. The effect has to be heard to be fully appreciated; depending on the input source, the results can range from ethereal to disturbingly mechanistic.

PANNER

A panner is simply a device that automatically pans a mono signal from left to right and back again, usually under the control of an LFO. It is closely related to tremolo, an effect created by modulating the level of a signal using an LFO, except that in the case of the panner there are two modulating circuits, one of which is at maximum gain while the other is at minimum — as shown in Figure 5. Some effects units incorporate options for triggering the pan to MIDI notes or sync'ing it to tempo via MIDI Clock, in which case it's possible to synchronise the panning to the tempo of the music. While panning raw sounds around the place is a little dated, it can be effective to leave the original sound where it is and just pan the reverb or delay element of the sound.

A more recent advance is three-dimensional panning, an effect that combines left/right panning with psycho-acoustic front/back panning. Continually changing levels and EQ changes make the signal sound as though it's moving in a circle in front of the listener rather than simply following a straight line. As the sound pans, it seems alternately closer to the listener, then further away.

PITCH-SHIFTING

Pitch-shifting is a process for changing the pitch of a sound without changing its length. (If you change the pitch of a recorded sound by speeding up the tape, the shifted sound will, obviously, get shorter.) The range is usually one or two octaves up or down, with fine tuning as well as semitone step adjustment.

The effect works rather like an automatic sampler that samples very short sections of the sound, loops these sections, then plays them back at a different speed. Clever algorithms are used to hide the splicing between subsequent loops, but, on all but the most sophisticated units, the splicing shows up as a warble when large amounts of pitch-shift are used.

Most multi-effects devices include a pitch-shifting section, which may allow simultaneous shifting up and down in pitch. If small shifts of between five and ten cents, both positive and negative, are applied to a signal, you get a nice alternative to chorusing without any obvious cyclic sweeping. It's also common to find an option for ▶

NEWCASTLE ON TYNE'S LEADING MUSIC STORE

MAIL ORDER A SPECIALITY

GREAT PRICES FAST DELIVERY

Sounds Live

Tel: 0191 230 3422 FAX: 0191 222 1663

Keyboards & Modules

Alesis QS6	SOUNDS LIVE LOW £CALL
Alesis QS8	£LOW
Alesis QS7 MEGA LOW	£CALL
Alesis QSR	£LOW
Alesis Nanosynth	£CALL
Alesis Nanobass	£CALL
Alesis Nanopiano	£CALL
Emu Planet Phat	£CALL
Emu Orbit	£LOW
Emu Ultra Proteus	£929
Emu Morpheus	£799
Emu Classic Keys	£389
Emu ESI32 New Low Price Inc SCSI	£RING NOW
Emu E6400	£CALL
Emu E4K AND E4KX	£SOUNDS LIVE LOW
Ensoniq MR76 New weighted K/B version of MR rack	£CALL
Ensoniq MR61	£CALL
Ensoniq ASR10 Keyboard or Rack + Huge Free Library	£VERY LOW
Ensoniq MR Rack	£NEW LOW PRICE
Kawai Z1000 Brilliant New Keyboard Reads Most Styles	£CALL
Kawai K5000W and K5000S Amazing new synths now	...in stock £CALL
Korg Prophecy	£779
Korg Trinity Loads of Free new sounds Crazy new	...Low Price £CALL
Korg N364	...New Mega Deal £CALL
Korg iX300 The latest i Series Keyboard	£CALL
Korg N5R 64 voice 32 channel module	£CALL
Korg X5D	£549
Korg X5	£449
Korg i5s plus free Sounds	£699
Korg i5M plus free Sounds	£599
Korg X5DR	£399
Kurzweil PC88	£1499
Novation Bass Station	£279
Novation Bass Station Rack	£SOUNDS LIVE LOW
Studio Logic ST760 Mother Keyboard	£CALL
Studio Logic ST1100 Mother Keyboard	£CALL
Studio Logic ST880 Mother Keyboard	£CALL
Yamaha SU10	£249
Yamaha W7 EXCLUSIVE PACKAGE inc Vers 2.0 software	RRP £1989 £999
Yamaha QS300 Plus Free Sounds	£899
Yamaha CS1x Plus Loads of Free Sounds	£CALL
Yamaha AN1X Brilliant Bigger Version	£CALL
Yamaha MU90 New Module Coming Soon	£CALL
Yamaha A300 Mega Spec Budget Priced Sampler	£CALL
Yamaha VL70M	£SOUNDS LIVE LOW
Yamaha MU50	£279
Yamaha MU5	£169
Yamaha P50-M New Piano Module Based On P500	£CALL
Yamaha P150	£1189
Yamaha PSR7000 INC Free Stand And Style Disks	£1499
Yamaha PSR4000	£1059

WE WON'T BE BEATEN ON PRICE, OR SERVICE. SO CHECK US OUT

Software & Soundcards

Band In Box	£SOUNDS LIVE LOW
Cake Walk	£SOUNDS LIVE LOW
E Magic P C Logic	£SOUNDS LIVE LOW
E Magic P C Logic Audio	£SOUNDS LIVE LOW
Ensoniq QS Sound cards	from £99
Korg i3 Style Disks	£10
Kurzweil Style Disk	£10
MPC Midi Interface with Soundblaster Socket	£55
PG Music Jazz Guitarist	£39
Steinberg Cubase Score	£399
Steinberg Cubase	£289
Steinberg Cubasis	£SOUNDS LIVE LOW
Zip+SCSI Cable + Disk	£SOUNDS LIVE LOW
Jaz+SCSI Cable + Disk	£SOUNDS LIVE LOW
Syquest EZ135 + SCSI Cable + Disk	£SOUNDS LIVE LOW
Tahiti Turtle Beach + DB50+Cable Pkg	£SOUNDS LIVE LOW
Yamaha SY85 Discs (various) RRP £42	£15
Yamaha W7 Discs (various) RRP £42	£15
Yamaha W7 Boards Vintage/Piano/Rhythm/Dance Massive	RRP £179 £39
Yamaha PSR2700 Sample Sound Disks	£10
Yamaha DB50XG Daughter Board	£SOUNDS LIVE LOW
Yamaha SW60XG	£SOUNDS LIVE LOW
Yamaha MU10XG	£SOUNDS LIVE LOW
Yamaha QY70/QY22 Video Manuals RRP £25.99	£9.99
VIDEO MANUALS For most things available at low prices	£CALL
MIDI Interface cables/connectors/sync boxes etc, all from stock	£VERY LOW

Mixers

Allen Heath GS3	£1499
Mackie 1202 VLZ DEAL PRICE	£279
Mackie 1402 VLZ DEAL PRICE	£399
Mackie 1604 VLZ DEAL PRICE	£CALL
Mackie 2482 + free stand + free meter bridge	£SOUNDS LIVE LOW
Soundtracs Topaz 24/8 inc meter bridge, stand loom	£CRAZY LOW PRICE
Soundtracs Topaz Mini 12/2 DEAL PRICE	£249
Soundtracs Topaz Micro 14/2 DEAL PRICE	£379
Soundtracs Topaz Maxi 24/2 DEAL PRICE	£1449
Soundcraft Powerstation	£869
Studiomaster Diamond 8/2 ex demo	£189
Studiomaster Diamond 16/2 ex demo	£285
Studiomaster Diamond Pro 8/3	£320
Studiomaster Powerhouse 600w 8/2	£699
Studiomaster Vision 700w 10/2	£VERY BEST DEAL
Studiomaster Horizon 1200w 10/2	£VERY BEST DEAL
Studiomaster Trilogy 166	£CALL
Studiomaster Trilogy 206	£CALL
Studiomaster PRO2 203	£CALL
Yamaha MX12/4 Inc Reverb RRP £399	£CALL
Yamaha 03D	£CALL
Yamaha Promix 01, new special low price	£CALL
Yamaha EMX640 Powered mixer	£CALL
Yamaha MX200 8/2 RRP £599 DEAL PRICE	£419
Yamaha MX20C 16/2 RRP £899 DEAL PRICE	£629

Recording & Effects

Alesis ADAT XT Packages WE CAN BEAT ANY GENUINE DEAL	...£TRY US OUT
Alesis Microverb 4	£199
Alesis Quadraverb II	£CALL
Alesis Nanoverb	£LOW
Alesis Nanocompressor	£CALL
Alesis Monitor 2	£499
Alesis Midiverb	£289
Art FX1	£SOUNDS LIVE LOW
Art MP1	£SOUNDS LIVE LOW
Art Quad MP	£SOUNDS LIVE LOW
Art Leveler	£SOUNDS LIVE LOW
Behringer Composer	£225
Behringer Autocom	£149
Behringer Dualflex	£119
Behringer Ultraflex	£189
Behringer Ultracurve	£CALL
Boss SX700	£359
Boss GX700	£369
Boss GT5	£CALL
Digitech Studio Vocalist	£SOUNDS LIVE LOW
Digitech Midi Vocalist	£SOUNDS LIVE LOW
Digitech Vocalist Work Station	£SOUNDS LIVE LOW
Digitech Studio Quad	£SOUNDS LIVE LOW
Digitech Studio 400	£SOUNDS LIVE LOW
Ensoniq DP-PRO	£SOUNDS LIVE LOW
Ensoniq DP-4+	£SOUNDS LIVE LOW
Ensoniq DP-2	£SOUNDS LIVE LOW
Event Studio Monitors	£CALL
Fostex DMTB-VL New Lower Price	£RING NOW FOR BEST DEAL
Fostex D80	£RING NOW FOR BEST DEAL
Fostex DMTBVL Plus D5 Special Bundle Package Deal	£RING NOW
Fostex D-5 Digital Mastering	£VERY LOW
Fostex D90 New 8 track+scsi inc 1.3 gig drive	£CALL
Fostex D16 New 16 Track+scsi inc 1.3 gig	£CALL
Fostex XR14 New entry level 4 track	£CALL
Fostex XR3	£219
Fostex XR5	£299
Fostex XR7	£399
J.B.L. 4208 Amazing monitors at this price. Ltd offer	£249
Korg Soundlink DRS168RC Ring now for expert advice	£CALL
Korg iM	£299
Lexicon MPX1	£CALL
Lexicon Alex	£249
Lexicon Reflex	£299
Phillips DCC730 WITH FREE TAPES normal deal £249	£219
Samson Servo240 2x240 2xx120 watt Studio power amp	£199
SPL Stereo Vitaliser	£299
Sony DTC-A6 Plus 10 free tapes	£649
Yamaha MD4 Mini Disk 4 Track In Stock	£SOUNDS LIVE LOW
Yamaha MT50	£269
Yamaha MT8X MkII The Best In All Tape 8 Tracks	£SOUNDS LIVE LOW
Yamaha MT4X	£389
Yamaha G50 Midi Guitar System	£CALL
Yamaha NS10M Monitor Pkg With A100A amp	£499
Yamaha REV100 Digital Reverb	£179
Yamaha REV500 New Digital Reverb	£CALL
Yamaha ProR3 Serious Digital Reverb From 02R	£CALL
Zoom 505/506 Inc Power Supply	£SOUNDS LIVE LOW
Zoom 8080	£SOUNDS LIVE LOW
Zoom 1010	£SOUNDS LIVE LOW
Zoom 1202	£SOUNDS LIVE LOW
Zoom 4040	£SOUNDS LIVE LOW
Zoom 1010	£SOUNDS LIVE LOW
Zoom 1204	£SOUNDS LIVE LOW

★ Exclusive Deal ★

Yamaha W7 Workstation including 3 boards, Dance massive, Vintage Keys, Piano and 3 sound disks over 1000 total sounds. Total Price £1900 Our Exclusive Price £999

Drums & Sequencers

Alesis SR16	£129
Alesis DM5 Drum module	£299
Boss DR5	£249
Boss DR660	£309
Novation Drum Station	£SOUNDS LIVE LOW
Yamaha DTX Drum Kit System	£GREAT DEAL
Yamaha MDF2	£249
Yamaha RY20	£279
Yamaha RY8	£159
Yamaha QY22 Plus free video manual worth £25	£299
Yamaha QY700 Massive Spec New Sequencer/Module	£CALL

Mics & Radio Systems

AKG D65S	£39
AKG C1000S	£179
AKG C3000	£279
Audix AX-OM3X5	£99
Beyer TGX40	£137
Beyer TGX60	£175
Beyer TGX80	£189
Beyer M300	£89
Beyer S150G Guitar System	£SOUNDS LIVE LOW
Beyer S150H Mic System	£SOUNDS LIVE LOW
Beyer S250H Mic System	£SOUNDS LIVE LOW
Beyer Boom Mike Standds Completely Crazy Price	£35
Quicklock Boom Mike Stands Crazy Price	£29
Rode HT2	£CALL
Sennheiser MD504 Amazing New Bass Drum Mike	£89
Sennheiser 1051 Diversity system	£399
Shure SM58	£CALL
Shure ETV/SBS	£LOW
Shure ETV/SBD	£LOW
Yamaha MZ203BE RRP £225 Sounds Live Price	£95
Yamaha MZ106S RRP £115 Sounds Live Price	£49

'SHURE, BEYER, SENNHEISER, AKG, MIKES AND HEADPHONES, ALL ON GREAT DEALS'

Second hand, Ex Demo & Some New Bargains

Akai S2000	£879
Allesis ADATXT	£1899
Alesis QS6	£599
Alesis QSR	£649
Alesis DMS Drum Module	£369
Emu Orbit	£699
Emu ESI32+SCSI	£859
Emu Performance Plus	£179
Ensoniq ASR10 Keyboard With SCSI	£1499
Ensoniq ASR10 Rack	£1399
Ensoniq MR Rack	£799
Ensoniq DP PRO	£799
Fostex D80	£1199
Fostex X26	£99
Kawai Z1000	£1099
Kawai K5000S	£1399
Korg X5	£429
Korg I55	£659
Korg Trinity Std	£999
Korg Prophecy	£649
Korg N364	£859
Kurzweil K250R	£2299
Lexicon MPX1	£899
Lexicon Reflex	£289
Novation Bass Station Rack	£325
Roland D10 Synth	£269
Roland U110 sample player module	£169
Yamaha VL7 Virtual Synthesis	was £3999 CRAZY LOW PRICE £869
Yamaha VL70M	£399
Yamaha RY30	£179
Yamaha RY20	£179
Yamaha P150	£1159
Yamaha P300 Piano	£799
Yamaha MT50	£269
Yamaha MT4X	£379
Yamaha QS300	£699
Yamaha W7	£849
Yamaha Promix 01	£1289
Yamaha CS1X	£499
Yamaha P50M	£249
Yamaha MD4	£689
Yamaha QY700	£689
Yamaha MT8X MkII	£725
Yamaha MT8X Mk1	£499
Yamaha REV500	£299
Yamaha REV100	£179
Yamaha TG500	£425
Yamaha PSR520	£399
Yamaha PSR320	£169
Yamaha PSR220	£149
Yamaha PSR230	£153
Yamaha PSR78	£89
Yamaha PSR73	£59
Yamaha PSR4000	£969

Special PA & Mixer Deals

Soundtracs T... Mini 24-4-2 Mixer	£1450
Peavey SPL MB2 FM1 Bins, Mids & Horns(B/W loaded) The Lot	£600
Studiomaster Vision 8/2 700w Powered mixer + FX	£799
Studiomaster Diamond 8/2 Mixer	£149
Studiomaster Diamond 16/2 Mixer	£285
Studiomaster Powerhouse 8/2 600w powered mixer + FX	£639
Yamaha MX200 8/2 Mixer 3 band EQ, 4 Aux	£299
Yamaha MX200 24/2 Mixer 3 band EQ 4 Aux	£895
Mackie 1202 VLZ mixer	£289
Mackie 1402 VLZ mixer	£399
Fender LX 1506 150W PA Amp with Reverb	£259
Bose 802 speakers plus equaliser	£599
Turbosound impact 120 speakers 12" + cone tweeter	£899
Turbosound impact 180 bass cabs 18" driver + Xover	£999
Celestion SR1 full range compact speakers + controller	£849
Celestion Road 2x15+Horn Mega full range speakers	£950
Celestion CR122 250w 12"+Horn speakers	£349
JBL TR225 2x15" + Horn Full range speakers	£789
JBL MR925 1x15" + Horn Full range speakers	£599
Allen & Heath GL2000 16 channel	£1060
Torque 100w 1x12" powered wedge monitor	£189
Fender LX1504 150w P.A. Amp with reverb	£239
Studiomaster 1200D 600w/600w Power Amp	£519
Electrovoice SX200 300w 1x12" + horn speakers	£899
Electrovoice SB120 300w 1x12" Bass speakers	£750
Alesis Microverb III multi effects 19" rack mount	£99
Yamaha REV100 multi effects 19" rack mount	£185
L.A. Audio GCx2 stereo compressor	£155
Harfield 1000w stereo poweramp	£399
Peavey XR600 300w PA amplifier	£225
GM Mini mixer 8 channel + built in FX	£249
GM 16 channel 500w powered mixer + 2FX built in	£550
EV stage 200 300watt speakers	£650
PACKAGES	
Studiomaster 1200 Amp + Turbosound impact 120 Spkrs	£1299
PSL 1200 watt amp +Celestion Road 15" speakers	£1199
Studiomaster 1200D Amp + EV SX200 speakers	£1669
Studiomaster 1200 Amp + JBL TR225 2x15" Spkrs	£1369
Studiomaster Powerhouse 600w powered mixer + FX and Celestion CR122 250w speakers	£1019
Fender 150w P.A. Amp+Rev and Fender 1x12" speakers	£519
Studiomaster Visión 700w powered mixer + JBL TR125 15" speakers	£1450
Studiomaster Diamond 8/2 mixer plus 700D Power Amp	£549

Power Amps

C. Audio RA3001 625w/625w 4 ohms	£BEST DEAL
C. Audio RA4001 1000w/1000w 4 ohms	£BEST DEAL
Crown Complete Range In Stock	£LOWEST PRICES
Studiomaster 700D 350w/350w 4 ohms	£399
Studiomaster 1200D 600w 4 ohms	£599
Torque T800M 400w/400w 4 ohms	£425
Yamaha P3500 620w/620w 4 ohms	£LOW

System Enhancers

BBE 462 Stereo Maximiser	£279
BBE 362 Stereo Maximiser	£199
Behringer Dualflex Stereo	£119
Behringer Ultrafex Stereo	£199
SPL Stereo Maximiser	£BEST DEAL

27-29 DEAN STREET, NEWCASTLE ON TYNE NE1 1PQ

TEL: 0191 230 3422 FAX: 0191 222 1663

SURF SOUNDSLIVE: E-MAIL. 100[illegible]22.3716 @ compuserve.com

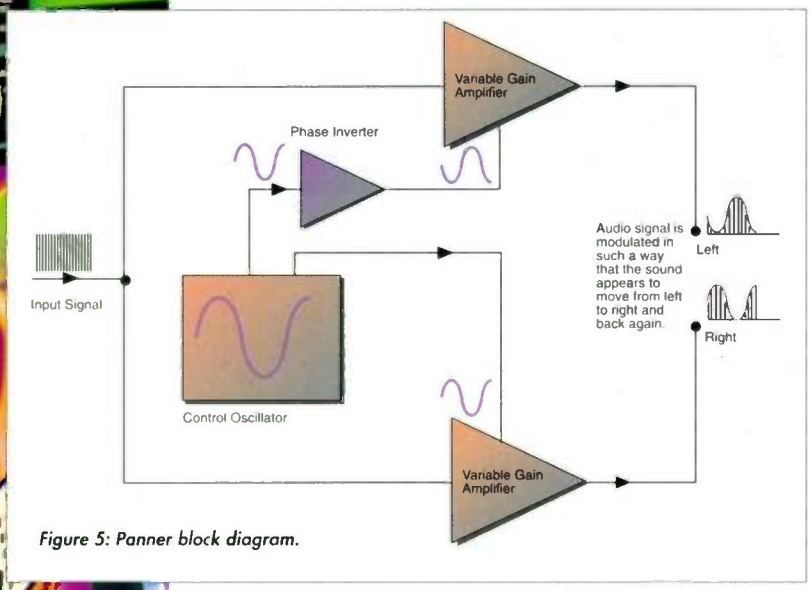


Figure 5: Panner block diagram.

adding delay to shifted sounds, and for feeding the shifted output back to the input so that it will be shifted again. This can be useful as a special effect to create fixed-step arpeggios.

Such a basic pitch-shifter is of little use in creating true musical harmonies, because the only useful fixed intervals tend to be octaves and fifths. However, some models now include intelligent pitch-shifting, where the user defines a musical scale, and the device automatically picks the correct harmonic interval. This is done by tracking the pitch of the input signal (which must be monophonic for clean tracking), then applying the correct amount of shift to produce the desired harmony note. The musical scales may either be presets or user-programmable.

Though 'formant-corrected' pitch-shifting is not yet available in typical multi-effects units, it can only be a matter of time before it becomes standard issue. With a conventional pitch-shifter, moving the pitch up creates a Mickey Mouse effect, because not only does the musical note change, but the timbre of the sound also changes, just as though you were speeding up a tape. But when a real singer sings a new note, certain components of the sound actually stay the same — their throat and chest cavity resonances remain constant. Using formant-corrected pitch-shifting, it should be possible to move notes to any pitch but leave them sounding natural. Alternatively, you could deliberately move the formants to make a male voice sound female or vice versa.

This is going to be a hugely important area in the not-too-distant future, and when something affordable arrives, we'll be the first to let you know! At the moment, the only affordable formant-corrected pitch-shifters are built into hard disk recording systems and require off-line processing, though Digitech's Vocalist range of devices, designed by IVL, employs a couple of clever techniques to help make the shifted sound seem more natural.

Next month I'll be looking at the more common dynamics and EQ-based processing blocks before focusing on how the different blocks work together.

SOS

STUDIOLOGIC MAIN DEALERS

Altrincham: DAWSONS - 0161 928 3302

Barnet: DIGITAL VILLAGE - 0181 440 3440

Birmingham: MUSICAL EXCHANGES - 0121236 7544

Bournemouth: Eddie Moors - 01202 395135

Brighton: GUITAR & AMP SHOP - 01273 676835

Bristol: EMIS - 0117 956 1855

Bristol: X MUSIC - 0117 973 4734

Burnley: DAWSONS - 01282 25829

Cambridge: MUSIC VILLAGE - 01223 316091

Cardiff: CRANES - 01222 398215

Catford: ERIC LYNDSEY - 0181 690 1848

Chester: DAWSONS - 01244 348606

Cockfosters: MAKE MUSIC - 0181 441 1050

Colchester: TECH MATE - 01206 793355

Croydon: DIGITAL VILLAGE - 0181 407 8444

Deal: MAKE MUSIC - 01304 375028

Dublin: CONTROL TECHNIQUES - 00 353 14545400

Glasgow: CC MUSIC - 0141 339 0566

Glasgow: SOUND CONTROL - 0141 204 0322

Guildford: ANDERTONS - 01483 38212

Hayes: MAKE MUSIC - 0181 756 1079

Hounslow: PROJECT MUSIC - 0181 570 4444

Ipswich: MARK'S MUSIC - 01473 254150

Leicester: INTASOUND - 0116 254 5456

London: GIGSOUNDS - 0181 769 5681

London: SUTEKINA - 0171 240 7696

London: TURNKEY - 0171 379 5148

London: X MUSIC - 0171 349 9444

Newcastle: SOUNDS LIVE - 0191 230 3422

Nottingham: MILLENIUM - 0115 955 2200

Nottingham: MUSIC INN - 01159 784403

Romford: MUSIC VILLAGE - 0181 598 9955

St. Helens: DAWSONS - 01744 30424

Stockport: DAWSONS - 0161 477 1210

Wakefield: KGM - 01924 371766

Ware: MAKE MUSIC - 01920 830195

Warrington: DAWSONS - 01925 245422

Watford: ACTIVE SOUND - 01923 246282

Wigan: DAWSONS - 01924 44680

For further dealer information contact:
ARBITER GROUP PLC
Wilberforce Rd. London, NW9 6AX
Tel: 0181 202 1199
Fax: 0181 202 7076
Web: http://www.demon.co.uk/arbiter

Feeling Even Better...

Reporting on our best– selling Studio 900, **Sound on Sound** magazine said the action was "the closest thing to a real piano yet".

As good as it was, our all new **STUDIOLOGIC** series take the modern keyboard to a new level of playability and dynamic response.

It's all down to our new hammer; redesigned lighter but longer to distribute mass exactly as it is in an acoustic piano hammer. It's increased travel through a wider arc results in unprecedented control through the spectrum from *ppp* to *fff* whilst the dynamic resistance (or inertia) it provides, makes for a truly sympathetic and responsive instrument, playable for hours without the fatigue.

What's more, the new **STUDIOLOGIC** range includes a host of new features as a direct result of feedback from professional users worldwide.

Surveys show our Studio series out–sold all the other weighted motherboard brands combined - First reaction to the new **STUDIOLOGICS** feels even better.

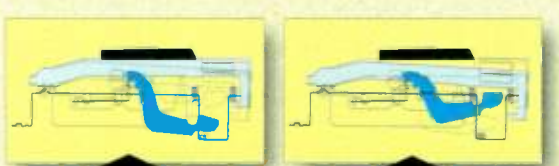
• 88 weighted keys with STUDIOLOGIC weighted hammer-action • velocity sensitive with aftertouch • Backlit display • 4 sliders, 64 memories • 4 MIDI ins/outs • 2 programmable control wheels

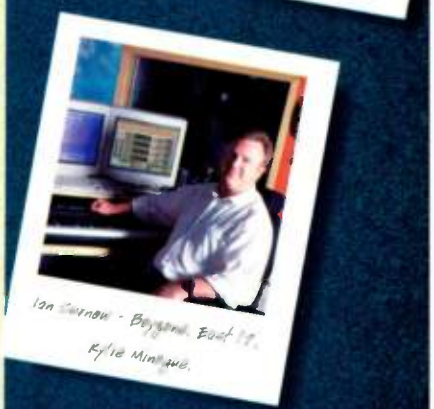
• 88 weighted keys with STUDIOLOGIC weighted hammer-action • velocity sensitive with aftertouch • pitch/mod wheels • 4 zone, 2 assignable sliders, 32 memories • 2 MIDI outputs 1 MIDI in

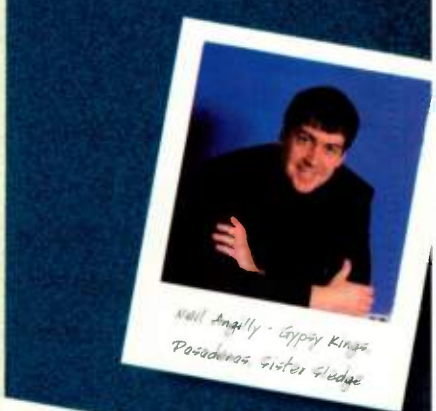
• 88 weighted keys with STUDIOLOGIC weighted hammer-action • velocity sensitive with aftertouch • pitch-bend wheel and modulation wheel • 4 zones for splits and programmable layers

• 76 weighted keys with STUDIOLOGIC piano style • velocity sensitive with aftertouch • pitch-bend wheel and modulation wheel • 3 zones for splits and programmable layers

• 81 non-weighted keys, synth type • velocity sensitive with aftertouch • pitch-bend wheel and modulation wheel • 2 zones for splits and programmable layers







Distributed exclusively by ARBITER GROUP PLC

Wilberforce Rd. London NW9 6AX Tel: 0181 202 1199 Fax: 0181 202 7076 Web: http://www.demon.co.uk/arbiter

the m corporation

DIFFERENT CUSTOMERS, SAME SERVICE

Although our customers include many professional producers, Artists, Studios and record companies, we offer the same quality of service to everyone. This claim is supported by the fact that we win more new customers from recommendations than all of our advertising put together.

INSTALLATION & TRAINING

We employ specialist staff to advise, design, install and train. We have experience of many successful, major installations.

EXPORT DIVISION

Join our many customers in Europe, Africa, Asia and the USA. We will arrange documentation and shipping anywhere in the world.

RECORDING SERVICES

As well as supplying equipment, we also use it. Recording, editing, mastering and CD cutting are all available in house.

EDUCATIONAL DISCOUNT

We supply a great many educational customers with everything from DAT tapes to complete studio design. Call us to register on our educational mailing list and receive limited offers and our regular newsletter.

MANY WAYS TO PAY

Choose whichever option best suits your needs, we accept Cash, Cheque, Bankers Draft, Credit Card, Switch, or we are more than happy to arrange Personal Finance, Leasehire or a free 30 Day Credit Account

TRY BEFORE YOU BUY

Some equipment is difficult to appraise without your other equipment, and your own environment, For certain items we will give you a 7 day trial, no obligation, free of charge!

HARD DISK RECORDING

If you're thinking of investing in a Digidesign **Pro Tools** system then you *need* to speak to us. No one knows more about ProTools than us on a day-to-day basis, or how to integrate it into existing systems

Pro Tools IV Now 24 bit and powermac native ,this is a significant upgrade with new enhanced mixing features and total dynamic automation (inc TDM plug-ins) and built in Audio Suite Program

888 I/O Audio Interface...8 channels of high quality A/D & D/A conversion and 8 channel AES/EBU I/Os.

Mackie Hui Bringing total control to your ProTools and TDM system, this external controller is the interface that we've all been waiting for. Complete with motorised faders, jog shuttle and the ability to control transport functions as well as to adjust DSP parameters in realtime, how have you lived without it?

Get yourself plugged with Focusrite D2, Vocalign, TC Tools, Hyperprism, Waves, Truverb, Qsound, DVerb and the new PCI Expansion Chassis NOW!

Soundscape V2. 8 tracks upwards, real time digital EQ, digital mixing. Expandable up to 128 tracks, Timestretch Option, Removable Drive Option Accelerator card with TDIF and new 8 channel I/O with ADAT interface all available now

We use it, We install it & We support it
A New Software Version and some exceptional new prices .. Call for Details

COMPUTERS

Apple Macs
New PCI range available Call for details
• 9600 • 8600 • 7300 • 4400 • 5260 • 3400

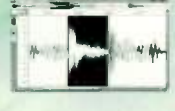
Call now and speak to one of our PC experts - We are able to supply fully configured PCs to suit your requirements as well as advice and technical support on soundcards, upgrades and compatibility

Daystar, Umax and Motorola clones also available ..... Call for details

Ensoniq PARIS Cross platform 128 track 24 bit digital audio workstation with EDS1000 controller and plug-in expandability

Audiowerk8 New PCI card with 8 discrete outputs and 2 analogue inputs and stereo digital I/O

Emagic Logic Audio Mac & PC In stock



EMAGIC

Steinberg Wavelab...professional audio sound processor & database.....**In Stock**
SoundForge 4.0 .....Free demo CD available, incredible features including paragraphic eq, sync support for record & playback, multilevel undo/redo & loads more! .....Call now for your free CD!

Opcode Studiovision for PC, **Cubase V3 VST**, Lite, Score & Audio for Mac, PC & Atari

Pinnacle... Incredible plug and play soundcard, Kurzweil sound engine, up to 48Mb of sample RAM

SYNCS & INTERFACES

NOW IN STOCK!

Also Introducing the
MIDIExpress XT...CALL TODAY

Mark of the Unicorn Miditime Piece AV
Features all the best of the Midi Timepiece II plus a host of sync facilities including **Digidesign Superclock, ADAT sync and Video Genlock**
Call for more details of this and Digital Timepiece

• BRC • CUEPOINT • PPS 2 • PPS 100 • ACI • AI2 • SMART SYNC • VIDEO SYNCMAN • MIDIMAN • OPCODE STUDIO 64 • OPCODE 8 PORT SE • SYNCMAN • DATASYNC II • DATAMASTER • IFYOU NEED A SYNC, THEN YOU NEED US!

0115 947 4070

WRH

The M Corporation
Midlands Regional Office
Alfred Street North
Nottingham NG3 1AA

DEDICATED HARD DISK

Fostex D90/D80. Simultaneous 8 track recording & playback utilising IDE removable, caddy held hard disks

Fostex D160. 16 bit, CD quality format, 16 track recording & playback with ADAT digital interface, 8 ghost tracks on IDE removable, caddy held hard disks,

Fostex DMT8 VL..tapeless multitrack with built in IDE drive and mixing facilities, parametric EQ, digital outputs, cut & paste editing, built in MIDI time sync.....available for demonstration

Roland VS880...8 track HD recording, 64 virtual tracks, 6 simultaneous recording, 32, 44.1 & 48kHz record rates, 14 mix channels, 8 bus routing & loads more! .....CALL TODAY!

Akai DR8 and DR16...Superb 18-bit AD/DA conversion. Jog shuttle. locate points. Extensive sync options. Optional EQ board, ADAT I/F and much more! **Call for more information**

AKAI DD8 Incredible versatile addition to the range which can be used with the powerful **DL1500 controller**

Yamaha MD4..The first of the Minidisk multitrack recorders benefiting from instant access and no more tape hiss or wow and flutter

- *Can't make up your mind?*
- *Call one of our experts for some free, friendly advice.*
- *We look forward to your call.*

Tascam's 564 Digital Portastudio ..... Minidisk multitrack Non- destructive bouncing , powerful edit features & 3 band EQ

Sony's MDMX4 offers recording at 44.1KHz, 37 mins on a 74 min disc, 6 channels, 2 aux, a s:n ratio of more than 94dB and **5 FREE minidisks**

MIXING CONSOLES

Yamaha O2R...On board automation of all digital mixing parameters, 40 input channels & 2 full featured stereo internal effects returns. 4 band fully parametric digital EQ (automatable) on all channels. **Call to arrange your demo**

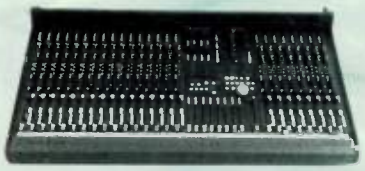
Yamaha **02R**
.....**O3D**
.....**PROMIX01**

Yamaha 03D...Yamaha 's latest, 26:8:2, addition to their digital mixer range offers 02R functionality for less than £3000, incredible surround sound effect, **Call one of our pro specialists for full details, see it first at The M Corporation.**

Mackie Digital 8 Buss We are now taking orders for this outstanding 48 input desk with motorized faders, dynamic automation, 4 band para' EQ and 32 bit internal processing **Call for more details**

Soundtracs Topaz, Meter bridge, stand & loom
24 channel £1899
32 channel £2499

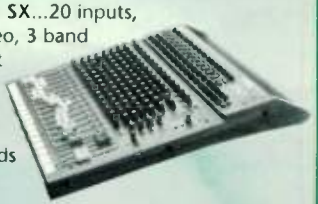
Mackie CR1604 VLZ....four submaster buses, 16 studio grade mic preamps, swept mid EQ, AFL/PFL solo, signal present indicators, and much much more..... All at the UK's lowest Prices



We supply the Soundcraft and Spirit range including the amazing **Ghost** in-line console, with paranormal EQ!

Mackie's 1202 VLZ..at a new lower price! 3 band EQ, balanced XLR outs
Mackie 1402 VLZ.. Phantom powerable mic inputs, Mackie quality pre-amps, 60mmfaders

Studiomaster ... Full range of desks available including some ex-demo and secondhand models.....**Call now**
We are also selling our own studio's Allen & Heath Sigma 32/34 Mixing console as used by Tricky, Bjork & Damon Albarn, one off opportunity! Call for details



New Spirit Folio SX...20 inputs, 12 mono, 4 stereo, 3 band eq, 3 auxs, direct outs on 8 mono channels, 60 dB gain on mic inputs & loads more!

CALL FOR DETAILS OF THE ENTIRE SPIRIT RANGE

Behringer Euro-rack... 8 mono input channels with insert points and direct outputs, 6 stereo input channels,4 aux sends. Now with 4 band EQ on all channels

Behringer Eurodesk is now available with "cybermix" automator

Behringer Eurodesk MX8000....24/8/2, superb EQ, 6 stereo aux returns, 48 channels mixdown

MULTITRACK

Alesis Adat XT.....Industry Standard modular 8 track,.4 times faster, intelligent transport, onboard digital editor with track copy, auto punch, track delay, tape offset, onboard autolocator & loads more! On demo in our studio

Sony PCM800...high quality, digital multitrack, AES/EBU digital I/O, up to 110 minutes continuous recording, demonstrations available

New Tascam DA38.....108 minutes recording time, 44.1Khz & 48Khz sampling rates, balanced & unbalanced analogue inputs, internal digital routing & track bouncing!.....£1949

Tascam DA88.....post production quality, digital linear 8 track, over 100 minutes recording time.
30 day credit account facilities available

CALL NOW AND GET YOUR NAME ON OUR NOTTINGHAM MAILING LIST TO RECEIVE ALL THE BEST OFFERS FIRST
0115 947 4070

The M Corporation
Head Office & Mail Order
The Market Place Ringwood
Hants BH24 1AP

01425 470007

the m corporation

MASTER KYBDS

Call for details of NEW Fatar range

Roland A33 & A90 both available for demo

Kurzweil PC88, 88 note master kybd, 120 internal sounds inc the renowned Kurzweil piano voices, weighted keyboard. Also MX version with extra sounds and FX.. CALL FOR DETAILS

NEW LOW PRICE!

New range of Fatar keyboards available from stock • SL760 - 76 note, weighted • SL880 - 88 note weigthed • SL1100 - 88 note weighted, with LCD • • SL2001 - 88 note weighted, 64 presets, LCD •

DAT

UK'S BIGGEST SUPPLIER

NOW WITH 10 FREE DAT TAPES

Panasonic SV3800.....exceptional sonic quality, multiple digital interfaces, shuttle search & single program play, limited offer with free tapes.....**CALL**

Tascam DA20...SCMS defeat function, 2 heads, 44.1& 48KHz sampling rates

DAT TAPES ALWAYS IN STOCK

Tascam DA30 MKII.....the price has never been so low! 44.1, jog & shuttle wheel, balanced I/O, AES & SPDIF.....One of our best selling units

Tascam DAP1, Fostex D5 & D15 always in stock

SPECIAL DEAL ON NEUMANN M149 CALL FOR DETAILS

Sony Dat players....we have the largest selection of Dat machines including the new **Sony D8** portable and the **DTC A6**

Call our team for the best prices and full technical information

Sony Mini Disk, 2 track less than £300!

DTC A6 £599

Philips DCC players in stock . Cassette recorders available for mastering and realtime duplication

SYNTHESIZERS

Roland JP8000.. New Powerful "Vintage synth" featuring Roland's classic analogue modelling in the digital domain.. Such fun that we're looking for any excuse to demo it

Roland .MC303 vintage groove box! **SC88 Pro, XP50, XP10 & XP80**...CALL FOR THE BEST UK DEAL

Roland JV2080.. New powerful, expandable synth module with 3 independent FX sets and 8 expansion slots!

CALL FOR MORE DETAILS

Roland JV1080.. We can now offer the 'Industry standard' expandable module at a **NEW LOW PRICE**

Yamaha VL70m..... Stunning Physical modelling synthesis. Realistic brass, wind and ethnic sounds at your fingertips

Version 2 S/W now available

Emu Orbit and launch pad...Dance module with dedicated MIDI control, E4 filters, over 600 samples, 32 note voice polyphony, 512 presets, 16 part multitimbral

Emu Planet Phatt...New 640 presets, 32 note polyphony, MIDI synced LFOs, 100drum loops

Oberheim OBMX...analogue synthesizer front panel means instant gratification!

MICS

Rode NT2....professional condenser mic, gold plated diaphragm, 10dB pad & bass roll off, Pro studio quality for less than £500.
Rode Classic....Versatile valve mic in an aluminium flight case
NEW **Rode NT1**.. cut down version of the acclaimed NT2.. Call to arrange a demo NOW

Available on our 7 day loan Service

Industry standard AKG C3000 & C1000 in stock and available for over night delivery to anywhere in the UK.
New Low Price!

Microphones available from Neumann, Sennheiser, Beyer, Shure, Earthworks, Audio technica, Bruel & Kjaer and many others

Call to discuss your requirements

Trinity Plus ONLY £1699

We stock the entire **Korg** range including the amazing **Prophecy** and **Trinity**.
WE HAVE, FOR A LIMITED PERIOD ONLY, QUANTITIES OF TRINITY PLUS' AT AN AMAZING £1699

Korg N5DR..New module packed with sounds, acts as a Mac/PC interface, Call to arrange a demo

NOW AN1X ALSO IN STOCK

Yamaha AN1X....Analogue-style synth sounds and control. Arpeggiator, 16 step sequencer, 4 track parameter recorder, programmable effects and 3 band EQ for each voice **CS1X also available**

Novation Drum Station.classic TR808 & TR909 sounds, extensive MIDI spec, up to 12 note polyphony, 4 assign banks.....**LOWEST UK PRICE**
New Superbasstation and drumstation fresh from Frankfurt.....Call for more information

New N range now in stock

Korg N264 and N364..loads of features! CALL!!

The M Corporation has just secured an amazing Akai deal....Akai **SG01V, SG01P & SG01K** all available at an incredible £229! But hurry, they're selling fast!

CDR

CUSTOM CD SYSTEMS TO YOUR NEED

Marantz CDR 620/615...multi functional,top quality A/D and D/A converters, sample rate converter and fully automatic indexing from CD, DAT, & DCC sources
New **Yamaha 2x6 & 4x6 CD cutters** .....**CALL**
• **Pinnacle** • **Yamaha** • **Philips** • **Red Roaster** • **Micronet** • **Ricoh** • **Sony** •**Multi-CD Cutters**

DRIVES

Syquest Flyer 230 Mb inc cartridge, compatible with just about everything!
Syjet 1.5Gb removable for less than £500

FREE FITTING OF SIMMS ON THE PREMISES

• **EZ Drives** • **Syjet** • **Zip Drives** • **Hard Drives** • **Jaz Drives** • **AV Drives** • **Quantum** • **Seagate** •**Barracuda** • **Western digital** • **IBM** •
We can supply the compatible drive for your system...phone today for the best advice around!

0115 947 4070

The M Corporation
Midlands Regional Office
Alfred Street North
Nottingham NG3 1AA

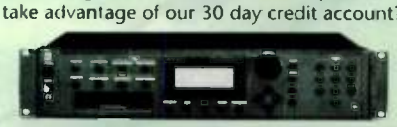
SAMPLERS

Kurzweil K2500R..48 note polyphony, 192 oscillators, dual SCSI ports, 32 track sequencer, digital I/O, up to 128Mb RAM, optional digital multitrack I/F & sampling.

Kurzweil K2500.. 76 and 88 note version Keyboard versions of the above also available from stock

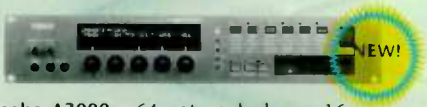
Emu E4K Kybd.. In Stock

We can arrange finance on all EMU samplers, or why not take advantage of our 30 day credit account?



Emu ESI32...32 voice polyphony, digital filters, time compression, EIV compatible, With 8Mb expansion

We also stock all your other favourites such as Roland's S760 and Yamaha's SU10 along with memory and other upgrades ... Call US first



Yamaha A3000... 64 note polyphony, 16 bit, upgradable to 128Mb, In built effects inc Real-time time stretch, 4 band EQ, easy-edit architecture, digital input option, stereo output and assignable outputs... Call for more details

K2000s and K2000Rs available from stock fully upgradable with RAM, P-RAM, ROM 'Blocks' and sample options to your requirements on site
K2000R with VX emulator S/W.....Only £1699

We offer the **entire Akai** range of *drive options* all *upgrade options*, the best *service*, the best *support* the *lowest prices* & all upgrades done in house. Call our product specialist now!

AKAI MPC2000 Simply one of the most creative pieces of equipment that you can put in your studio! Sequencer, Up to 6 minutes of sampling. 16 pads make it easy to add sublety to your programming
Call to arrange a demonstration
Akai S20 .....budget sampler CALL
• S2000 • S3000 • S3200 •

For a **limited period** only we are, exclusively, able to offer **CD3000XLs** loaded with **24Mb** of RAM for less than £1900.00 inc VAT

Hard drives and Simms available from stock and fitted on the premises Free of Charge

NEW & USED

CALL NOW & GET ON OUR HEAD OFFICE MAILING LIST TO SEE ALL THE BEST OFFERS FIRST
01425 470007

Allen & Heath Sigma 32/24C
Samson MPL2242.....£429
Roland Jupiter 6.....£699
Cakewalk Home Studio.....£79
Roland E660 S/Hand.....£399
Akai S1000PB.....£499
Allen & Heath (ex demo).....£599
Alesis 3630.....£149
Lexicon Alex. £249
Sony 7010 . . . . . £1999
486 DX4 PC w/ KB and Mon, Goldstar midi KB, Roland daughter board,Tahiti, Cubasis audio £1199

AMPS

NEW LOW PRICE!

Samson Servo 500...rack mount power amp (3 space) designed for studio & live use, 250 watts per channel @ 1kHz, 4 Ohms
Samson Servo 240 .....Ideal for near field monitors and now at a reduced price!

C Audio RA series..CALL NOW

Alesis Matica 900s available at sub-£400 prices! For a limited period only..... CALL NOW

Chameleon range always in available, phone today and arrange your personal demo

OUTBOARD

NEW RANGE IN STOCK NOW!

Joe Meek's acclaimed range of outboard....
SC2.....Compressor
VC1.....Studio Channel
VC2.....Tube Channel
VC4.....Enhancer
VC3.....Pro Channel

UK'S LEADING DEALER!

The M Corporation are one of the leading **Behringer** suppliers. Call us now for a free brochure on the entire range

The **Focusrite Green** in stock & **Red** range available. **Dual Mic Pre, Focus EQ & Voicebox** available for overnight delivery.....CALL NOW

We stock the entire Lexicon range including the Alex, Reflex, PCM80, PCM90 & MPX-1 Lexicon MXP-1... Almost infinitely editable FX with sweepable resonant filters

We stock the amazing **T C Electronics M5000, M2000 Wizard & Finalizer**...Call Us Now

Digitech Studio Vocalist.....£LOW
Digitech Studio Quad.....IN STOCK

DBX New Blue range..the names speak for themselves
160s Compressor . . . . . .**Blue Velvet**
786 Mic Pre . . . . . .**Electric Blue**
704 A/D convertor . . . . . .**True Blue**

NEW **Yamaha Pro R3**...all the effects processing of the O2R in one rack.....IN STOCK
Yamaha REV500 . . New Dedicated reverb unit for under £400

Alesis Midiverb IV, 18 bit multi effects for less than £300, another 'M' Best Seller!
Alesis Microverb IV.....IN STOCK
Alesis Q2.....£Call

Boss SX700... Quality effects on a budget.. 18 bit AD and DA conversion. 44.1KHz. True stereo. Featuring Roland's RSS spatial expansion

Ensoniq DP2 . . . . . .£LOW
Ensoniq DP4+ . . . . . .£IN STOCK
DBX 363X . . . . . .£LOW
DBX 150X, 2 channel . . . . . .£IN STOCK

Full Drawmer range available including the **1960** "Industry Standard" valve compressor and **1961 EQ**

MONITORS

"m" BEST SELLER

Soundcraft **Absolute 2s**....still one of our best selling monitor systems, **call now** for the very best deal across the UK. Also check out our prices on the **Absolute Zeros** and **Absolute 4ps**

Alesis Monitor 1 & Monitor 2's, Guaranteed best prices in the UK

Spendor and Tannoy monitors in stock and available for demo

PMC TB1S.... The near field monitor market has a new contender, PMC's new TB1S which feature extended low frequency performance, low colouration and consistent balance at all level....**CALL FOR DETAILS**

Silver 5L (pair).....£735
Silver Bass Augmentors (BH) (pair)....£675 Call for the prices and spec of the 10L's

We have the stunning **Genelec 1029s** in stock and available for demo as well as the **1030s, 1031As** and the **1092 subwoofer** system. Call us now to discuss your particular requirements or to arrange a personal audition.

SOS raved about these compact monitors Now you can hear the new **Dynaudio BM5s** and **BM10s BM15s** in one of our studios

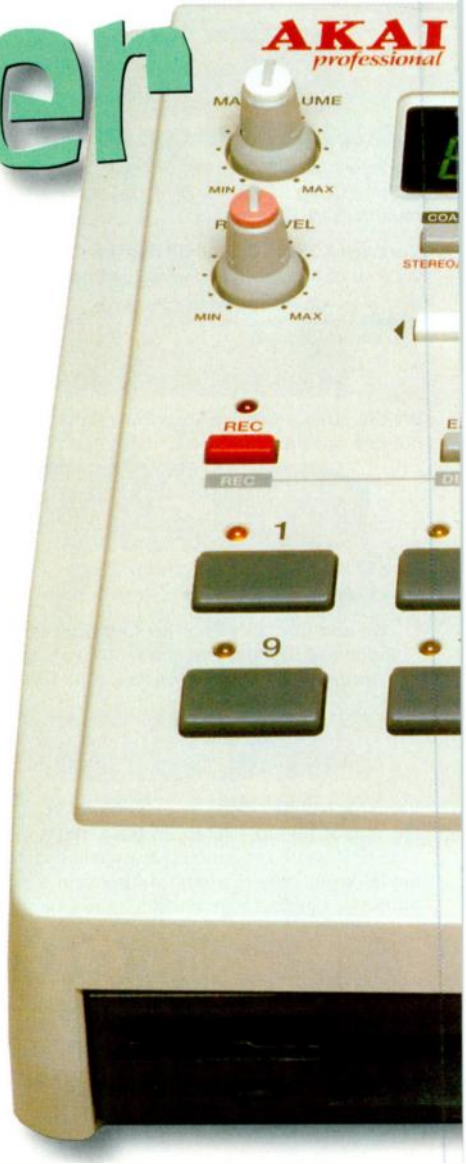
The M Corporation
Head Office & Mail Order
The Market Place Ringwood
Hants BH24 1AP

01425 470007

Super Looper

AKAI S20 MIDI DIGITAL PHRASE SAMPLER

The release of the S20 means that £500 now buys you into the prestigious Akai name — and gets you a supremely easy-to-use sampler which will perform both on stage and in the studio. CHRIS CARTER goes completely loopy...



In an interview some years ago I was asked what I thought was the most essential piece of gear in my line of work, and without a second thought I said "a sampler". "Ahh", said the interviewer, "but aren't they instruments of the devil, don't they put musicians out of work, and wasn't a sampler responsible for that awful 'NNNNineteen' record?". OK guv, it's a fair cop. I admit everything, except the bit about 'NNNNineteen'.

For the hard-up musician (aren't we all?) who can't afford banks of keyboards, a sampler is invaluable — with a decent sample library it can take on the guise of almost any instrument or sound, so I still stand by the answer I gave then. Give me a sampler, an effects unit and a DAT machine, and I'll give you a CD, a gig, or both. Death to the Luddites: long live the RAM chip!

S01+R16=S20

Good-quality samplers, on the whole, have never been what you might call affordable. Until now, that is, when along come Akai with an expandable, 8-voice, 16-bit stereo sampler, with a few novel features (including a basic real-time sequencer and a useful automatic bpm-calculation mode), for only £499. The S20 is essentially a repackaged hybrid of the original mono Akai S01 (reviewed in *SOS* November 1992), with some added Remix 16 (Akai's DJ sampler). It has the typical Akai look, unlike the Remix 16, and is compact but chunky, with a footprint a little smaller than the magazine you're holding.

Editing is achieved with the minimalist edit matrix approach first seen on the aforementioned S01. This arrangement uses two rows of LEDs, with printed columns showing which mode is current, and four cursor buttons to navigate around the matrix. There's a large 4-digit display, with + and - buttons for entering parameters, and a coarse button to speed things up. A further eight buttons (Rec, Erase, Hold/Loop, Stop, All Stop, Reverse, Seq, Edit) cover the real-time playback, record and sequencer functions, and there's a large Tap button for repeat triggering of samples, or for entering the bpm of a sample loop manually in Beat mode (more on this later). The Reverse button, by the way, allows you to instantly and temporarily reverse a loop or sample. Finally, 16 Bank buttons (unfortunately not velocity sensitive) are used to trigger the samples. The stereo inputs and outputs are on line-level phono sockets and there's a quarter-inch headphone socket. Power is supplied by a small 12V DC unit — not a wall-wart type.

Before I go into too much detail about the S20, I should briefly explain a little about Akai's use of the term Bank. Each of the 16 Banks in the S20 contains one sample and a VCA — that's it. If you've used other Akai S-series samplers before, these Banks are the equivalent of a single keygroup, containing a single stereo or mono sample. This begs the question: if Banks only contain one sample, why didn't Akai call them samples instead of Banks? Anyway, from now on, for Bank read sample.

THREE STEPS TO SAMPLING

Out of the box the S20 is loaded with 1Mb of RAM, enough for only 14 seconds of mono sampling at 32kHz, but it can accept an additional 4Mb or 16Mb SIMM. With 17Mb installed, the sampling time jumps up to 131 seconds in stereo at 32kHz. Memory is dynamically allocated, so any Bank can use as little or as much as it needs — in theory you could have a single stereo loop over two minutes long at 32kHz, or even a sample over 17 minutes long in mono at 4kHz.

Sampling on the S20 is a piece of cake, and with its default settings it offers one of the simplest sampling methods I have ever come across, on any sampler. To sample and play back a stereo

pros & cons

AKAI S20 £499

pros

- Good-quality 16-bit stereo sound.
- Expandable memory.
- Fast, fun and easy to use.
- 16-part multitimbral.
- Simple, logical layout, great for live use.
- Small, well-built and rugged.
- Good price-to-power ratio.

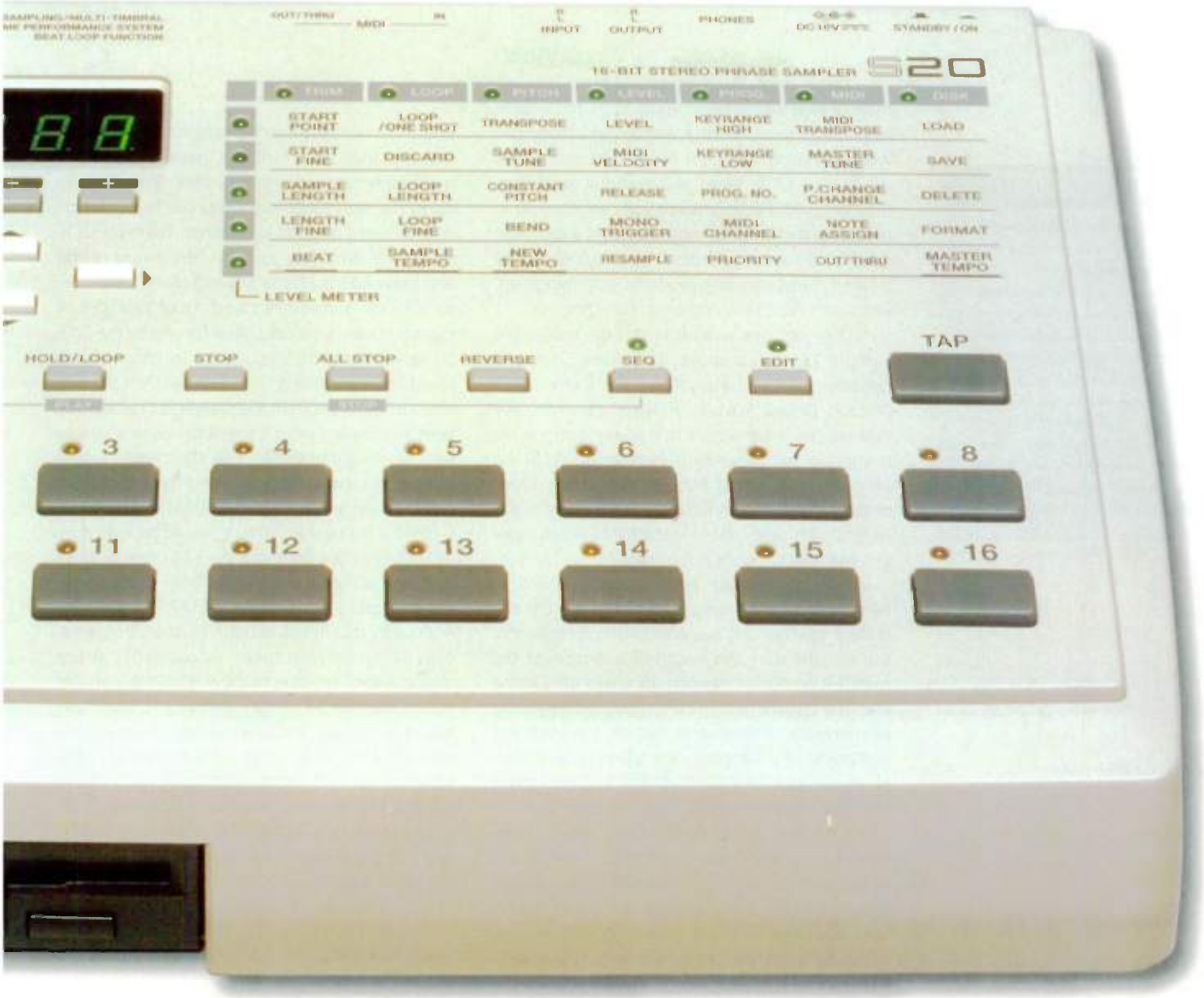
cons

- No playback while sampling, saving or loading.
- The 4-digit display is a bit skimpy.
- No panning of mono samples.
- No ADSR envelope editing.
- No metronome.
- Saving and loading a fully-expanded S20 will mean buying floppies in bulk.

summary

A versatile, quality sampler let down only by the 1Mb basic memory and the 4-digit display. At this sort of price, though, there's little to complain about. If you can live with these limitations, the S20 makes an ideal and reasonably-priced introduction to desktop sampling, and if you're a DJ looking for a fast, easy-to-use looping machine with some useful dance-orientated features, the S20 is a good choice.

SOUND ON SOUND



loop from a cold start involves only three button pushes: no parameters to set, no pages to wade through — just switch on and sample. Here's how.

Assuming you've already connected your sound source, a record deck or CD player, or, indeed, any line-level signal to the S20's inputs, the first thing to do is press the Rec button, which puts the S20 in Record stand-by mode and starts the Rec LED flashing. You can hear the audio signal and see how loud it is on the left-hand row of Edit matrix LEDs, which now act as an input meter. Adjust the audio level (with the red Level knob) and choose whether to sample in mono or stereo. You can also select a sample rate (4kHz, 8kHz, 16kHz or 32kHz) and whether to use auto-triggered sampling. However, to begin sampling at the default settings (32kHz, stereo) just press a Bank button and the Red LED glows steadily to let you know that you are now recording into that Bank. There are two ways to stop sampling, depending on whether the sound is to loop or not. Normally, pressing any button other than a Bank button ends the sampling, and the sample will play back if you press the same Bank button again. However, things get more interesting if you want to sample a loop. To stop while sampling a loop involves hitting the Hold/Loop button at the point where you want the sound to start looping. This seamlessly ends recording and starts playback of the sample, which is now in Loop mode, so you can hear the results immediately. This is a really fast and efficient way of achieving decent loops of any kind.

COMPLETELY LOOPY

Successful looping on any sampler is an art, and that old idiom 'practice makes perfect' is just as true on the S20 as it is on an S3200XL. There is also often a 'knack' involved, and for the first few days of using the S20 I had it. It seemed as if I had magic fingers, because almost every loop I attempted worked first time, no matter what the tempo or style of music. Then I got flu for for a couple of days and nothing would loop properly — it wasn't the fault of the S20: I had acquired a woolly-headed feeling and lost my sense of timing, and the knack of hitting those buttons just right was gone (I feel a lot better now, thank you).

Even though the S20 may be considered a basic sampler, there are enough parameters available to allow you to achieve pretty decent loops, including Sample Start and Length and Loop Length (all with fine and coarse adjustment) ▶

MESSING ABOUT

While researching (for which read messing about) with the S20, I came across something even Akai UK weren't sure about: the S20 supports MIDI Sample Dump Standard — after a fashion. I managed to transfer samples to the S20 from an Akai S3000XL and from *Cubase* — a little slowly, but it worked. Strangely, the S20 wouldn't accept MIDI SDS files from Passport's *Alchemy* or Steinberg's *ReCycle*, and I couldn't persuade it to work in reverse at all.

Akai couldn't help, but they did say that some older Akai S01 editors and mixer maps may work with the S20, as it has a lot in common with the earlier machine.

CD INCLUDED

Included with the S20 are four HD disks of various loops and samples to get you started. In addition, with the UK package you get a free sample CD compiled by AMG, including hundreds of samples and loops from a dozen or so of the best AMG CD releases. There is so much stuff on this CD that it could take you a week to get through it all — everything from dub to disco, SFX, vocals, beats, bops and blaps, licks and loops, and all with listed bpms — icing on an already fine cake.

but, because of the simplistic 4-digit display, manual loop adjustment on the S20 can be quite laborious. It's well worth trying to get a loop right while sampling, even if it means attempting the job two or three times. Achieving a good loop through careful timing means you can move on to grabbing and looping more samples a lot more quickly, because you don't need to get side-tracked into Loop Edit mode to tidy things up, which can be a slow and frustrating process.

Other options available in Edit mode are Sample Tune, Transpose, Loop/One Shot and Release. Unfortunately there isn't any ADSR (Attack, Decay, Sustain, Release) control, only Release, so there aren't that many options for shaping a sample once it's inside the S20. An annoying quirk is that if you attempt to transpose or tune a sample that has been adjusted with the Beat Loop function (about which I'll tell you more in a moment), it goes out of sync.

Although sample editing on the S20 is hampered by the meagre display, there are still quite a few options available. In Trim mode you can edit the start and length of a sample, to the minutest amount if needed, by using the Coarse and Fine parameters. Discard mode allows you to permanently remove areas outside the start and end points of a sample — the bits you can't hear. It's always good practice to do this, as it frees space and makes the most of the available memory.

A sub-page of this mode is Copy, which allows you to copy one bank to another. Copy is also useful for making temporary backups of samples, prior to editing, and is a lot quicker than backing up sounds to disk. There are two other sub-pages here: Reverse, which does what it says; and Initialise, which erases a sample and resets the parameters in the current Bank. Other edit parameters available are: Sample Level; Fine Tuning; Constant Pitch; MIDI Velocity Response; MIDI Bend Amount; Mono or Multiple Triggering. There is also a Resample mode, which can progressively downgrade a sample to a lower bandwidth, to conserve memory.

SPECIFICATION

16-bit stereo, 64x oversampling DAC	
SAMPLING RATES:	4kHz, 8kHz, 16kHz, 32kHz
POLYPHONY:	8-note
MULTITIMBRALITY:	16-part
BEAT MODE:	bpm adjustable from 000.1 to 999.9
MEMORY:	1Mb, expandable to 5Mb (with 4Mb SIMM) or 17Mb (with 16Mb SIMM).
SAMPLING TIMES:	
1Mb, 32kHz rate:	7 seconds stereo, 14 seconds mono
1Mb, 16kHz rate:	14 seconds stereo, 28 seconds mono
17Mb, 32kHz rate:	131 seconds stereo, 262 seconds mono
17Mb, 16kHz rate:	262 seconds stereo, 524 seconds mono
REAL-TIME SEQUENCER:	4 tracks, 30,000 notes
FLOPPY DISK DRIVE:	3.5-inch DD/HD
CONNECTORS:	L+R audio in and out (phonos)
	MIDI In and Out (soft Thru).
	Stereo headphones socket.
SIZE:	11.5 inches x 8 inches x 3.25 inches

BEATS WORKING

While I'm on the subject of looping, I should go into that Beat Loop function, because you can't really have one without the other in the S20. By using the Beat parameters you can match loops with different bpms to each other. There isn't any fancy time-stretching going on here — just raising and lowering the playback speed of the sample — so loops can sometimes sound out of tune, but all the adjustments are calculated for you by the S20. To achieve this trick you need to enter a beat count figure (anything from 1 to 64) then the S20 measures the length of the sample, calculates the bpm and displays what it thinks the current sample bpm is, instantaneously. You then enter a new bpm, either manually or by using the Tap button, and the loop is instantly recalculated to that figure — pretty impressive. Well, it would be if it came up with the right bpm, but the S20 often displays a slightly different bpm. A loop at 128bpm, for instance, could be calculated as 127.1 or 128.9 — not out by much, but enough to make things fall out of sync over time. Apparently, these discrepancies are due to how accurately you've edited the sample length: although a loop may sound fine by ear, the S20 may not agree. After a lot of annoying (and unnecessary) loop adjustments and sample editing, it occurred to me that if the S20 insisted on telling me that a loop's speed was 127.1bpm, when I knew for a fact that it was 128, I should set a new tempo for my other loops (which were 120 and 135bpm) of 127.1bpm. Voila! Everything was now in sync, happy, happy, joy, joy... If the bpm needs further adjustment, it's just a matter of changing the Master Tempo setting, which shifts the tempo of all the loops relative to each other while still keeping them in sync.

It's a shame that the manual doesn't explain the Beat Loop function as well as it could (less than one page), considering that it's such a big selling point. Although it isn't foolproof, it's possible to get some impressive results if you are aware of its quirks.

REAL TIME

Although the S20 real-time sequencer spec looks good on paper, with 30,000 notes across four tracks, it's a bit of a mixed bag and is only really useful as a musical scratchpad. Apart from the fact that it only offers Record, Play and Stop controls, if you try to get clever with your paradiddles it tends to throw a wobbly and its timing flies out of the window. The review unit also had a strange tendency to leave some samples muted when All Stop is pressed. The S20 does record the Bank Hold and Reverse functions but it doesn't record the neat repeating effect you get from pressing the Tap button (see 'Totally Tapped' box) and, unfortunately, doesn't receive or transmit MIDI start, stop or clock signals, although the front-panel buttons can be controlled by a MIDI sequencer or keyboard. However, it does

FOSTEX

8 tracks, no compression, SCSI back-up, seamless studio integration.

And all from less than £1,500 inc vat.*

MULTIPLE 16 AND 24 TRACK MACHINE SET-UP
Use a D-90 to control further D-90s and/or D-80s (backwards compatible) all from one remote control, locked to sample accuracy.

So what do you want from an 8 track digital multitrack? Non-compressed CD quality audio with 18/20bit convertors? Simultaneous 8 track recording? Non-linear copy / move paste and erase editing? Varipitch? Removable expandable recording media with up to 1 hour of recording time? Analogue & Digital I/O? Versatile Chase mode?

adat OPTICAL

With the new D-90 you get all of that. And then some. Standard equipment also runs to an ADAT™ Digital Interface for simultaneous 8 channel input and output via optical data I/O - making it easy to transfer existing recordings to and from our non-linear format and connect directly to the new wave digital mixers. Balanced inputs and outputs are via an optional card.

SCSI INTERFACE
For ultra-fast back-up & restore to removable media

And there's a SCSI option for the fast back-up and restore of sessions to removable drives such as SyQuest, MO, Jaz, external hard drive, etc.

Flexible, expandable, easy to interface and loaded with the features you want.

It has to be the new Fostex D-90.

Fostex D-90

Non-Compressed Digital Multitrack

SCV LONDON

Exclusively distributed in the UK by SCV London 6-24 Southgate Road London N1 3JJ. Tel: 0171 923 1892. Fax: 0171 241 3644
email: fostex@scvlondon.co.uk web: http://www.scvlondon.co.uk

All trademarks acknowledged. Price excludes hard drive and SCSI option. E&OE

Also from Fostex...

- 16 track digital multitrack with no compression
- 8 further 'ghost tracks' for additional takes
- ADAT™ Digital Interface (simultaneous 16 channel)
- ±6% pitch control with no loss in audio quality
- Optional LTC Timecode board with Word & Video sync
- SCSI interface as standard for fast back-up of sessions
- Balanced I/O option

D-160
16 Track Digital Multitrack

WRH

transmit MIDI note data, so you can transfer any sequences tried out on the S20 to another sequencer for more sophisticated editing.

MIDI CONTROL

This brings me nicely to using the S20 as a multitimbral sampler module — though Akai don't seem to be as interested in emphasising this aspect of the sampler as they are in promoting it as a DJ tool. Setting up the S20 to receive MIDI on multiple channels is just as easy as everything else on this unit. I managed it without referring to the manual, which can't be said of many samplers. Under MIDI control, the S20 takes on a different personality altogether. For a start, it now responds to velocity and MIDI note numbers (across 10 octaves) on all 16 Banks. Each Bank can receive on different MIDI channels or share the same channel, with the facility to assign samples to specified ranges on a keyboard. So, for instance, with an external sequencer and keyboard connected, on MIDI channel 1 you could have a sample (not a loop) playing a bass line in the lower octaves and another sample playing a melody higher up, with loops and percussion samples playing on other MIDI channels. Important samples, such as drum loops, can be given higher priority over others, so that there aren't any embarrassing gaps if you exceed the S20's 8-note polyphony.

KILLER HURTS

At the 32kHz sampling rate the S20 sounds pretty damn good. I loaded some Akai S3000XL loops into the S20 for a side-by-side comparison and found little subjective difference — even the loop points played back perfectly. On the S3000XL, samples sounded a little more full, particularly in the sub-bass area, and they had slightly more sparkle in the upper regions, but I think most everyday users would be hard-pressed to tell the difference between them. However, with the S20 at 16kHz the sound quality isn't nearly as bright and has a distinctly digital graininess — though this rate is still perfectly acceptable for things like bass samples/loops, kick drums and SFX. At 8kHz, the sound quality becomes dirty and grungy, great for lo-fi loops. The 4kHz setting has pretty limited usefulness.

CARRY ON SAMPLING

I haven't had so much fun sampling and looping for ages, and using the S20 is a piece of cake even for a newcomer to sampling. After using it for a day I knew where most of the deeper edit sub-pages were without needing to refer to the manual. My 15-year-old son got his hands on the S20, and within ten minutes, without any help from me and not a peek at the manual, he was triggering, looping, reversing and layering samples. It took me another half an hour to get it back so I could carry on with this review! Most users will be flying this machine with ease after a week or so, because, even at its most complex editing level, the S20 is very easy to get to grips with. From switching on to sampling takes a mere eight seconds, making the S20 perfect for quickly grabbing samples and assembling ideas that can't wait. Seasoned S20 users are sure to become sampling speed demons.

AND FINALLY

The S20 is undoubtedly a wolf in sheep's clothing and a wolf wearing two hats, at that. On the one hand it's presented as a phrase-sampling, live DJ tool, for grabbing loops and matching bpms, which it does extremely well. On the other hand, if it's expanded to the full 17Mb of memory and connected to a MIDI keyboard, it's a perfectly capable 8-voice, 16-part multitimbral sampler. Some may find the 4-digit display a limitation, and the editing facilities may be a little on the basic side when compared to more expensive samplers, but this is compensated for by the ease of use and the sound quality, which, at 32kHz, is superb.

There are a few other sub-£500 samplers on the market, notably the dinky Yamaha SU10 at £299 and the Roland MS1 at £399, but neither of these offer Akai compatibility, which could be a deciding factor, considering the overwhelming amount of Akai-compatible sample libraries available on floppy disk (see 'CD included' box). Whether you're a DJ or a musician thinking of entering the wonderful world of sampling, the S20 offers a pretty convincing combination of power and price, and could be a rewarding and productive addition to any setup, be it turntable or desktop. Just make sure you budget for some extra memory. SOS

TOTALLY TAPPED

Holding down the S20's Tap button and pressing a pad causes the very start of the sample being triggered by that pad to repeat rapidly (a bit like the dreaded 'NNNNineteen', but better). You can adjust the speed of the repeats using the + and - keys.

IT'S STORAGE, JIM...

The S20 is a fast machine to work with, and ideas can be developed and worked out very quickly. The only fly in this speedy ointment is the slow saving and loading to floppy disk. If you're sampling with the full 17Mb, in full flood with tons of great loops and sequences, and you want to move on to another song or try out some new ideas, you can't do anything until you've spent nearly 10 minutes shunting a dozen disks in and out of the S20 to back up your work. This tends to dry up the creative juices pronto, and I thought it seemed a bit short-sighted of Akai not to have included the option to add at least either a battery back-up, flash RAM or a SCSI connector — this machine is crying out for something like a Zip drive. However, after I had voiced my opinions to Akai they told me that the S20 is mainly intended for the DJ market — hence the inclusion of the Beat Loop function and the sample pads — and they see it more as a live looping tool, where saving and loading won't be an issue. They also anticipate that most people will go for the 4Mb upgrade rather than the full 17Mb, and in this case saving and loading will be a lot faster. Also, offering any of the above solutions (even as upgrade options) would have meant additional chips and a more detailed and expensive display, and this would have added too much to the cost of the unit.

I don't entirely agree with this: for a start, I think that many people will be tempted to go for the full 17Mb upgrade, particularly with the current price of RAM (approximately £75 for a 16Mb SIMM, if you shop around). Being multitimbral, the S20 is ideally suited for the GM/DTM market, which Akai do (rather half-heartedly) admit. Also, after seeing my son's reaction to it, I can see a lot of up-and-coming electronic dance bands buying S20s and connecting them to MIDI keyboards as a cheap way into quality sampling.

As is usually the case in this industry, there will probably be a mark 2 or an XL version in a couple of years time; let's hope it includes some better external storage options. In the meantime, have fun!

£ £499 including VAT.
A Akai UK, Haslemere Heathrow Estate, The Parkway, Hounslow, Middlesex TW4 6NQ.
T 0181 897 6388.
F 0181 759 8268.

PERCY PRIOR'S HI-TECH STORE

TO ORDER CALL 01494 443418

Akai S3200XL £3499
(or 18 months interest free credit, £194.39 per month)
Akai's biggest sampler, 32 voice, 8 outputs, 16Mb RAM, SCSI, Digital I/O, SMPTE and hard disk recording. It's got everthing!!!

Yamaha A-3000 £1299
(or 12 months interest free credit, £108.25 per month)
Set to rock the sampler market, real-time stretch and synamic filter control for each sample, 3 effect blocks and assignable outputs!! Nice.

Fostex D90 and 8338 package £1698
(or 12 months interest free credit, £170 deposit and £127.33 per month)
8 track hard disk recorder package with SCS I interface board

Akai MPC 2000 £1199
(or 12 months interest free credit, £99.92 per month)
Sampling drum machine and sequencer and quite alot else all in one very user friendly box. Excellent

Behringer Ultra-Dyne £769
(or 12 months interest free credit, £64.08 per month)
Digital 64-bit Dual DSP Mainframe Stereo 6-Band Compresor/Leveler/Exciter and programme Adaptive Noise Reduction System. All in one box

EMU E4X £3149
(or 24 months interest free credit, £131.21 per month)
64 voice sampling synthesizer with 4Mb RAM, 540Mb hard drive and digital effects, One of the most powerful samplers available

Fostex D15 £2929
(or 18 months interest free credit, £299 deposit and £146.11 per month)
DAT mastering machine with timecode chase

Behringer Composer £299
(or 6 months interest free credit, £49.83 per month)
Interactive 2-channel com-presor/Limiter/Expander. At the top of it's class

Alesis RA-100 and Monitor 1's £674
(or 10 months interest free credit, £67.40 per month)
Reference power amp and monitor speaker package

Yamaha NS-10M £375
(or 9 months interest free credit, £41.67 per month)
Industry standard monitor speakers. Say no more

Yamaha MX124 £399
(or 6 months interest free credit, £66.50 per month)
12 input, 4 bus mixer with digital effects and a 7 band graphic

Yamaha 02R £6999
(or 36 months interest free credit, £699 deposit and £175 per month)
Fully automated 40 input 8 bus digital mixer, 4 band parametric eq for every input and 2 comprehensive on-board effects processors

Audio Technica AT4050/CM5 £995
(or 12 months interest free credit, £82.92 per month)
Multi pattern studio capacitor microphone with sock mount, Switchable Cardioid, Omnidirectional and figure of eight polar patterns

Soundcraft Spirit Folio 4 £1209
(or 12 months interest free credit, £100.75 per month)
20 input, 4 bus Live/Recording mixer

AKG C-414B-ULS £1169
(or 12 months interest free credit, £97.42 per month)
Large diaphragm, multi pattern mic with bass roll off, Includes stand adaptor and windsheild

Neuman U87 £2089
(or 24 months interest free credit, £87.04 per month)
One of the best sounding studio microphones available

THE HOTTEST NEW RELEASES FIRST

Percy Prior's MUSIC

31 Octagon Arcade,
High Wycombe.
Bucks HP11 2HT

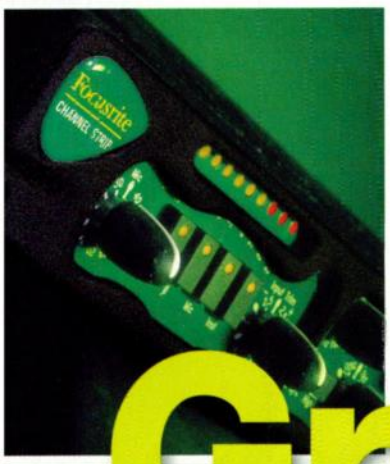
TEL: 01494 443418

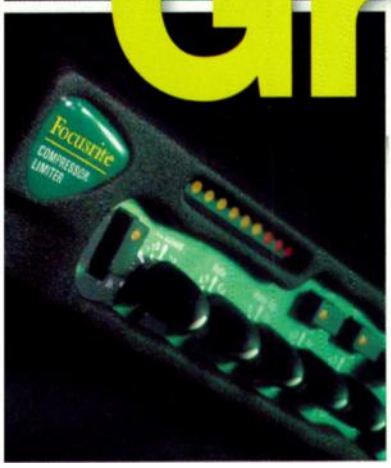
FLEXIBLE FINANCE DEALS,
HELPING YOU GET THE SET-UP YOU WANT.

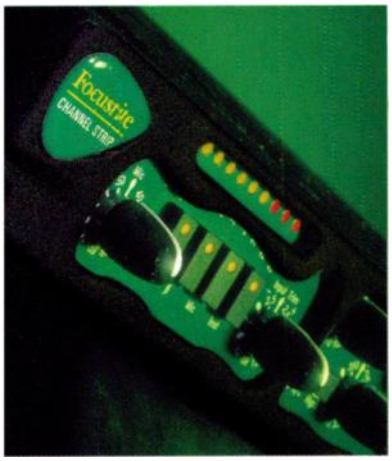
UP TO 36 MONTHS INTEREST FREE.

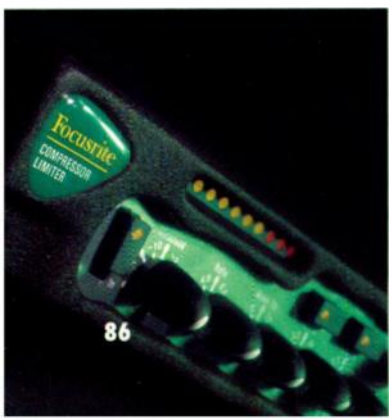
NO DEPOSIT REQUIRED, MAIL ORDER SPECIALISTS
FREE UK DELIVERY, WRITTEN DETAILS ON REQUEST.

WRH









Green Party

FOCUSRITE GREEN 4 DUAL COMPRESSOR/LIMITER & GREEN 5 CHANNEL STRIP

Focusrite's new Green processors are enough to make anyone envious, as PAUL WHITE discovered when he had to give them back!

Over the past few months, we've reviewed several processors from the Focusrite Green range, so I'll spare you all the obvious jokes about the front-panel appearance. These two new units are based on the circuitry used in previous Green processors. The compressor/limiter is a fully featured, dual-channel device for line-level operation; the channel strip combines a mic/line/instrument input stage with EQ, compression and an expander/gate. Like the other Green units, these two feature transformerless input and output stages and the distinctive sculpted front-panel styling. In fact, the case is moulded in one piece using aircraft-grade aluminium, and the green front panel and circuit board sub-assembly are fitted via the rear of the case. The mains voltage may be switched from 240V to 120V by means of a recessed slide switch, just in case you were thinking of taking one on holiday.

DUAL COMPRESSOR LIMITER

Unlike many compressor/limiters, the Green version includes separate compressor and limiter sections, each with its own threshold controls. Both operate on the same class-A VCA, and stereo linking is implemented for applications such as mix or stereo subgroup processing. The audio inputs and outputs are on balanced XLRs with switchable +4/-10 operating levels; according to the manual, a balanced jack version is also available.

In the Green units that combine several processor sections, the compressor tends to be somewhat simplified, but this one has five rotary controls, plus switches for the selection of soft or hard-knee operation, variable-frequency high- and low-pass side-chain filters, bypass, and an auto-release mode. All the buttons on the Green range have integral status LEDs. The filters cover the ranges 15Hz-10kHz and 65Hz-25kHz, and may be used for frequency-conscious applications, such as de-essing. Because the filters are only in the side-chain path, they don't affect the quality of the audio being processed, only the way in which the compressor responds.

Auto release responds to the dynamics of the input signal in such a way that the more it exceeds the threshold, the longer the release time. All the rotary controls are standard compressor issue: threshold, ratio (1:1 to 10:1), make-up gain, attack and release. Two further rotary controls are provided for the limiter, to control the threshold level and release time, but, interestingly, there's also a Look Ahead button. This introduces a very short delay (based on analogue circuitry) into the compressor's audio path, but doesn't delay the limiter's side-chain, enabling it to respond to peaks fractionally before they arrive. In digital recording applications where clipping is completely unacceptable, this can be a very useful safeguard — but, for most routine jobs, the manual suggests that you leave Look Ahead switched off, as it reduces the audio bandwidth to 35kHz. Limiter operation is signalled by a red status LED; the compressor has a 10-section gain-reduction meter LED display.

Gain Change buttons in the central Link section allow the meters to be switched from monitoring gain reduction to monitoring the input signal level, whereas Link ties both channels' side-chain together for consistent stereo tracking, in which case the left-channel controls act as masters. However, the Link button doesn't affect the setting of the Filter or Look Ahead buttons, so these should be matched manually.

IN USE

Not only does this compressor sound very nice, it's also surprisingly flexible, partly due to the unusual soft-knee characteristic. Most soft-knee compressors come in gradually and then level out, but in this circuit, if you drive it hard enough, you reach a point where the curve folds back on itself — the higher the input signal, the lower the output signal becomes. This is great for those vintage pumping effects where the cymbals actually increase in volume as they decay, and it's also stunningly good for guitar. By choosing the appropriate settings, you can make the available effects range from near-perfect transparency to overtly effected — but if you want a simple life, the Auto release will work on most types of signal. One particularly impressive result is that the vocals can be evened up without sounding as though the singer is moving back and forth in relation to the microphone.

The inclusion of side-chain filtering also makes

it possible to process complex material more successfully, by preventing certain parts of the spectrum from dominating the proceedings. For example, in very rhythmic music the bass tends to control the compressor, but by setting the low filter at between 100 and 200Hz, you can prevent this. For de-essing, you simply have to bracket the offending frequency range, usually between 2 and 8kHz.

The Green limiter is a valuable ally, especially when you're recording digitally. Even with Look Ahead switched off, the limiter was fast enough for any normal job, and also nicely unobtrusive, and even when the threshold was set way too low, the limiter sounded no more harsh than many compressors I've heard: deliberate over-limiting can actually work rather well when you need a more creative effect.

CHANNEL STRIP

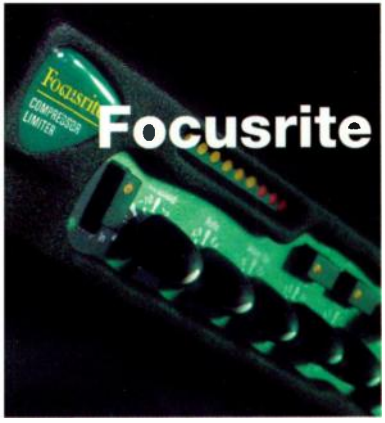
The Channel Strip is such a logical product that I'm surprised it wasn't introduced into the line-up earlier. Essentially, it provides a one-box solution to getting mic-, line- or instrument-level signals into a recorder without the need for a mixer. This is recognised as one of the cleanest ways to record, and many professionals use this method whenever possible. In addition to one of Focusrite's super mic amps, based on the Linear Technologies LT1028 mic amp chip, the Channel Strip incorporates high- and low-pass filters, a 4-band sweep EQ with switchable mid-range Q, an expander/gate and a compressor. Though ideally suited to recording vocals, the Channel Strip is also useful for high-impedance instruments, such as electric guitar or bass, and for re-processing line-level signals that have already been recorded. An Instrument/Line jack is on the rear panel, along with a Hi Z/Line selector button; there are also dedicated XLRs for the line and mic inputs. A Link jack enables two units to be made to track for stereo applications, and there's an external key input for the gate, which has its on/off button on the rear panel. I can imagine these rear-panel switches being awkward in some situations, but there really is nowhere left to put them on the front panel.

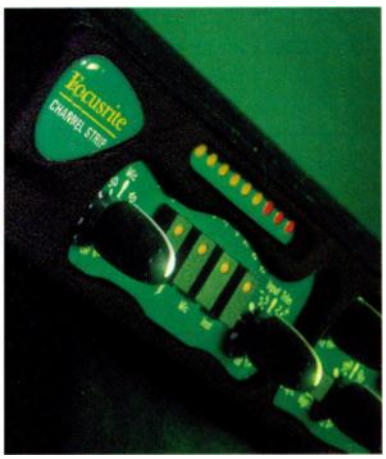
In addition to Mic Gain, Input Trim and Output Fader (Level) controls, there are buttons for 48V phantom power and phase reverse. A red LED shows when the high-impedance instrument line input is selected, and you get Mic/Line selection by turning the switched Mic gain control fully anticlockwise. There's no high-pass filter or mute as there is in the dedicated mic preamp, and, because of the high headroom provided, there's no need for a pad switch. A 10-section meter monitors the signal level, post the input Trim control, but it may also be used to indicate the compressor gain reduction and expander/gate operation.

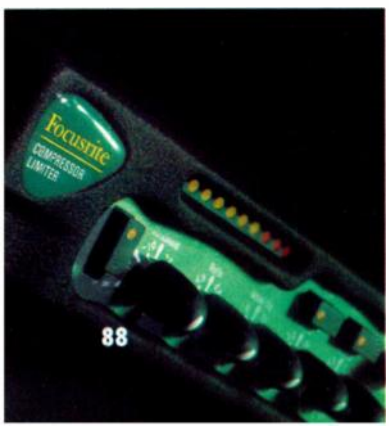
At first glance, the EQ section looks pretty busy, but that's mainly due to the inclusion of the high- and low-pass filters. These cover the same frequency range as the ones in the compressor, and may be switched into the audio path or the side-chain. When Side Chain is set, the filters appear in the gate side-chain if Key is selected; otherwise they appear in the compressor side-chain, for de-essing and so on. The remaining EQ is dedicated to the main signal path and comprises variable-frequency high- and low-shelving filters, plus two swept mids with switches to sharpen up the Q for more 'surgical' applications. Like the EQ on other Green products, the EQ here has a very wide range, with the low section sweepable between 30Hz and 480Hz, and the high shelving filter from 2.5-18kHz. Even the low mid extends right down into the bass, with a 40Hz-1.2kHz span, and the upper mid goes from 600Hz right up to a bat-sizzling 18kHz, all ▶

> "It's not until you use a good EQ that you realise just how much cheap EQs screw up your sound!"

Focusrite Green 4 & 5







with a ±18dB range. Twin Fine buttons select the narrower Q option, while bypass buttons are fitted for both the filters and the EQ.

Moving into the expander/gate section reveals a simple two-control system for Threshold and Release, with a further button to switch from gating to expansion. There's also a gate bypass button and a Fast switch for use with percussive sounds. Interestingly, the gate circuit side-chain uses discrete transistors, and when an external key signal is connected and the unit switched to Key (on the rear panel), the Ext status LED lights. Selecting the Key button on the front panel puts the high- and low-pass filters into the gate side-chain, while 'To Meter' displays the expander/gate gain reduction on the red LEDs of the bargraph and compressor gain reduction on the amber LEDs.

Finally comes the compressor, once again based around a class-A VCA, but with rather simpler controls than the dedicated compressor/limiter. Essentially, the user has control over Threshold, Ratio, Release and make-up gain; the attack-time control is reduced to a single Fast button and the release can be switched to Auto. An overload LED warns of clipping at the output. De-essing can be achieved if you commandeer the filters.

PERFORMANCE

It's pretty hard to fault the Channel Strip on performance, though I did find having the Key and Inst switches on the back panel a little awkward. I also found that, unless the unit was above eye-level, it was difficult to see the legending — it's hidden either by the edge of the front panel or by the buttons, but then I don't suppose that this would take getting much used to.

Used as a mic preamp, the unit gives a front end that's just as clean and transparent as it is on the other units in the series, and I have to concede that this is an extremely nice-sounding mic amp. When switched to Instrument, the unit becomes the ultimate DI box, and you're quite likely to hear details in the sound of your instrument that you never realised were there before. As far as I can tell, the EQ section is based on the circuitry used in the Focus EQ, and this has the wonderful ability to let you re-balance different parts of the audio spectrum without introducing unnatural or harsh artifacts. It's not until you use a good EQ that you realise just how much cheap EQs screw up your sound! Having the narrow Q settings is great for notching out rogue frequencies, and the high- and low-pass filters are good for 'bracketing' sounds to exclude unwanted lows or highs, without affecting what goes on in the middle.

Expander gates are rarely exciting, but this one is easy to set up and smooth in operation, and has a useful display if the To Meter button is pressed. Having the expansion option is good for situations in which you want the gating to be as subtle as possible, and the compressor section that follows is equally friendly. Though there aren't many controls to play with, the compressor works fine on just about any type of programme material and, used in moderation, can sound extremely transparent. Again, cheap compressors may keep the levels under control but they often play havoc with the tonality. No trouble on that front here, but if you crank up the ratio and bring down the threshold, you can still get a nice snappy bass or guitar tone with as much or as little pumping as you require.

SUMMARY

Both these units are worthy and logical additions to the Focusrite Green range, and both display the attention to circuit-design detail that makes Focusrite a world leader in analogue signal processing. As far as the cosmetics go, you either like them or you don't, but what concerns me more is the small, easily obscured legending. As stated earlier, you do soon learn where the controls are, but unless you get close up and read the dials, there are no real visual clues.

> "You're quite likely to hear details in the sound of your instrument that you never realised were there before."

The Channel Strip is the ideal solution for anyone wanting to record directly to a hard disk recorder, modular digital multitrack or open-reel analogue machine, and the choice of mic, line and high-Z instrument inputs makes it very flexible indeed. The dual compressor may only do one job, but it does it beautifully, with plenty of control range and flexibility. The limiter section works extremely well; though Focusrite excel at transparent compression, this one sounds great when worked hard too.

The Green range is the budget baby of the Focusrite range, but there is no compromise in circuit design. As a consequence, the units aren't actually cheap; but if you've been recording for any length of time, you'll appreciate the advantages of spending that little bit extra on certain pieces of key equipment. SOS

info

E Focusrite Green 4 Dual Compressor/Limiter £1056.32; Green 5 Channel Strip £1173.82. Prices include VAT.
A Focusrite Audio Engineering Ltd, 19 Lincoln Road, Cressex Business Park, High Wycombe, Buckinghamshire HP12 3RD.
T 01494 462246.
F 01494 459920.
E sales@focusrite.com
W http://www.focusrite.com/

Groove On This?

ASR
SAMPLER RESAMPLER

The new ASR-X™ features:

- ASR Sampler •
- MR Synthesizer •
- 24-Bit Effects •
- On-Board Sequencer •
- Resample w/Effects while sequencing! •
- New Resonant Filters •
- 44.1 Khz Sampling rate •
- 20-Bit Analog to Digital converters •
- Velocity sensitive pads •
- Expandable to 10 outputs •
- Optional SCSI •
- Expandable to 34MB of RAM with 72-pin SIMM slot •

- Expandable to 26MB of ROM with optional MR-EXP board •

We went to the masters of sampling and asked them to list the top features they would like to see in the ultimate groove machine. They said to make it easy to sample, resample, and loop, include a built-in synth, add some incredible effects, resonant filters, an easy to use sequencer and put it all into a portable box with pads.

Introducing the new ASR-X™ from Ensoniq—pick one up today and get into a groove!

www.ensoniq.com

ENSONIQ
LEADING THE WORLD IN SOUND INNOVATION

ENSONIQ Worldwide Headquarters • 155 Great Valley Parkway • P.O. Box 3035 • Malvern, PA 19355 • USA

Represented in the UK by Key Audio Systems
Robjohns Road, Chelmsford, Essex, CM1 3AG
Tel: 01245 344001. Fax: 01245 344002

Key audio systems

Music Village

Specialists in modern music technology

10 High Road, Chadwell Heath, Essex · 0181 598 9506 | **86 Mill Road, Cambridge · 01223 316091**

562 Brighton Road, South Croydon · 0181 407 8444 | **230 High Street, Barnet · 0181 440 3440**

0% Finance available on many items – No deposit necessary! Please call for details

- The very best deals on all Hi-Tech & Pro Audio products!
- Friendly, professional, knowledgeable staff!
- Fastest possible insured mail order facilities!
- Unsurpassed after sales service!
- Access, Visa, Amex, Switch

Music Village Pro Audio

High spec demonstration facilities including a state-of-the-art digital recording studio, jam packed with all the very best pro-audio products around – Drawmer – TLA – Digidesign – Akai – Lexicon – Tannoy – K-Rok – Mackie – Roland – Yamaha – Tascam – Alesis – Fostex etc, etc. Some of our more recent customers include: Take That, East 17, Human League, Simply Red, Let Loose and Duran Duran. So give us a call now and join this esteemed list.

Music Village Sound Reinforcement Centre

A dedicated soundproofed demonstration studio featuring the best in modern P.A equipment – Soundcraft – Studiomaster – C.Audio – JBL – Electrovoice – Animation – Soundtracs – Mackie – Carlsbro – Shure – AKG – Yamaha – Crown etc, etc.

Yamaha CS1X

CS1X – RRP Only £599

CS1X UNBELIEVABLE!
P150 New low price!
MU5 Only £179
MU50 £299
MU80
RY8 £169
QY22 £349
QY300 NOW £575
QY700
MDF2 NOW ONLY £269
P50M
VL70M
SU10

Yamaha AN1x

The 'Fattest' Synth yet?

Featuring analogue physical modeling synthesis, 10 note polyphony, arpeggiator, 16 step sequencer, 4 track parameter recorder, highly flexible and easy to use and it retails at only

£899

Fabulous new products from Roland

JP-8000

£1499

JV-2080

£1399

This does of course mean that the JV1080 is now available from us at an incredibly low new price! – So Give us a call Now!

XP10 ONLY £399
XP50 great price!
XP80
PMA5
JV1080 still a best seller
JV1080 Boards

MDC-1 Lowest ever price
MVS-1 ONLY £299
MOC-1 ONLY £299
MSE-1 ONLY £299
MGS-64 Our Price £349
SC88 VLWH Lowest ever price

Up to 39% off Korg!

We have a very limited quantity of these superb products at absolutely unbeatable prices!

So order yours now to avoid disappointment

Trinity Pro X – 88 note piano weighted action, includes the stunning proprietary solo synth!

Trinity Pro X – RRP £3595	£POA
Trinity Pro RRP £3195	£1999
Trinity Plus RRP £2395	£1799
Trinity RRP £1999	£1449
N364 RRP £1299	£999
N264 RRP £1499	£1199
X5DR RRP £499	£399
NS5R RRP £599	£POA

Up to 56% off Trinity Options

	RRP	Our Price
PBS-TRI Playback Sampler	£625	£399
HDR-TRI Hard Disk Recording	£599	£399
SCSI-TRI SCSI Board	£399	£249
DI-TRI Digital In/Out	£225	£ 99
SOLO-TRI Mothers Board	£475	£299

Akai Samplers Emu Samplers Yamaha

Akai – Unbeatable deals on the complete range, e.g:

S2000 + FREE Zip Drive + 5 extra Zip cartridges **£999**

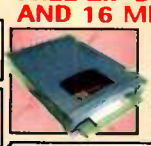
S3000XL + FREE Zip Drive + 10 extra cartridges **£1795**

PLUS You can fill up your FREE Zip cartridges with our unique & vast sound library, completely FREE of charge!

Emu e6400

EXPANDABLE MONSTER!
FREE ZIP DRIVE AND 16 MEG!!

£2495



Zip drives and cartridges

£185 £45

Yamaha A3000

RRP **£1299**

Yamaha SU10

£269

Emu Orbit – Version 2

£NEW LOW PRICE!

Waldorf Pulse

Delightfully fat analogue sounds from this 3 oscillator monosynth. Great spec, Great price!

Roland MC303 Groovebox

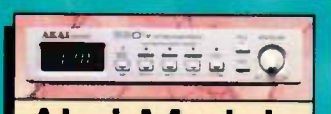
This is THE dance machine!

In Stock Now! **£PLEASE RING!**

Novation

BassStation and DrumStation

£PLEASE RING!



Akai Module Madness!!

Yes – thanks to our bulk buying policy, we can now offer these superb half rack modules at an incredibly low price!

Akai SG01V – Vintage
Akai SG01K – General MIDI
Akai SG01P – Piano

Village price only **£219**

Alesis QS6

Price Breakthrough!

64 note polyphony, 640 sounds, 500 multitimbral mixes, GM bank, 61 note velocity sensitive keyboard with after-touch, on board 4 bus multi-effects, Mac/PC interface, 8 meg of waveform ROM, PCMCIA flashcard compatible

RRP was £949

MV price only **£599**

WRH

Phone our mail order Hotlines now

CROYDON STORE NOW OPEN!
(OPPOSITE CROYDON ADVERTISER BUILDING)
TEL: 0181 407 8444

0181 598 9506
or fax us on 0181 599 7236
0181 440 3440
or fax us on 0181 447 1129
Education Division Tel · 0181 598 9955

MV Portastudio Added Value Packages

From the company that originally conceived the P.P.D. (Portastudio Package Deal), comes the latest in a long line of superior bargain offers!
Not One but Two Added Value Packages for you to choose from...

Added Value Package One
Retail Value £49.00 Inc VAT
- Cables
- CD quality Headphones
- Three Maxell 90 chrome tapes
- Head Demagnetiser
- Head Cleaning Kit

Added Value Package Two
Retail Value £100.00 Inc VAT
- Phonic MKII Mic & Cable
- CD quality Headphones
- Three Maxell 90 chrome tapes
- Cables
- Head Cleaning Kit

Portastudio	PLUS..... Added Value Package One	OR Added Value Package Two
Fostex XR3 The new budget standard	£229	£249
Fostex XR5	£315	£335
Fostex XR7	£429	£449
Tascam Porta 03	£179	£199
Tascam 414	£329	£349
Tascam 424 MkII	£429	£469
Yamaha MT50s	£279	£299
Yamaha MT4X	£379	£399
Yamaha MD4	ONLY	£899
Tascam 564	ONLY	£1099

Plus FREE Phonic PCL3200 Stereo Comp/Lim/Gate worth £169!

Digital Tape Multitracking

Alesis ADAT XT
Tascam DA88

Call now for the very best deals on these superb products!

M.V EXCLUSIVE! PACKAGE DEAL
ADAT XT plus Soundcraft Spirit Studio 16-8-2 Desk
our price only **£2999**

Fostex D80
8 Track Hard Disk Recorder

New low price ~~RRP £1499~~ **£1299**

and now the fabulous new...

D90

featuring: varispitch, enhanced synchronisation, ADAT digital interface, 9 virtual tracks, SCSI option, balanced I/O option.
~~RRP only £1499~~

M.V EXCLUSIVE! PACKAGE DEAL
D80 plus Soundcraft Spirit Studio 16-8-2 Desk only **£2149**
D90 plus Soundcraft Spirit Studio 16-8-2 Desk only **£2329**

Roland VS-880 VXPanded

Announcing the incredible VS-880-SI system expansion kit for VS-880, providing powerful additional functions to this innovative digital studio workstation..... Automated mixing, easy recording with an inserted effect in "input track" mode, effect insertion for master cut, scene change by midi program change message, simultaneous playback of 8 tracks in "master mode" recording, digital output with copy protection, 10 additional effect algorithms (30 algorithms in total), voice transformer, mic simulator, 10 band vocoder, hum canceller, space chorus, reverb 2, 4 band parametric eq, 10 band graphic eq and vocal canceller plus over 20 powerful features in editing/sync sections.

ALL new options available including Zip, EZ, Jaz at the very best prices and up to 5 year warranties!!

Call for best package deal

Fostex DMT8 VL
8 tracks of CD quality digital recording for under a grand!

• 540 MB internal hard drive – user upgradable • 3.5" expansion bay for soon to be released IDE and SCSI interface options • 16 Bit, 44.1kHz, no compression

~~RRP only £999~~ **£999**

SCSI option now available ~~RRP only £199~~ **£199**

Plus FREE Music Village portastudio "Added Value Package Two" (excluding tapes and head cleaning kit – You won't be needing those!)

Pioneer PDR-05 CD Recorder

Yes it's true – Now you can master direct to CD, for the price of a budget DAT machine. No computer needed, this is a stand alone unit!

ASTONISHING!!

Village price only **£899**

Kurzweil

The quality of these products has never been in doubt, but at these prices you cannot afford to ignore them.

MicroPiano – Module with 32 great sounds, digital PLL tuning and transpose functions.
Village Price Only £359

PC88 – Superb 88 note, piano-weighted action master keyboard with 48 sounds. The ultimate mother!
Village Price Only £1599

K2000 Rack – Classic sound module now with many great V2.0 software upgrades.
Village Price £PLEASE RING

K2500 Rack – Monster module / sampler, 48 note polyphony, up to 192 oscillators, sample option expandable to 128Mb, analog & digital I/O.
Village Price £PLEASE RING

Studio 161 RRP £229
Studio 880 RRP £599
Studio 1100 RRP £699

Studio 610, 5 octave, touch sensitive
Exclusive clearance offer **£159**

Fatar StudioLogic

NEW LOW PRICES!!

PLUS
e.g. Studio 880 – 88 note piano weighted hammer action PLUS Korg X5DR module only **£899**

Evolution Music Creator Pro

Full size MIDI keyboard PLUS FREE Sequencing Software
• 49 Full Size Keys (Velocity sensitive) • LED Display
• Pitch Bend Wheel • Modulation Wheel • Transpose
• Octave Shift • Program & Bank Change
• Includes Connecting Cable for Soundcard
• 8 Program Memories

Only **£99**

Evolution Pro 61 Now 61 note model now available with on board stereo speakers
Only **£159**

Tascam DA38

10E minutes of digital recording time; 44.1kHz and 48kHz sampling rates; superb quality.

UNBELIEVABLE NEW LOW PRICE! **£PLEASE £RING!**

M.V EXCLUSIVE! PACKAGE DEAL
DA38 plus Soundcraft Spirit Studio 16-8-2 Desk
only **£2999**

Minidisc Madness!!

Sony MDS-JE500 Minidisc Recorder

Another coup for the Village buying department – Now you can digitally master on this popular format for an unbelievably low price! Editing features such as combine, move and autocut; jog dial; digital input; full function remote control.

Village price only **£269**

WRH

Music Village

Specialists in modern music technology

10 High Road, Chadwell Heath, Essex · 0181 598 9506
86 Mill Road, Cambridge · 01223 316091
562 Brighton Road, South Croydon · 0181 407 8444
230 High Street, Barnet · 0181 440 3440

Mixing with the best – Digital Mixers just got real!

Korg Soundlink

At last, the affordable Digital Studio

Problem – You want to record high quality audio, sequence and mix totally in the digital domain but can't afford Pro Tools 4 TDM – Well finally help is at hand. Using a Mac/Cubase VST system with Korg 1212I/O card and a Korg Soundlink 168RC mixer, you can record (using 18bit A/D converters) up to 32 audio tracks (depending on the Mac) through Korg's FX including distortion, speaker simulation reverb, delays..etc. Then at mixdown you can use VST's own FX supplemented with plug-ins and the 2 FX processors on the Soundlink to produce a very high quality direct to disk or DAT master – at under half the cost of Mac/Pro Tools 4 TDM.

Ring our Mac experts at Barnet & Croydon for details and come in for a demo.

Yamaha Promix 01

Fully automated 16-2 digital mixer, 3-band parametric EQ on every channel, motorised faders, 2 on-board multi-FX processors, 50 scene memories, rack mount option.

This ground-breaking little mixer has been around for a while, but NOW it represents fantastic value!

LOWEST EVER!

Yamaha 03D

Yet another breakthrough from Yamaha in terms of quality, facilities and price! Up to 26 inputs (18 analogue stereo), 16 outputs, 28 dynamics processors, 28 x 4-band fully parametric EQ, 20 bit A/D D/A, motorised faders, mouse input, MIDI machine control, 2 internal FX processors, large integral screen, 4 aux sends, surround sound.

RRP only £2999

Yamaha 02R

This monster, launched last year, is still one of the most highly desirable pieces of pro audio hardware around. Up to 40 inputs (24 analogue standard), 40 x 4-band fully parametric EQ, 20 bit A/D D/A, motorised faders, 6 aux sends, large integral screen, optional meter bridge.

PLEASE RING!

Soundtracs

50% off Topaz Project 8

These consoles have always been very highly regarded, even at their original RRP of nearly £3200 just for the 24-8-2 model. Now however, we can offer these superb products bundled with the meter bridge, stand and 2 looms at an

ASTONISHING HALF PRICE!

But grab one quickly – It can't last

24-8-2 + Meter bridge + Stand + 2 Looms	32-8-2 + Meter bridge + Stand + 2 Looms
£1999	£2599

MACKIE

Unbeatable deals on SR Series, 8 Bus Consoles and New 12, 14 & 16 Channel VLZ Models

Behringer Eurodesks and Euroracks at incredible new low prices!!

Behringer MB8000 Meter Bridge for MX8000 Eurodesk in stock – ONLY £299
Also 'Cybermix' automation software for PC – suitable for any desk with insert points! – ONLY £499

Soundcraft Spirit Studio

These superb mixing consoles are available in 3 configurations: 16/8/2, 24/8/2 & 32/8/2 and feature:

- In line design • Up to 72 inputs at meltdown (32ch)
- Up to 32 discrete tape sends • 8 bus group section and stereo master • fader flip to save repatching
- 8 versatile aux sends • 4 stereo FX returns with EQ
- 4 band EQ (2 swept mid) • EQ switchable between signal paths • 2 band EQ on each group bus
- PFL soloing on all channels and monitor inputs etc.

Legendary Soundcraft quality at a fraction of the original price!

16-8-2	24-8-2	32-8-2
£965	£1465	£1995

Soundcraft Spirit Folio Mixers

Incredible new prices!

These mixers have always been excellent value for money but now they are simply unbelievable!

Folio Notepad	was £203	NOW £149
Folio F1 14-2	was £381	NOW £299
Folio F1 16-2	was £452	NOW £349
Folio SX	was £623	NOW £479

EXCLUSIVE!

Phonic MM122

- 4 mono channels & 4 stereo channels
- pro quality slider faders
- gain control on all channels except 9-10 & 11-12
- high & low shelving EQ ± 15dB
- phantom power
- 2 aux sends & 2 stereo aux returns
- pre/post switchable inserts on channels 1&2 and post fader inserts on 3 & 4
- 19" rack mountable

only £199 plus FREE UM87 mic worth £50

Monitoring Magic

U-beatable Deals on monitors and monitoring systems by Yamaha, Alesis, Soundcraft, Tannoy, KRK, Phonic etc.

PLEASE RING!

Soundcraft Absolute Zeros

PLEASE RING!

Absolute 2's - Still a best seller

EXCLUSIVE!

1/2 Price Tannoy!

System 6 NFM II's

Superb response nearfield reference monitors, 8.5 inch dual concentric, high sensitivity high power design, 175 watts each, peak power handling, magnet shielded, top quality hard wired crossover network, bi-wired and biamped, 3 year warranty!

Legendary Tannoy quality at a price you can't afford to miss

RRP £529 MV Exclusive

exclusive monitors package: NFM II's plus Samson Servo 240 amp – only £499

only £259

Power Amps

	RRP	Special
Omniphonics Footprint		£399	£279
Samson Servo 150		£225	£169
Samson Servo 240		£299	£229
Samson Servo 500		£399	£POA
Alesis RA100		£399	£299
Yamaha P1500		£449	£POA
Yamaha P2500		£599	£POA
Yamaha P3500		£699	£POA

The legendary Crown Power Amplifiers – Now in stock, you won't believe our prices!

C Audio – Very special deals on these superb British made Amps.

Absolute Zero's PLUS Samson Servo 150 bundle RRP £424

£349

Phone our mail order Hotlines now

CROYDON STORE NOW OPEN!
(OPPOSITE CROYDON ADVERTISER BUILDING)
TEL: 0181 407 8444

0181 598 9506
or fax us on 0181 599 7236
0181 440 3440
or fax us on 0181 447 1129
Education Division Tel · 0181 598 9955

TL Audio 33% off Indigo Range!!

e.g Indigo 2021 2 Channel Compressor Now Only £469

Drawmer

Lexicon MPX1

Multi-FX with no compromise

£POA

Lexicon Reflex

Only £339

Boss SX700 Multi FX

Only £369

Alesis Midiverb 4

NEW LOW PRICE Only £279

TC Electronic Finalizer

The Finalizer is the machine that everyone has been waiting for. Your final mix can sound as if it has been mastered by a mastering engineer. Multiband compressor, 5-band EQ, 20-bit converters, digital in/out, phase metering, normaliser and 120 professionally engineered presets.

True quality at an unbelievable price! £1699

Behringer Price Crash

Composer - Comp/Exp/Peak Limiter
Dualfex - Dual Enhancer
Ultrafex 2 - Enhancer
Autoquad - Quad Expander/Gate
Edison - Stereo Image Processor
Ultra Curve - 64bit Dual D.S.P
Multicom - Quad Compressor/Limiter
Multigate - Quad Gate
Intelligate - Gate/Ducker

CALL NOW FOR THESE CRAZY DEALS!

Zoom 1202

Grab one quickly! LOWEST EVER!

Zoom 1204

LOWEST EVER!

Yamaha REV500

RRP £399 £POA

SPL Stereo Vitalizer

Only £349

Joe Meek

VC3

Classic mic pre-amp combined with punchy Joe Meek compression and enhancement. Perfect front end for digital recording systems. Rivals units costing three times the price!! RRP Only £299

VC1

Rack mount transformer coupled mic pre-amp, large VU meter, instrument input, fully variable ratio attack and release, hard by-passable enhancer, output fader PLEASE RING!

SC2

Classic Joe Meek stereo compression, the flagship of the range. Used by top professionals worldwide, including "Simply Red", "Mark Knopfler", "Peter Gabriel", "Pulp", "Prodigy", "Paramount Studios", "Disney Corp", etc etc. PLEASE RING!

dbx

266

Full featured, high performance dual compressor / gate using the new dbx autodynamic attack and release circuitry and gate circuitry, to deliver a truly musical and versatile unit at an unbeatable price. Only £199

286

Studio quality mic pre-amp combined with a compressor, de-esser, spectral enhancer and expander gate. Tremendous flexibility and now you can buy it from Music Village at an amazing £199

120XP "Boom Box"

Patented dbx sub harmonic synthesis gives your track the bottom end you have always wanted! Actually produces a new waveform modelled bass note, exactly an octave below the bass in the original audio. As used by top sound and film professionals. Just £299

1066

Stereo compressor / limiter / gate featuring selectable auto or manual compression, contour switch, over easy or hard knee compression modes, peak stop plus limiting, gold plated balanced XLR and jack ins and outs etc etc. Only £399

Digitech Mega Deals

Studio Quad

– 4 ins & 4 outs

This superb multi-fx processor is now even more affordable at Music Village PLEASE RING!

Studio 400

Effectively 2 Studio Quads in 1 box with 4 ¼ inch jack and 4 XLR jack outputs.

Professional unit – Stunning price PLEASE RING!

Studio Twin

Parallel fx processor, 198 presets, very easy to use.

Superb quality – Bargain price Only £199

DOD R512

480 preset multi fx

Got to be the cheapest multi fx around!! Only £129

Vocalist Performer

RRP £379

MIDI Vocalist

PLEASE RING!

Vocalist Workstation

Great product! PLEASE RING!

Studio Vocalist

PLEASE RING!

PHONIC EXCLUSIVES!

PCL 3200

Dual Compressor/Limiter/Gate

- Hard Knee or Soft Knee processing modes
- Stereo Link/Dual-Link Switch • Side Chain Jack
- On-Board Gates with Independent Threshold and Rate Control
- Balanced or Unbalanced Operation
- Full Input/Output and Gain Reduction Metering
- Bypass/Compare

£169

PEQ 3300
PEQ 3400
PEQ 3600

31 Band Mono / 2 x 15 Band Stereo / 2 x 31 Band Stereo Graphic EQ's

All of the PEQ Series are built to professional standards and are endowed with many thoughtful features which include constant-slope sliders, LED indications for major functions, a choice of balanced and unbalanced operation, and adjustable equalisation range.

PEQ3300	PEQ3400	PEQ3600
£119	£149	£199

Music Village

Specialists in modern music technology

10 High Road, Chadwell Heath, Essex · 0181 598 9506
86 Mill Road, Cambridge · 01223 316091
562 Brighton Road, South Croydon · 0181 407 8444
230 High Street, Barnet · 0181 440 3440

Dotty DAT Deals!

Sony DTC A6

Tascam DA20

Sony ZE700

Tascam DA30

Panasonic SV-3800

Fostex D5

For the very best deals on DAT machines – Call us now!

The Russians are coming!

Nevaton CMC51

The Nevaton CMC 51 is an ultra high quality multi pattern capacitor microphone, designed and individually hand crafted for professionals. Dual diaphragm, pressure gradient capsule, configurable to any one of 4 direction patterns, integral 10dB attenuation pad switch enabling it to handle levels in excess of 120dB. Superb vocal mic but flexible enough to cope with any recording situation. In tests this mic has more than held its own against competition costing up to 3 times its price! (Neumann U87's etc)

Come and hear for yourself

EXCLUSIVE! Only £599

Alesis SR16

• 50 rhythms • 223 voices
• Touch sensitive • Stereo

Great drum machine at an unbelievable new low price!

only £199

Alesis DM5

Superb drum module

RRP £429

only £269

Multicore Stagebox

only £299

4 Way 19"Rackmount DI Box

only £99

Computer Systems

Pinnacle £479

Enhanced Full-Duplex soundcard

Dart Pro £299

Clean up any audio file with incredible ease with a full suite of powerful noise eliminators

DeNoise
DeHiss
DeClick

Multi!Wav Digital Pro £449

Professional Digital I/O for Windows

TripleDat £1290

Affordable and professional multitrack hard disk recording, editing and red book mastering system for the PC.

Yamaha DB50XG and SW60 Cards

In stock from only £99

Audiowerk8 by Emagic

RRP only £499

CD quality 8 track recording

Microphone Madness!

Shure SM58	£99	Shure SM57	£89
Octava MK219	£219	Rode NT2	£POA

Audio Technica ATM 4033 plus 8441 cradle (was £695) NEW LOW PRICE

Audio Technica ATM 4050/CM5 (was £995) Now £799

Guaranteed lowest prices on all Mics

AKG Mic Scoop

D3900 – Top of the line dynamic vocal microphone with high and low frequency contouring switches
RRP £245 – VILLAGE PRICE £99

D3700 – Professional dynamic vocal mics
RRP £129 – VILLAGE PRICE £69

C1000S – Cardioid/Hypercardioid vocal mic
RRP £281 – NEW LOW PRICE

C3000 – Cardioid/Hypercardioid, large diaphragm
RRP £363 – NEW LOW PRICE

WMS51 HT PLUS – Handheld diversity radio mic – stunning quality at an amazing price

ONLY £299 each or 3 for JUST £699

3 FOR 2

Phonic UM97's

High quality dynamic Mic (SM58 copy)

£45 each or 3 for just £99

Accessories Megadeals

Headphones

Audio Technica ATH-A [illegible] £45 £29
Audio Technica ATH-PRO [illegible] £120 £99
Beyer DT100 £PLEASE RING
Sennheiser Momentum £25 £20

Philip Rees TS1 – synch or time your tape machine to your sequencer using MIDI – generate and read all four SMPTE formats then convert to MTC – FREEWHEEL – [illegible] only £89

Quality Mic cables
6 metre Jack – XLR £6.99
6 metre XLR – XLR £7.99

Second Hand

Key: Ch=Chadwell · B=Barnet · C=Cambridge · Cr=Croydon

Mixers

Roland M240EU 4ch with EQ	£ 199	Ch	Mackie 1202 (not VLZ)	£ 199	B
Spirit Folio 12-2	£ 169	B	Akai MPX820	£ offers	B
Peavey M3 12-2	£ 249	Ch	Studiomaster Proline 16-2	£ 399	Ch
Alesis 1622 (16ch 6 aux)	£ 249	Ch	Fostex 812 (12-8)	£ 499	Ch
Fostex 450 (16-4)	£ 249	Ch	3G Unit 8 (24-8)	£ 999	C
Yamaha Promix 01 rack	£ 1199	Ch	Studiomaster Diamond Pro12-2	£ 249	Ch
Soundcraft 6000 (36-8, 8 stereo channels)				£ 1999	Ch

Keyboards

Yamaha DX7	£ 349	C	Prophet VS	£ 1050	B
Korg M1	£ 599	Ch	Roland JX10/PG800	£ 699	B
Korg O1W Pro	£ 950	B	Roland D20	£ 199	C
Roland JX1	£ 249	Ch	Casio CZ1	£ 399	Ch
Kawai K11	£ 399	B	Roland JX3P	£ 299	C
Kawai KX5 (remote)	£ 249	Cr	Roland A50 (powerful master)	£ 399	Ch
Roland D10	£ 299	Ch	Roland A30	£ 749	Ch
Yamaha CS3B Rare analogue	£ 500	B	Kawai SX240 Rare analogue	£ 249	C

Modules

Yamaha TX802	£ 399	Ch	Korg EX8000	£ 249	Ch
Korg 01R	£ 599	B	Emu Proteus World	£ 249	Cr
Cheetah MS6	£ 249	B	Kawai K1r	£ 199	C
Roland TB303	£ 900	C	Roland U110	£ 199	Ch
Roland U110	£ 179	Cr	Akai S1000PB	£ 599	B
Emu Proformance +	£ 199	Ch	Boss DS330	£ 249	Ch
Peavey Spectrum Bass	£ 229	Cr	Roland MT32	£ 119	C
Korg M1r	£ 599	C	Novation BassStation R	£ 329	C

Drum Machines / Sequencers

Roland CR80	£ 199	C	Roland MSQ100	£ 349	B
Roland MT100	£ 149	Ch	Roland MV30	£ 429	B
Alesis HR16	£ 99	Ch	Yamaha RY30	£ 299	C

Recording

Art Multiverb	£ 229	Ch	Peavey Addverb	£ 199	Ch
Tascam Porta 2	£ 249	Ch	Langevin CR3a Mic	£ 349	Ch
TDA MR8T (8-trk cassette)	£ 499	Ch	Sony TCD D7	£ 350	Ch
Sony TCD D7	£ 350	B	Peavey Q1031 EQ	£ 149	Ch
Sony DTC 690	£ 349	Ch	Alesis Monitor 2's	£ 449	Ch
Digitech TSR12	£ 199	B	Emmeter LX20	£ 149	B
Digitech GSP2001	£ 150	B	XR1 XR300 Sync Box	£ 125	B
MT8 DNG1 (2 ch gate)	£ 149	Ch	BSS DPR901 (dynamic EQ)	£ 495	Ch
Studiomaster Ultra Gate	£ 149	Ch	Samson MR6 (6-trk cass')	£ 349	Ch
Tascam 234 (4-trk cass')	£ 299	Ch	Fostex 4050 (remote/sync)	£ 299	Ch

MOTU Micro Express

• MIDI interface for Macintosh and Windows 3.1 and '95. • Can connect to both a Mac and a PC at the same time. • 96 MIDI channels • 4 independent MIDI IN • 8 independent MIDI OUT • SMPTE time code (LTC) generator and reader • Converts LTC to MIDI Time Code (MTC) to sync a Mac, PC or any other device to SMPTE time code. • Supports MIDI Machine Control transport messages. • 8 presets with 8 programmable, battery-backed memory. • Internal Power Supply (no Wall Wart!)

96 MIDI channels for Mac / PC

RRP only £299

Philips DCC170/730

Highly affordable digital mastering in portable or hi-fi component formats.

Digital interface, mic/line inputs. Free remote with DCC730.

Including £35 worth of FREE tapes

Unbelievable value at £249

WRH

North London · 0181 440 3440
230 High Street · Barnet · Herts · EN5 5TD
Fax · 0181 447 1129

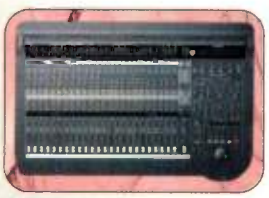
South London · 0181 407 8444
562 - 562b Brighton Road
South Croydon · CR2 6AW
Fax · 0181 407 8438

Mixing in the Digital Domain – on a Budget

At last there are cards with us for **Mac** and **PC** that give ADAT optical inputs & outputs and with the new range of Digital Mixers from Korg & Yamaha it's now possible to add high quality FX to Audio sequencer audio tracks keeping everything digital and having the advantage of total recall. These mixers are the **Korg 168RC SoundLink** and the new **Yamaha 03D** and the cards – the **Korg 1212 I/O** and the **EMAGIC Audiowerk8** (with a soon to be released ADAT output on a daughterboard). You might also consider adding an ADAT interface to your **Pro Tools** rig for use with one of these amazing mixers. Ring for more details and how they can be used with your current rig and come in for a demo.

Korg 168RC – up to 24 inputs (8 analogue, 2 x ADAT standard) / 22 outputs 3-band EQ mid parametric & two internal FX processors, 18 bit AD DA. **RRP £1899 Inc VAT**

Yamaha 03D – up to 26 inputs (18 analogue standard) / 18 outputs, 28 dynamics processors, 28 x 4-band fully parametric EQ, 20 bit AD DA, motorised faders, mouse input, Midi machine control, two internal FX processors, large integral screen, 4 aux sends, surround sound. **RRP £2999 Inc VAT**



Yamaha 02R – up to 40 inputs (24 analogue standard), 40 x 4-band fully parametric EQ, 20 bit AD DA, motorised faders, 8 aux sends, large integral screen, optional meter bridge. **RRP £6999 Inc VAT**

Coming in the near future – **Mackie Digital Desk** 48 input (48 analogue standard) internal meter bridge, SVGA output, 12 analogue inserts, V-Pots, motorised faders, 12 Famous mackie Mic pre-amps, 48 compressor / gates, two internal FX processors, transport controls, hard disk drive & floppy drive. **RRP £7999 Inc VAT**

Pro Audio

Do you want to configure a studio set-up? If you need advice on Desks, Mics, EQ, Compressors, Exciters, Multi-FX, DATs, etc.

Speak to DV for:
Drawmer, Lexicon, TLA, Eventide,
Joe Meek, Tube-Tech, Soundcraft, Mackie,
Neumann, Sennhelser, Behringer, AKG, Røde,
Focusrite, SPL, DBX, Digitech Blue Series, Yamaha, Octava, Nevaton, Motu, etc. etc.

Sounds

The new Akai MPC2000 and Dance Village Sound Library – The Unbeatable combination! DV is the home of the Akai Sampling range,

Call for details of our unbeatable deals!

Hard or Soft option?

Here at Digital Village we hold the widest range of digital recording products in the country – In stock and on demo! Whether it's Hard disk or Minidisk, DAT or ADAT, D80 or DR16, VST or ProTools. If you're confused as to which hardware device or computer based system will suit your requirements, Call us!

We have no affiliation to any computer company or product distributor and can offer honest unbiased advice.

At Digital Village we have hundreds of long-term customers that rely on our knowledge and enthusiasm when structuring and re-structuring their recording systems. So to get the facts – Call The Experts!

Credit terms available subject to status. Call for a quote

All major Credit cards accepted

Same day despatch for Mail-order items when in stock

Leasing terms available to companies or self-employed customers

Opcode

GREG D'ALESSIO of Opcode Systems offers some hints, tips, and advice for Mac users running Vision, Studio Vision Pro, and Overture software.

At Opcode Systems we receive a wide range of questions from our users, concerning everything from basic troubleshooting to specific features of our applications. The following tips and setup instructions answer a few of the most commonly asked questions, but there are also a couple of more sophisticated, 'high-end' techniques to help you get the most out of *Vision*, *Studio Vision Pro*, *Overture* and OMS, the Open Music System, running on a Macintosh.

MIDI COMMUNICATION PROBLEMS

A great many problems with MIDI software revolve around input from a controller not reaching the software, or output from the software not getting to a MIDI device.

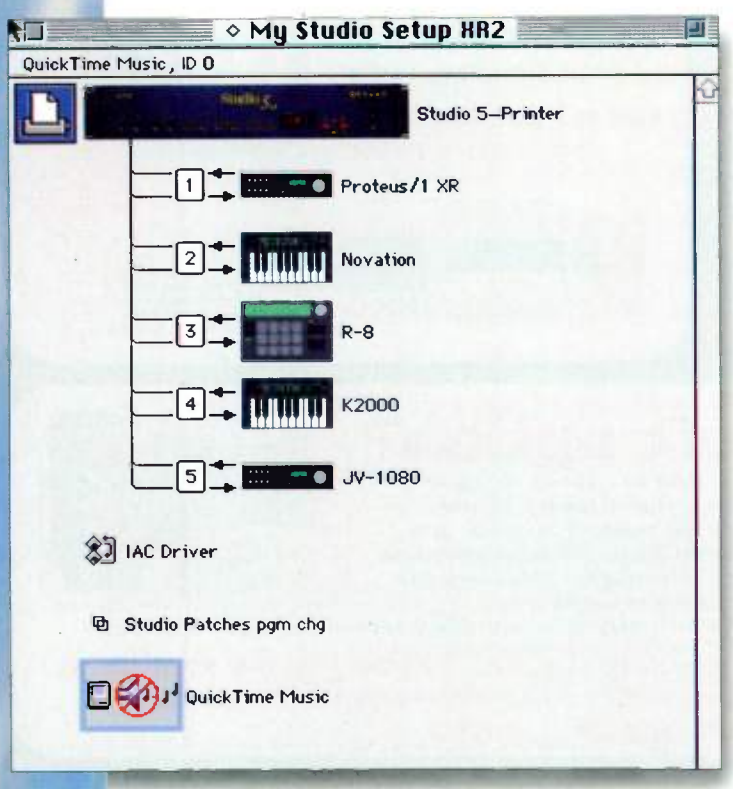


Figure 1.

These are MIDI communication errors and probably have one of several causes:

Your OMS Studio Setup is improperly configured or not current.

• Go through your Studio Setup very thoroughly to make sure that all of your devices are properly defined and depicted (Figure 1). Pay special attention to whether the ins and outs (virtual patch leads with arrowheads) to all device icons reflect the physical patch cords of your actual studio. Also, double-click on each device icon to open up its MIDI information window and check that it's set up to receive on the channels to which you want to send MIDI; make sure that you've established whether it is a controller and whether it is multitimbral. This is all especially useful if you haven't been using the program for a while, or if you've opened up an old Studio Setup in a later version of the program, as it's easy to forget about any changes you've made in your studio that might not be reflected in your OMS Setup.

• Make sure that there's a diamond by the name of your Setup in the title bar to indicate that it is the current studio Setup. If there isn't a diamond, choose Make Current from the File menu.

• Go to the Studio menu and select Test Studio. When you move the cursor over one of your device icons, it should turn into a note. (If it doesn't, check back in the Studio menu and make sure there's a check mark next to Test Studio.) Single-click on the device icon. You should hear random bursts of MIDI signals from your device — and these can be quite loud, so make sure your volume is down! Now go over to any controller keyboard that you have and play a key. You should hear a voice in your Macintosh say "MIDI received", and see the input arrow in the Studio Setup flash.

Your physical studio is not set up correctly.

• Check and double-check that all devices have the desired MIDI Ins and Outs going to the opposite kind of port (In to Out/Out to In) on your MIDI interface.

• If the communication problems are only with one device, try substituting different MIDI cables connected to it, to see if you have a bad one.

• If the problem is only on playback, check that the device's volume is turned up, and that any mode or other front-panel settings that allow it to send or receive MIDI are correctly configured.

• Try using a different serial cable from your Mac to your MIDI interface.

CORRUPTED PREFERENCES

Occasionally, one of the files that an application uses when it's running can become corrupted, usually resulting in small glitches or strange performance in a previously functioning program. If these files are trashed or moved when the program is not running, they will be recreated afresh when you re-launch the application.

For *Vision*, *Studio Vision Pro* or *Overture*, the file is in the Preferences folder (inside the System folder) and will be called 'Vision Preferences' (or 'Prefs'), or 'Studio Vision Preferences', and so on. If you develop an odd or anomalous problem in the application, simply quit the program, drag this preferences file into the trash and reopen the program. You will have to reset a few of your application's parameters — the Metronome's assigned MIDI note, for example.

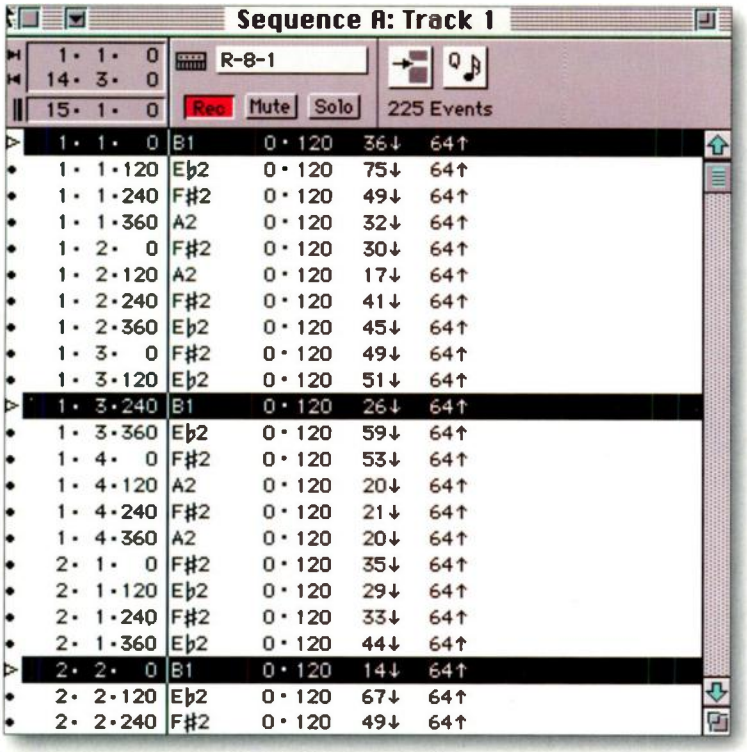
EXTENSION CONFLICTS

A very large percentage of the problems people have with their software on Macintoshes results from a conflict between various system extensions. Extensions are programs or parts of programs that are automatically loaded into RAM when you turn on your computer — you will see them as little puzzle-piece icons at the bottom of your screen when you boot up. In general, it's best to run with as few extensions as possible to avoid any conflicts.

Macintoshes with system 7.5 or later have an Extensions Manager control panel, where you can turn off extensions so that they won't be loaded into RAM when you restart; on Macs with earlier systems you can achieve the same result by dragging extensions from the Extensions folder (in the System folder) to any other folder on your computer — though creating a special Disabled Extensions folder and placing it in an obvious locale, such as your desktop, is highly recommended. There are also several commercial start up managers, such as *Now Utilities*, which will perform this same task.

When you're using Opcode software, you actually need only two or three active system extensions. The first of these is always necessary, and that's the Open Music System (OMS). If you're using MIDI only, without any digital audio, you can boot up your computer with only OMS enabled as a system extension and run all Opcode applications fine. If you're going to be doing any digital audio, you'll need either Apple's Sound Manager extension (recent operating systems have this built in) or Digidesign's Digisystem init, if you're using any Digidesign audio

Figure 3.



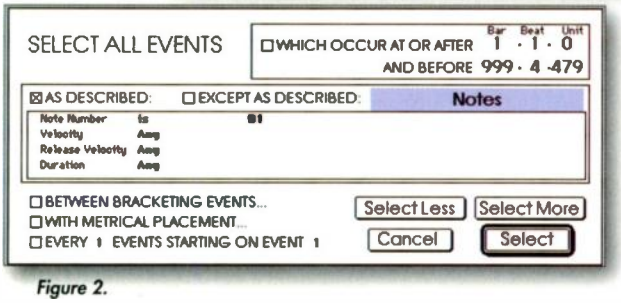


Figure 2.

hardware. In addition, if you're using a card or interface that requires an extension — Digidesign's Samplecell card, for example — you'll need that as well. You might also need your printer driver if you intend to print something from an application.

SEPARATING A DRUM MACHINE TRACK INTO MULTIPLE TRACKS

Suppose you record a track of drums into an Opcode sequencer from a drum machine or other MIDI device which has different sounds assigned to different notes, and you want to edit the volume or other parameters of the individual sounds separately.

• Make sure that the track is selected in the tracks window (the dot at the beginning of the track will be a triangle).

• Open the Select by Rule window — Edit then Select or Command+[E] — and choose Note in the decryption pop-up by clicking and holding on Events (see Figure 2). Then select 'is' from the description conditions (click and hold on the word Any in the description area), and either click and hold on the note name and select the note corresponding to the patch you want, or single-click on the note name and play the appropriate note on your keyboard controller, then hit Select. (If you have the drum machine set as the Thru Instrument by the keyboard icon, you will be hearing the actual drum sound as you do this.)

• When you open an edit window (list, graphic or notation) the selected notes will be highlighted (Figure 3). Cut them (by choosing Cut from the Edit menu or pressing Command+[X]), then select a different track in the tracks window and paste the notes you selected in the main track into the new track (using Paste from the Edit menu, or Command+[V]).

• Now assign this track to the same patch and you will have separated out a given drum sound which you can then control (volume, pan, velocity and so on) separately from the rest of the sounds in the original track (see Figure 4 on page 98).

REPLACING MIDI EVENTS WITH AUDIO EVENTS

Obviously, this tip is only relevant to MIDI + Audio sequencer owners! This is what to do if you have a sequence with a MIDI drum track and you want to replace it with some sampled drum sounds that you've recorded to your hard drive.

• Separate the different MIDI notes in the drum track, as above.

• Import your drum soundfile into *Studio Vision* (Option+[H]), select it, and copy it —

WEB LINK

You can find more suggestions like the ones in this article at Opcode's web site; go to http://www.opcode.com and use the 'Support' link to get to them.

Electro-Voice®

BEING PROFESSIONAL

MEANS NEVER HAVING TO SAY YOU'RE SORRY

Being professional means there are no excuses. That's why professionals in every field, from Metallica to the Ministry, from Riverdance to the Russian State Ballet, from Wembley Stadium to Wet Wet Wet trust Electro-Voice.

Inside every EV cabinet — from the DeltaMax and MT Concert Sound systems, through the T-series to the best-selling Sx range — you'll find top end technology (our components are a favourite with system installers the world over) put together with the expertise that comes from over 70 years of acoustic research.

Listen to them and you'll be convinced. The highs cut, the mids are rich and the lows really kick you in the chest. And rugged. Take them on the road, and you can be sure they'll go on night after night, just like you. Because, like you, they're thoroughly professional.

MADE TO GIG. MADE TO LAST. MADE IN THE USA.

Electro-Voice®

CALL 0181 646 7114

Shuttlesound

Opcode

this writes it to the clipboard.

• Open the Graphic edit window for the MIDI drum track and select the MIDI notes that you want to substitute with the audio file.

• Open the Substitute window in the Do menu. Click the 'Replace each selected event with the contents of the clipboard' radio button, and hit Substitute. *Studio Vision* will then put the audio file drum sound from the clipboard into the sequence in place of each MIDI note.

• Repeat this procedure with the other MIDI drum notes and different audio files and you can create a new audio drum part in place of the original MIDI file. Once you have substituted audio files for all the MIDI tracks, you can select all the audio tracks and choose Mix audio from the audio menu. This will create a single track of all the audio files which will play back well from hard disk.

RECORDING FROM AN EXTERNAL SEQUENCER

Imagine that you've created songs in an external MIDI device's built-in sequencer and want to record them into *Vision*. Here's what to do...

• Go to the Setups menu and check 'Input Map Enabled'.

• Open the Input Map Window and choose 'Make one line per channel' from the pull-down menu in the title bar.

• In the Options menu, set the Receive Sync mode to either External Beat Clock or MIDI Time Code, depending on what kind of timing data your external sequencer actually sends. Set the Receive Sync Device to be the external sequencer that's sending the data — make sure that the device has been defined as one that sends sync in your OMS Studio Setup. If you have a Studio 4 or MIDI Time Piece interface/patchbay, choose that instead. Note that in the 3.5 versions of *Vision* and *Studio Vision Pro*, there's a new Sync Options window which consolidates most of the above functions.

• Open the Record filter window in the Setups menu and choose All Except, then click the check box for Tempo. Filtering the Tempo data will allow for more accurate transcription when recording multi-channel data.

• Put the sequencer in Wait For Note mode, record-enable a track, click the Record button (or hit the tab key) and begin playing your sequencer. When the external sequencer has finished playing, hit Stop (or the return key).

The data from your external sequencer will be recorded all in one 'multi' track. If you select this track and choose Separate Multi Track from the Edit menu, each channel will be placed in its own track and you can assign them to different MIDI devices and patches, and edit the data exactly as if you had created the sequence in *Vision* itself (see Figure 5).

ASSIGNING MIDI CHANNELS TO DEVICE MODES

Many MIDI devices access their patches in different modes: Patches, Performances, rhythm, and so on. It is an inherent limitation that you can only send to one mode at a time for any given MIDI channel. You can, however, set up *Vision* so that certain channels of the device will always be set to certain device modes — so that, by switching between various MIDI channels, you can access all the different modes on your device at any given time.

• From the Windows menu in *Vision* or *Studio Vision Pro*, or the OMS Names window in the Options menu of *Overture 2.0* or later, open the Names window.

• Select the device that you want to reassign, go to the Names menu and select Show Channels. *Studio Vision* will then list all the various channels of the device in the names window.

• In the Device Mode column, assign different channels to different modes.

At this point, if you go to the Trumpet icon in the control bar you will see different names when you select different MIDI channels.

CREATING A PATCH-NAME LIST

If you get a new synthesizer and there is not yet a Librarian module in *Galaxy* (Opcode's editor/librarian software) or a patch name document in OMS for it, you can create your own patch name list in *Vision, Studio Vision Pro* or *Overture 2.x*.

• Define the device in your OMS Studio Setup and run a Test Studio to make sure that the device is

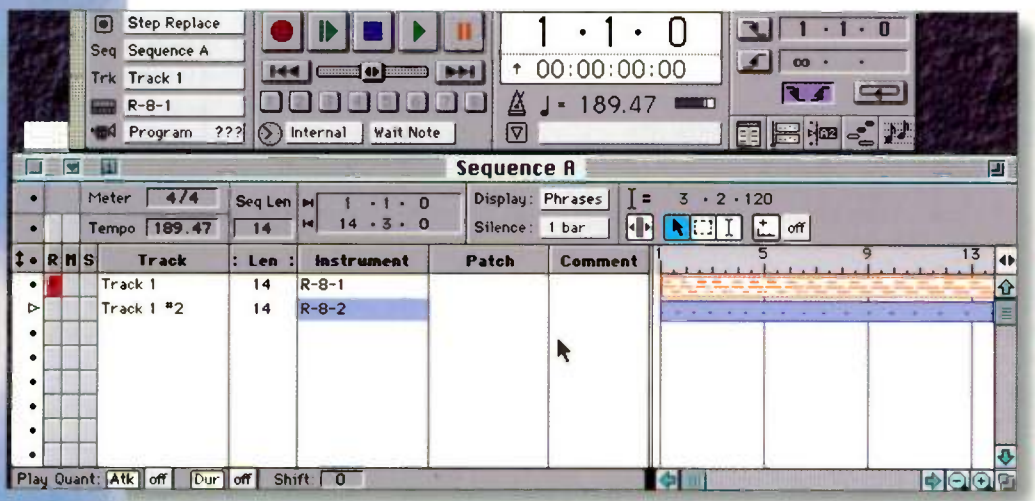


Figure 4.

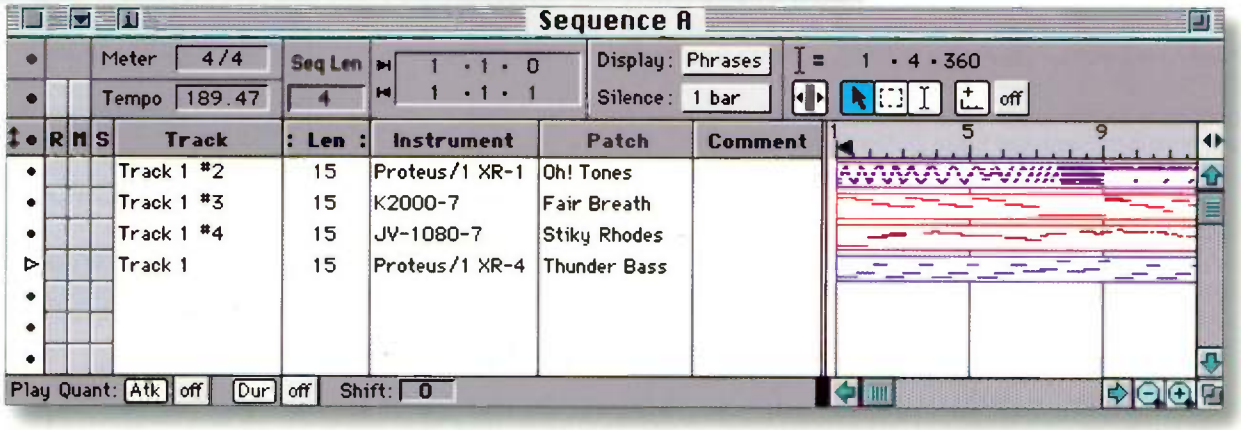


Figure 5.

DIRECT TO DISK RECORDING

NEW Emagic Audio werk 8 output card for Apple Power PC or PC only £499
Fostex DMT8VL only £949
upgrade yours with new hard disk card- in stock!
New and boxed Apple PPC 9500 16/2GB CD only a few left £1750
AKAI DR8 and DR16 packages available CALL FOR PRICE!
ROLAND VS880 V XPANDED with efects and 2.1 Gb HDD, limited edition so don't miss out only £1649
EMU DARWIN with internal 1GB Hard disk 8 track system in stock! PRICES FROM £2750!
Special deals on AKAI DR8 with MT8 Remote CALL!
New YAMAHA MD4 Digital four track Mini Disk £899

MPLER POWER PACKAGES

NEW LOW PRICES ON EMU ESI32 PACKAGES 3 FREE EMU CD ROMS WITH EVERY ESI32 FOR A LIMITED PERIOD!
NEW EXPANDED OUTPUTS COMING OUT SOON!
EMU ESI32 2MB RAM with SCSI £899
EMU ESI32 8MB RAM with SCSI £999
EMU ESI32 32MB RAM with EZ Flyer and CD ROM Player £1499

NEW EMU! NEW EMU!
New EMU E6400 expandable up to 128MB RAM 128 Voice 32 Multi 16 outputs FX card Dig I/O card DSP card - prices start from under £2500

NEW EMU E4X huge spec - prices start from under £3000
NEW EMUE4X TURBO Monster Sampler call for great spec and price £CALL!
WE HAVE LIMITED STOCK OF THESE MONSTER DEALS SO HURRY!
If you have a particular spec, call us now for the hottest price

AKAI SAMPLER POWER PACKAGES

AKAI S2000 SPECIAL 6MB RAM & CD ROM DRIVE & AKAI CD LIBRARY DISK £999!
AKAI S2000 10MB RAM and SCSI Zip Drive £1099
AKAI S2000 18MB RAM £999
AKAI S3000 XL 18MB and Zip Drive £1849
AKAI S3000 XL 32MB with Zip Drive £1999
AKAI S3200 XL 32MB £CALL! FREE ZIP
AKAI CD 3000i 8MB Sampler £CALL! FREE ZIP
NEW AKAI MPC2000 SAMPLER/32 VOICES EXCELLENT GRAPHIC DISPLAY/BUILT IN SEQUENCER SCSI PORT/EXPANDABLE UP TO 32MB RAM AND GUESS WHAT - ONLY £1199!
KURZWEIL K2500R with sampling option and 32MB £CALL!
NEW KURZWEIL 2500 Keyboards from £3149
YAMAHA SU10 sampler at only £279 with PSU and next day delivery
New Yamaha A3000 64 Voice sampler stunning spec for only £1299!
BUY ANY OF THE ABOVE SAMPLERS AND HAVE FREE ACCESS TO OUR SAMPLE LIBRARY!

DISK DRIVES

Iomega Zip drive with cartridge and cable £159
Zip cartridge 10pack inc. delivery £109
230MB Optical drive with 5 cartridges £CALL!

RECORDING

WE NOW STOCK THE EXCELLENT RANGE OF MONITORS FROM DYNAUDIO. CALL FOR PRICE!
EVENT P8 20/20 Bi Amp Monitors SPECIAL NORMALLY £999 PRICE £649!
Lexicon Alex CALL!
Lexicon Reflex £339
Lexicon MPX1 Multi effects excellent unit in stock CALL FOR PRICE!
NEW LA AUDIO GCX2 COMPIGATE £189 inc. next day delivery

PEAVEY PC1600 MIDI CONTROLLER ALWAYS IN STOCK £CALL!
AKG C1000 & C3000 IN STOCK £CALL!
BEHRINGER COMPOSER great value £CALL!
ALESIS Nanoverb Great value £159
EVENT 20/20 monitors stunning sound £325
SPIRIT Absolute Zero Monitors SEXY £199
MASS TECHNOLOGY 250 power amp £CALL!
MASS TECHNOLOGY 500 power amp £CALL!
Tascam DA20 DAT machine with 6 free TDK 60 DATS inc. next day delivery £699
Tascam DAP1 Portable DAT with 10 free TDK DATS inc. next day delivery £1349
NEW Peavey Dualfex 2 FX in one rack for only £159
Full range of Alesis effects in stock

SYNTECNO Tee Bee Bass Module call now!
JOMOX Xbase 09 Great Drum Machine call!
Alesis Monitor one's £299 inc. next day delivery
Alesis Monitor Two's £649
Fostex XR3-XR5-XR7 all in stock

MACKIE MS1202-VLZ in stock £399
MACKIE MS1402-VLZ in stock £CALL!
MACKIE CR1604-VLZ in stock £849
MACKIE SR series 24 track 4 bus LIMITED OFFER £1199
Behringer 24/8/2 Eurodesk - CALL FOR THE LOWEST PRICE AROUND

call on: 0181 570 4444 OR FAX ON: 0181 577 5818

OPEN TUESDAY TO SATURDAY
10.00-6.00

PROJECT MUSIC

433 - 437 GREAT WEST ROAD, HOUN SLOW, MIDDLESEX, TW5 0BY

E-MAIL: 100764,2105@compuserve.com

AKAI Series Samplers

£999

£1849

£1999

E-MU ESI 32 Profesional Digital Sampler

£999

MACKIE CR1604-VLZ in stock

£849

NEW YAMAHA A3000 64-voice sampler!

£1299

JOMOX Xbase 09 Drum Machine

£call

LEXICON ALEX

£call

NEW LA AUDIO GCX2 compigate!

£189

SYNTECNO Tee Bee -bass module!

£call

KORG X5D

NEW YAMAHA AN1X Mega Virtual Analogue Synth!

£899

£599

KORG Trinity Plus

NEW ROLAND JP8000

£call

NEW AUDIO WERK 8 for Power Mac & PC

£515

£499

ROLAND VS-880 Digital studio workstation

FOSTEX DMT 8VL

£949

£1649

Instant Credit facilities available call for a quote.
All major credit cards accepted. Next day delivery does not include Saturday or Sunday delivery.

PLEASE NOTE WE ARE NOW OPEN UNTIL 8PM ON THURSDAYS
MUCH, MUCH MORE IN STORE

WRH

SOFTWARE

CUBASIS for PC with Sound blaster to MIDI cable inc. next day delivery £129
CUBASE 3.0 for PC £299
CUBASE VST for Mac £299
CUBASE AUDIO XT for PC or Mac £CALL!
Full range of EMAGIC Software in stock - call for prices
Sampletude Pro for PC inc. next day delivery only £149
RED ROASTER SPECIAL! inc. next day delivery £569
Just about every kind of MIDI interface for Mac and PC you can think of in stock
OPCODE-MOTU
Time and space juke box in store - loads of the latest CD's in stock

HOT NEW ANALOG

NEW EMU PLANET PHAT DANCE MODULE IN STOCK NOW!CALL!
NEW WALDORF PULSE PLUS added features include audio input and a CV to Midi converter great value at £699!
NEW YAMAHA CS1X real time controller synth keyboard £525
NEW ROLAND MC 303 it's 303-909-808 and SH 101 all in one box! £515
EMU ORBIT dance module 512 presets Emulator 4 filters six outputs unique 'beat mode' need we say more? Dance your socks off for only £749
ORBIT version II software £49
BASS STATION RACK in stock yours for £339
WALDORF PULSE IN STOCK RRP £499
NOVATION DRUMSTATION 808 & 809 in a rack inc. next day delivery for just £419
AKAI SG01v Vintage synth module inc. next day delivery £269

MODULES

GREAT NEW YAMAHA VL70M VA SYNTH WITH FREE MAC OR PC EDITOR ONLY £479 inc. next day delivery
NEW ROLAND JV 2080 64 voice module in stock £CALL
ROLAND JV1080 NEW ALL TIME LOW PRICE LOADS IN STOCK IN TIME OF PRINT
CRAZY DEALS ON EX DEMO ROLAND EXPANSION MODULES CALL!
ALESIS QSR 64 VOICE MODULE CALL!
NEW LOW PRICE ON KORG 05R/W £279
NEW KORG NS5R 64 VOICE MODULE OVER 1100 PROGRAMS! £525 inc next day delivery
KORG X5DR ONLY £495 inc. next day delivery
AKAI MODULES IN STOCK £259!
KURZWEIL MICRO PIANOS IN STOCK - call for the hottest deal £359

KEYBOARDS

KORG X5 INC. NEXT DAY DELIVERY LIMITED STOCK £449
KORG PROPHECY LIMITED OFFER INC. NEXT DAY DELIVERY £699
Korg X5D £599.99 inc. next day delivery
Korg Trinity £ NEW LOW PRICE CALL
Korg Trinity Plus £NEW LOW PRICE CALL

New Yamaha AN1X Mega Virtual Analogue Synth including next day delivery for only £899
NEW EVOLUTION MIDI 49 NOTE KEYBOARD WITH PC SEQUENCER SOFTWARE FOR ONLY £119
NEW ROLAND JP8000 ANALOGUE SINTH - DON'T MISS OUT CALL NOW!
NEW ROLAND JP8000 ANALOGUE SYNTH in stock £1499
Roland XP50 inc. next day delivery £999
Roland A90 EX in stock £CALL
ROLAND XP10 real time filter control! £425
ROLAND XP80 76 - note version of above in stock
ROLAND A33 MIDI KEYBOARD £369
ROLAND RD500 NEW LOW PRICE £1249
Full range of FATAR controller keyboards in stock
Alesis QS8 88 note weighted 64 voice synth in stock for only £1549
ALESIS QS6 64 voice synth - comes with free CD ROM for Mac & PC loaded with software inc. next day delivery £599

SECOND HAND AND EX DEMO GOODIES

S/H Trace Elliot TEK150 Keyboard Amp as new! £349
S/H Spirit Folio 12/2 Mixer £225
S/H Boss BX 16 Mixer £249
S/H Roland M12E 12 Channel Rack Mixer with Parametric EQ £199
S/H Yamaha Rev5 Effects £499
S/H Roland SC88 £325
Novation Bass Station Rack AS NEW £260
Digidesign 882 Studio I/O £999
S/H Akai S01 sampler AS NEW £349
S/H Apple 7100/80 80MB RAM/700HD/CD CPU £1399
S/H Yamaha QY300 Seq module £450
S/H Roland D110 £169
EX DEMO KURZWEIL K2VX £2399
S/H KORG O1W/FD £849
S/H Yamaha O2R with ADAT sync little use £4999

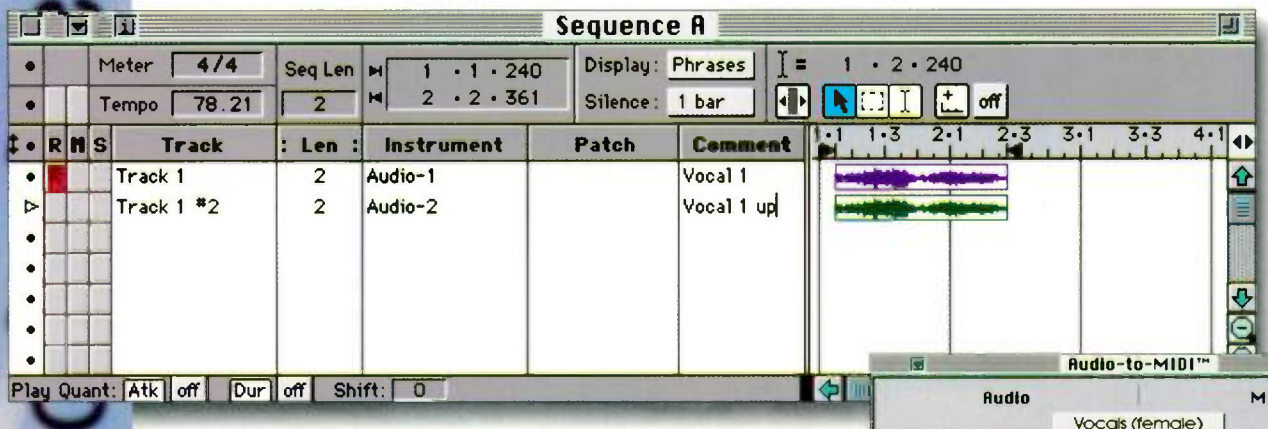


Figure 6.

Figure 7.

▶ sending and receiving MIDI signals.

• Go to the Names window in the Windows menu of *Vision* or *Studio Vision*, and single-click on the icon for your device in the Device column — if it's not there, check that the OMS Studio Setup has been made current.

• Double-click on the Patch Name Document column for the new device; this opens up the Patch Name Document window. Single-click on the patch name column for the first patch number (which defaults to 0). This will highlight the field and allow you to type in the name for that patch number.

• Repeat this procedure for all the patches you want to list. If you have multiple banks in your device, you can configure them in the Add Bank window in the Patches menu. When you've entered all the patch names, click OK and then save the document. This will take you back to the Patch Names from OMS window.

• At this point you can Subscribe to this document in the Names menu as though it was loaded from a synthesizer: select the device in the Names window and choose Subscribe from the Names menu — select your new Patch document and hit Open. Once you've done this, the names you entered will be available to you in the patch name window next to the Trumpet icon.

HARMONISING A VOCAL LINE WITH DSP

Suppose you have a vocal line that you want to sweeten up with a little close harmony. Rather than call in a bunch of back-up singers, you can use either the pitch-shifting or Audio-to-MIDI and MIDI-to-Audio Digital Signal Processing (DSP) functions in *Studio Vision* to get the same results in a fraction of the time.

PITCH SHIFTING

If you want to harmonise at a set, parallel interval, the best DSP function to use is Pitch Shift.

• Select the vocal line that you want to harmonise in the Track Overview window and copy it to a new track.

• Open the Pitch Shift DSP window and choose the interval you want to transpose the line to. Check Maintain Voice Character (version 3.5 only) to avoid 'munchkinising' the sound, and hit OK. This will create a new sound file that's a transposed version of the original (see Figure 6).

• With the original file on one track and the transposed version on another, on playback you will get an incredibly tight, smooth vocal harmony.

AUDIO-TO-MIDI & MIDI-TO-AUDIO

If the line you want to use as harmony isn't a straight parallel transposition of the original, you should use the Audio-to-MIDI DSP function.

• As before, select the vocal line in the Track Overview window and copy it to another track.

• Open the Audio-to-MIDI window in the DSP menu. You'll want to choose the appropriate template for the sound file you are using, and set the range as close as possible to the actual range of the soundfile for faster processing (see Figure 7).

• Once the MIDI notes have been generated, you can edit those notes (in terms of pitch level or pitch bend) in any way you want, as long as you don't add or subtract notes from the original. (You can play the MIDI notes back along with the audio to test the line — see Figure 8.) Select the MIDI notes and audio file in the Track Overview window, and choose MIDI-to-Audio in the DSP menu. Choose the functions you want to process and hit OK. *Studio Vision Pro* will take the changes you made to the MIDI notes and apply them to the original sound file. This produces an audio event with the same sonic characteristics as the original but a completely new melodic shape. You will probably want to delete the MIDI notes so that they don't play back with the audio.

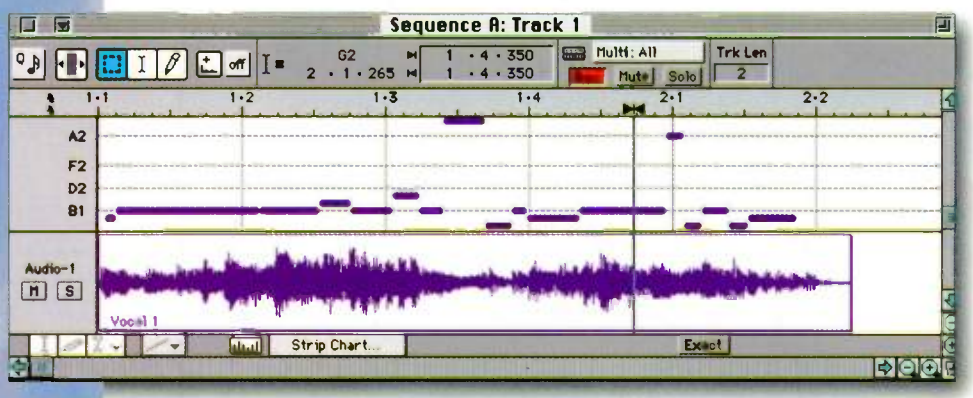


Figure 8.

smart syncing.

• comprehensive synchronization for the digital audio studio • includes support for: Pro Tools III™ (no SMPTE Slave Driver™ required), Alesis ADAT™ (no BRC™ required), Tascam DA-88™ (no SY-88 sync card or RC-848™ required), SONY 9-pin VTRs (no SMPTE card required), Word clock (word 1x), Digidesign "superclock" (word 256x), video (all formats), and any digital audio sequencer • MIDI Machine Control • SMPTE (LTC and VITC) in all formats (including 29.97 drop and non-drop) • Alesis LRC™ jack on front panel • video sync generator • SMPTE burn-in window • sequencer-triggered streamers with punch • 44.1 and 48K sample rates with 0.1% pull-up or pull-down • slaves to varispeed • custom-designed VLSI, high-frequency phase engine • no dithering or software delays •

the digital timepiece by

Mark of the Unicorn, Inc

19a HIGH STREET
SHEFFORD
BEDFORDSHIRE
SG17 5DD

TEL: 01462 812010
FAX: 01462 814010

musictrack

Why buy from us?

Confidence! BEST PRICE! We will match any genuine written quotation for items held in stock. (please ask for details)

Confidence! FAIL SAFE! Loan of suitable gear in the event of your purchase from us requiring an under guarantee repair.

MAIN DEALERS FOR ROLAND, KORG, YAMAHA, AKAI, EMU, ALESIS, SPIRIT, FOSTEX, TASCAM & MORE...

USED / EX DEMO SALE SELECTION

Leeds 0113 240 5077

Yamaha W5 76 note Workstation with 2 cards, flightcase and keyboard stand	£999
Yamaha SY99 Mega AWM Workstation	£899
Yamaha RY20 Drum Machine	£229
Zoom 9120 Studio Multi Effects Processor	£149
Alesis Micro Limiter	£49
Alesis Micro Enhancer	£49
Tascam DA30 Pro DAT Machine	£649
Kurzweil K2000R Rackmount Synthesizer	£1149
Emu Proteus FX Rackmount Synth Module	£349
Tascam 38 half inch 8 Track Recorder	£699
Seck 12.2 Mixer	£149
Seck 18.8.2 Studio Mixer	£499
Roland D20 LA Synthesizer with onboard 8 Track Sequencer	£349
Roland MT120s Sound Module / Sequencer	£449
Deltalab Effectron I Delay Unit	£39
Rhodes 660 Electric Grand Piano + Clavinet PCM Card	£49
Creative Essentials Orchestral Flavours Sample CD	£25
Zero G Junk Percussion Sample CD	£35
Emu Orbit V1 Synth / Dance Module	£649
Korg Wavestation Keyboard + 3 Cards	£649

PLEASE ASK FOR LUKE OR MARK

Leicester 0116 262 4183

Yamaha QY20 Music Sequencer	£175
Emu ESi32 Sampler + Iomega Zip Drive	£999
Emu E4 Keyboard Sampler (no box)	£2799
Allen & Heath GS1 Mixing Desk	£499
Yamaha PFP100 Stage Piano	£899
BBE 362 Sonic Maximiser	£169
Roland E15 Synthesizer	£179
Peavey Spectrum Synth Module	£199
Roland MVS1 Vintage Synth Expander inc. TR808 / TR909 & CR78 Sounds!	£249
Music Control Deep Bass 9 Synth Module with Midi / CV Gate	£249
Roland A33 Mother Keyboard	£349
Akai CD3000i Sampler with Analogue Inputs and built in CD ROM	£1499
Korg N264 76 Key Workstation with Arpeggiator + 4 Outputs	£1099
AKG C1000S Condensor Microphone	£189
AKG C3000 Large Diaphragm Microphone	£249
Rode NT2 Cardioid Microphone (soiled)	£399
Behringer Edison 3D Spacial Processor	£219
Behringer Rackmount Line Mixer	£199

PLEASE ASK FOR TAI OR MARI

Norwich 01603 666891

Marantz DCC DD82 Digital Compact Cassette Recorder	£199
Denon DRM510 Cassette Recorder	£79
Apple Macintosh Classic	£129
500Mb External SCSI Hard Disk	£199
Kam XLDD20 Deck	£149
Pioneer CDJ500 Compact Disc Player	£399
Akai SG01V Vintage Synth Module	£149
Yamaha Promix 01 Automated Desk	£1249
Tannoy PBM6.5 Studio Monitors	£199
Yamaha MU5 Synth Module	£149
Roland EP9 Piano	£599
Alesis Data Disc File Player	£199
Alesis MMT8 8 Track Hardware Sequencer	£99
Roland MC50 Hardware Sequencer	£449
Fostex D5 DAT Machine	£699
Akai DR4D Hard Disk Multitrack Recorder including 500Mb Hard Disk	£699
Emu Proteus 1 Synth Module	£199
Roland D110 LA Synth Module	£149
Yamaha TG55 AWM Synth Module	£199
Yamaha EMT10 Module - great piano!	£69
Roland JV1080 Synth Module	£699
C Lab Notator + Export (ST)	£99

PLEASE ASK FOR MARK FERGUSON

Nottingham 0115 958 1888

Roland E28 Synthesizer / Keyboard	£369
Soundtraks T Series 16.4.2 Desk	£499
Apple Macintosh IIsi with Monitor	£299
Atari 1040ST + HiRes Monitor	£199
Function Junction Midi Patchbay	£149
Yamaha NS10 Studio Monitors	£249
Tannoy Stratford Monitors	£179
Evolution EVS1 Synth Module	£129
Peavey DPMV2 Synth Module	£249
Studiomaster IMP1 Midi Mute	£149
Roland SPD8 Drum Pad Controller	£269
Viscount RD800 Midi Data Filer	£249
Yamaha EMQ1 Module	£99
Tascam 38 half inch 8 Track Recorder	£699
Roland MC500 16 Track Sequencer	£299
Boss DR550mk2 Drum Machine	£99
Fostex GT10 4 Track Dolby S Recorder	£249
Korg 01/W Pro X 88 Note Workstation	£1099
Akai Remix 16 DJ / Remix Sampler	£699
Behringer 1602 Mixer	£199
Sony TCD-D8 DAT Portable	£449
Peavey Midi Streamer	£149

PLEASE ASK FOR TERRY OR ROB

Sheffield 0114 264 0000

Casio CZ3000 PD Poly Synthesizer	£199
Kawai K1M Synth Module	£139
Korg XSC (01/W) 2S Orchestral ROM Card	£69
Akai Pro EX S01 Sample Editor (ST)	£5
Steinberg Pro 24 Sequencer Software (ST)	£5
Twelve Tone Cakewalk V5 (Dos)	£49
Sound Forge V.3 Software (PC)	£169
Simmons SMP 8.2 Mixer	£119
Korg KMX 6.2 Keyboard Mixer	£79
Aphex Type C Aural Exciter	£139
Peavey DPMV3 Synth Module	£279
Ensoniq EPS Sampler Workstation	£499
Viscount EFX2 Multi Effects	£99
Roland MT32 Synth Module	£129
DAC SCSI Interface for Atari ST	£29
Roland TR626 Drum Machine (damaged)	£19
Yamaha W7 Vintage ROM Board	£19
Orla DE49 Drawbar Organ Module	£149
Roland U110 Guitar / Keyboard Card	£29
Voice Crystal M1 Voice Card	£5
Korg X3 RAM Card	£39
Yamaha QY8 Sequencer	£79
Art DXR Elite Effects Processor	£79
Peavey Midi Librarian	£129

PLEASE ASK FOR RICHARD OR RYAN

Stoke 01792 205100

Tascam 38 half inch 8 Track Recorder	£699
Simmons SDS2000 Electronic Kit + 5 Pads	£299
Peavey Univerb 2 Digital Multi Effects	£75
Peavey SX 16 bit Stereo Sampler	£199
Dod 512 Studio Multi Effects	£119
Peavey Map 8x4 Midi Patchbay	£139
Kawai K1 8 Voice Polysynth	£175
Casio HT600 Keyboard / Synth	£159
Roland MGS64 32 Part Synth Module	£299
Fostex Mixtab + DCM100 Automated Mixer Package	£199
Viscount MF01 Midi File Player	£299
Kawai PHM Synth Expander	£129
Yamaha VL70M Virtual Modelling Module	£349
Yamaha FB01 FM Synth Module	£49
Turtle Beach Tahiti Sound Card (PC)	£199
Korg 01/W FD Workstation	£799
Yamaha TQ5 8 Track Sequencer / Module	£89
Atari Falcon D2D 4 Track Recording Software	£10
E Magic Micro Logic Sequencer Software (PC)	£79
Steinberg Cubase Score (PC)	£299
Yamaha MU5 Synth Module	£159
Roland MVS1 Vintage Synth Expander inc. TR808 / TR909 / CR78 Sounds	£249

PLEASE ASK FOR SHAWN OR PHIL

STOP PRESS! ACADEMY OF SOUND LEICESTER NEW SHOWROOM OPENS 28th JUNE!

MAIL ORDER 0345 697037

24 Hours a Day Response, 7 Days a Week

ACADEMY OF SOUND

Carlsbro

0113 240 5077 — 3 - 4 York Towers. 383 York Road, Leeds. LS9 6TA

0116 262 4183 — Academy of Sound. 22 - 32 Humberstone Road, Leicester. LE5 0AR

01603 666891 — Academy of Sound. 2 Sovereign Way. Anglia Square, Norwich. NR3 1ER

Finance Available
Subject to status
Written quotations on request
We Accept: Cash

Confidence! EXCHANGE!
If you are not completely satisfied with your choice of item, we allow upto 14 days for you to exchange your goods (subject to condition of the item/s.)

Confidence! SECURITY!
We have been established for over 28 years in the music business!

EVERYTHING REDUCED!

SUMMER Sale

starts saturday 5th July

Alesis QS6 Synth
• 64 Voice • 8Mb ROM • Host PC Interface • Q2 Type Effects • Superb Sounds • RRP £949

£579

Alesis QS7 Synth
• 64 Voice • 8Mb ROM • Q2 Type Effects • 76 note keyboard • RRP £999

£849

Tascam DA38
8 track digital recorder • TDIF in / out • 18bit A/D • 20 bit D/A • Jog Wheel

£1995 Save Over 30% off RRP

Studiomaster Diamond Mixers
• 2 band EQ • 2 Aux Sends & Returns

8.2 **£149** 16.2 **£219**

Computer Clearance
Master CD + CD Writer £299
600Mb External SCSI Hard Disk £99
DAC Datapac 44Mb Hard Disk £59
Opcode Midi Translator £99
Digidesign Sound Designer 2 ..... £149
Digidesign A / D Convertor + DAT I/O Interface + Sound Accelerator Card £49
E Magic Logic V2 (PC) £299
Quantum 365Mb Hard Disk £99

PLEASE CALL ROB OR TERRY AT OUR NOTTINGHAM STORE

Korg Prophecy
THE monophonic synthesizer!
• 7 Synthesis Types • Jog / Shuttle and Ribbon Controller • FAT sounds • Arpeggiator • Effects • Realtime control and loads more!

£699 Last Ever Stocks!

Yamaha Promix 01
Automated digital mixer with motorised faders, DSP effects and much more

£1299

Roland PMA5
Portable music composer featuring 306 quality sounds, 21000 event sequencer and touch panel interface!
• 4 backing tracks • 4 melody tracks • RRP £445

£349

Akai SG01 Sound Modules
Vintage Synth, Piano or General Midi Sounds • 32 Voice • 16 Part Multi timbral • Reverb Effects • RRP £299

£199 Limited Quantity

Tascam Porta 03mk2
The cheapest 4 track portastudio with Pan, Level & Dolby noise reduction!

£149

Roland JP8000 + Free Zoom 1204 Effects!
Serious analogue polysynth + £199 worth of multi effects unit FREE!!

£1499 Exclusive!

Zoom 1202 Effects
Possibly the most cost effective 16 bit multi effects unit available! • Loads of Usable Presets • 2 effects at once & more

£99 Buy it now!

Yamaha MT4X
• 3 band EQ • 2 Aux Sends • Single / Twin Speed • LCD Meters

£379

Yamaha MT50
• Twin Speed • 2 Band EQ • Aux Send • DBX NR

£279

Alesis 3630 Dual Channel Compressor
• Ratio, Threshold, Decay and Attack controls • RMS / Peak Compression • Hard / Soft knee dynamic Curves

£179

Korg X5DR Module
64 voice sound module featuring the classic Korg sound including many M1 favourites! • PC interface • FX

£389

Electrovoice SX100 P.A. Speaker Cabs
• 200w • Lightweight (no more hunking huge cabs to gigs) • Horn • 2 Way • 80hz - 25kHz Response

PR **£799**

MAIN DEALERS FOR ROLAND, KORG, YAMAHA, AKAI, EMU, ALESIS, SPIRIT, FOSTEX, TASCAM & MORE...

... during the weekend of 28th / 29th June we will be openng our all new showroom in Leicester. Over the weekend there will be a host of events including Prize Draws, special guest appearances and more!!

ACADEMY OF SOUND

Carlsbro

11 - 13 Hockley, Nottingham NG1 1FH
0115 958 1888

Academy of Sound, 720 - 724 City Road, Sheffield. S2 1GJ
0114 264 0000

35 - 39 New Hall Street, Hanley, Stoke on Trent. ST1 5HQ
01782 205100

ACADEMY OF SOUND

MAIL ORDER **0345 697037**

24 Hours a Day Response, 7 Days a Week

Electronic Muse

INTERACTIVE COMPOSITION SOFTWARE FOR THE PC

Shakespeare had his Dark Lady for creative inspiration, Dante had his Beatrice, Petrarch had his Laura — and you? You've got your PC! JANET HARNIMAN COOK compares three different interactive composition packages which aim to provide that elusive spark...

It's a quiet afternoon with no one around to disturb or distract you; everything in the studio is working fine, and the PC is running as sweet as can be. The only thing wrong is that you're totally devoid of musical inspiration. Does this sound familiar? And what can you do about it? Well, you could play safe and rewrite your best tunes, you could recycle some clichés — you could even go away and do something completely different. But a better option might be to accept a little help from your PC...

BEATING THE BLOCK

Your PC can help you beat the block if you have one of the interactive MIDI composition applications on the market. These are actually a specialised variety of MIDI sequencer, and if you're familiar with sequencing basics you should have little difficulty understanding the principles involved.

In this article we'll take a look at three packages: the Steinberg *Cubase* Styletrax module, PG Music's *Band-in-a-Box* v7.0e, and Sseyo's *Koan Pro* v2.0. Each of these applications generates music by applying style templates to live and sequenced musical input. *Band-in-a-Box* and the simpler *Cubase* Styletrax are primarily orientated towards providing auto-accompaniment conforming to conventional musical forms, whereas the enigmatic *Koan Pro* is directed towards the creation of more abstract evolving and mutating atmospheric soundscapes. *Koan Pro* has been endorsed by Brian Eno, who used it for his *Generative Music 1*, released in 1996 — not on CD, as might be expected, but on floppy disk in *Koan* album format.

Both *Band-in-a-Box* and *Koan Pro* pieces can be exported as MIDI files, and the output from Styletrax can be converted to standard MIDI data and edited directly in *Cubase*. In practice, these programs should be useful production aids, but I feel that their strength lies in originating and developing ideas rather than in creating complete musical pieces — I usually find it necessary to port the results over to a dedicated MIDI sequencer for more precise and quicker editing. It may also be productive, when experimenting with these applications, to record the audio output to DAT or HDR, and edit it in a wave editor such as *Sound Forge* or *WaveLab*.

But these programs can do far more than help you beat writer's block: by partially automating the production process, they liberate you from some of the more tedious and repetitive chores involved in song production, freeing up your time for other, more creative activities. The use of style templates can introduce new influences into your music, and the ability to build templates customised to your own styles and studio setup could revolutionise your writing process. You could even use these applications on stage if you are not averse to taking your PC to gigs. *Band-in-a-Box* and Styletrax are also powerful educational tools, and even students with minimal formal musical ability should be able to produce musical results without too much difficulty.

The processing requirements of these programs are quite modest, and you don't need a big PC to run them. A modest 486 DX2-66 machine with 8Mb will do the trick, as long as it's equipped with a GM soundcard or linked to an external GM module via a MIDI interface.

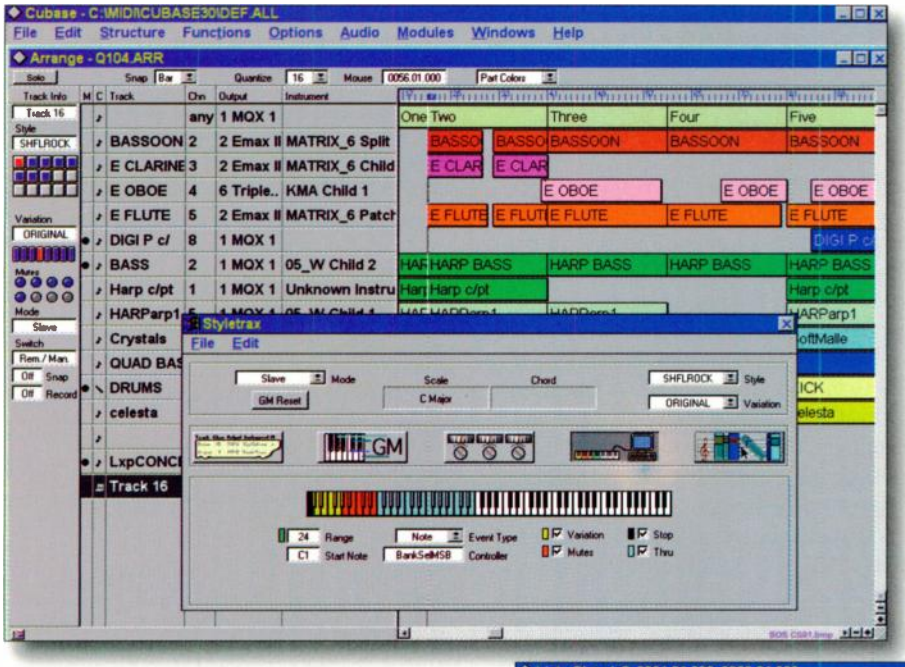
STEINBERG *CUBASE* STYLETRAX

Although Styletrax is the simplest of the three applications, it is nevertheless a very capable creative tool and is great fun to use. The Styletrax module integrates fully into the *Cubase* environment and has been included with the *Cubase* PC range from version 3 onwards. Styletrax has its spiritual roots in the *Cubase* IPS (Interactive Phrase Synthesizer) but is much more user-friendly and has a simple interface and a clearly-written section devoted to it in the *Cubase* Modules manual. However, as yet, Styletrax does not feature in the *Cubase* on-line help.

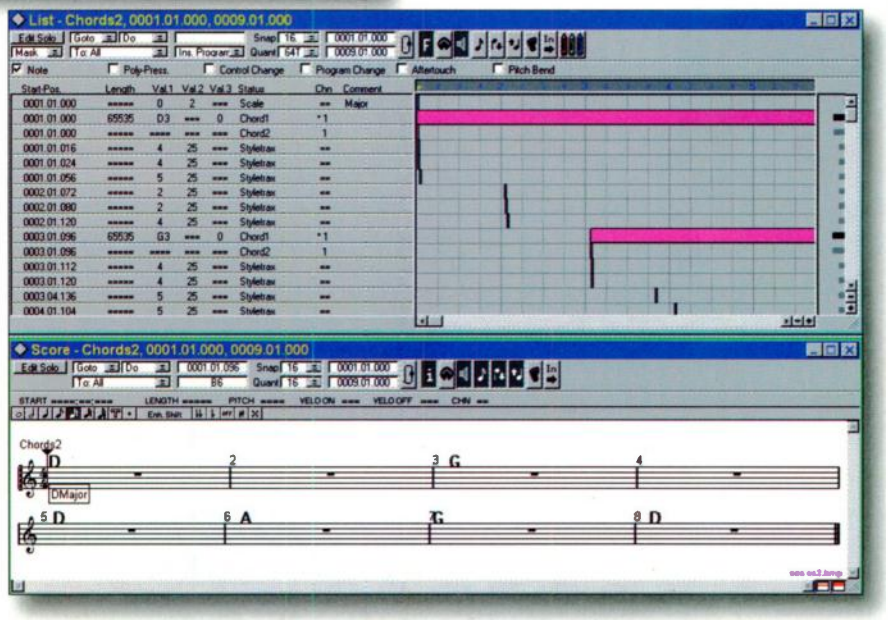
USER INTERFACE

The user interface comprises two software elements: the Styletrax Inspector on the main *Cubase* arrange page contains information about the currently active styles, variations and play modes, and complementing this is the Styletrax editor, which is made up of five modules:

- Library mode lets you see at a glance the names of the different styles and variations in use.
- From Remote Keyboard mode you can edit the keyboard zone configuration that governs the remote selection of variations, instrument mutes and playback stop, together with the Thru keys which are used to input chords during record or playback.
- Trigger and scale preferences are defined in Parameters mode.



Styletrax's user interface consists of two software elements: the Styletrax editor and the Inspector pane.



Styletrax information on view in the Cubase Score and List editors.

- MIDI instrument definition is found in Tracklist mode and handles the settings of the MIDI instruments.
- GM mode defines the instrument map; although Styletrax defaults to a standard GM MIDI map of 128 voices and five drum kits, it can be configured to accommodate multiple MIDI port configurations.

To explore Styletrax, first create a new track and then look in the *Cubase* Track Class list to check that the Styles module is loaded. Select a Style, click on the Inspector mode list, select Listening and put *Cubase* into play. Chords on the octave above middle C are added from your MIDI keyboard to determine the key and modulation patterns that are imposed on the Styletrax backing parts.

STYLES & CHORD TRACKS

Up to 15 different Styles can be loaded at any one time, each containing up to eight Variations which, in turn, may have nested Variations that allow different chords to produce individual patterns. Variations are sequenced from *Cubase* Chord tracks, or may be triggered from a MIDI keyboard. There are five other keyboard input modes in addition to Listening mode: Slave mode locks to the chord playback sequence defined in the Chord track; Easy mode allows one-finger chord input; and the remaining three modes — Roland, Yamaha and Casio modes — conform to the home keyboard auto-accompaniment chord-triggering conventions. Chord tracks do not contain MIDI data and are used exclusively for Styletrax control information. The MIDI channel and program change parameters in the Track list do not affect the finished recording, and are there simply to define the MIDI thru sound that is heard whilst recording the Chord track.

Another way of entering chord progressions is to convert MIDI tracks into Chord tracks, but one thing to remember when creating Chord tracks is that your input must consist of at least basic triads, otherwise the Styletrax chord recognition routines will not function correctly. Once you're happy with your track you can change it back into a standard MIDI track — the Styletrax instrument parts will then be transformed into normal MIDI parts on discrete *Cubase* tracks. To customise your Styletrax setup you can create your own Style templates, which may contain up to eight *Cubase* MIDI tracks.

SUMMARY

The *Cubase* Styletrax module can be great fun, and is accessible enough to be suitable for musicians of all abilities and ages. An added advantage is that if you're a *Cubase* user, it's free!

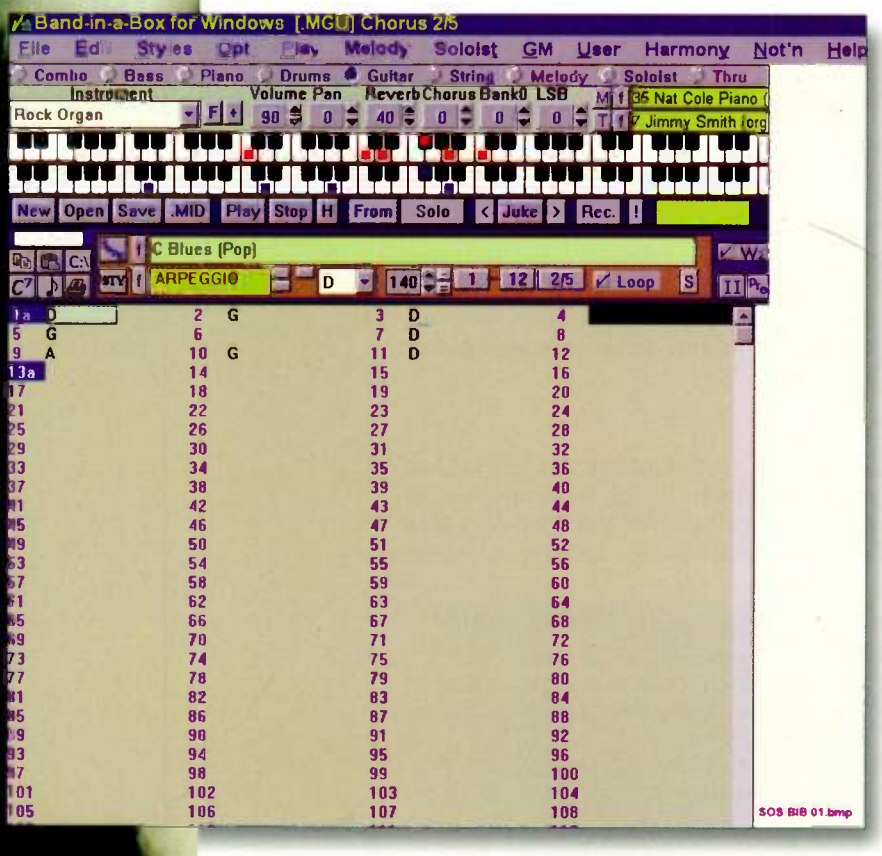
info
E Steinberg *Cubase* from £329.
A Harman Audio, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood. Herts WD6 5PZ.
T 0181 207 5050.
F 0181 207 4572.
E maria@harman.co.uk

PG MUSIC *BAND-IN-A-BOX*

Band-in-a-Box has been around for quite a few years now in Atari, PC and Mac versions. The standard edition of the program (£89) is a 16-bit application for Windows 95 and legacy Windows 3.1, and comprises six floppy disks — four program disks and two soloist disks — plus a comprehensive 314-page manual supplemented by on-line Help and Tip of the Day. The user interface is a little dated, but reasonably well laid out. Although it is not possible to use more than a single MIDI port on your PC with *Band-in-a-Box*, there is special provision for Roland GS and Yamaha XG extended General MIDI. I hooked up the Yamaha DB50XG daughterboard on my soundcard, and took advantage of *Band-in-a-Box*'s user bank function, with which I was able to customise the default instrument map to include instruments from not only the DB50XG's GM bank, but also those located in its higher voice banks. In addition, a wide range of general customisation options, such as harmonisation templates, styles, default instrument ensembles and drum maps, is available.

Band-in-a-Box is a versatile program that can generate drum, bass and various instrumental accompaniment styles, based on a chosen Style and your choice of chords. It can also harmonise solo lines, or even improvise solos, and those with higher ambitions can create their own Styles.

Songs are constructed by entering chord and part markers onto the Band-in-a-Box worksheet bar pane.



SONG CONSTRUCTION

You construct a Song by entering chord and part markers onto the Worksheet bar window, and then defining the key, the tempo, and a performance style. On the basis of your selections, *BIAB* can generate an arrangement of up to nine players or parts, each on separate MIDI channels. The melody can then be entered from your MIDI keyboard, and as you do so you can instruct *BIAB* to create harmony lines. You can type in lyrics from the PC keyboard, add 'improvised' Soloist parts, and, during playback, mute instruments, adjust MIDI parameters (such as patch, volume, pan and reverb) and rearrange song sections. Styles and instrumental ensembles can be mixed and matched between *BIAB* songs according to your own musical taste, and apparently incongruous musical styles can often provide the spark of inspiration that leads to new ideas and songs.

EDITORS

The MIDI editing power available in the *BIAB* score and key editors is limited compared with that found in dedicated MIDI sequencers, but you can export your song as a MIDI file, or copy it to the Windows clipboard prior to pasting it to your main sequencer for fine-tuning. It's a shame you can't import MIDI files, as this would enable you to build your own style templates more easily, but the template customisation options are extensive and you can save your piece, with all its parts and settings, as a *Band-in-a-Box* songfile. There are good basic score-printing facilities, and the copyright on all the music you create using the program resides with you.

• SUMMARY

One of my only criticisms of *BIAB* concerns the gaps in the range of styles included with the package — for example, there's lots of lounge jazz and MOR, but no rave, bhangra, or Celtic; the rap tracks are pretty lightweight, and the hip-hop is... well, more hop than hip! However, the quality of the arrangements is often surprisingly good, and although a GUI face-lift and the addition of PC

RANDOM COMPOSITION SYSTEMS

Random composition is not a new idea; Mozart developed such a system, based on short musical phrases and using dice to determine the play sequence. Not surprisingly, the results were less than satisfactory. A similar random-choice technique can be used for writing song lyrics or poetry:

- **Cut 40 pieces of paper to about the size of a playing card.**
- **Write a different word on each and shuffle them.**
- **Pick a piece of paper at random.**
- **Write the words down as phrases on your lyric sheet.**

If you're very lucky you might find yourself with a stunning ready-made lyric; on an average day you may find an interesting juxtaposition that fires up your imagination.

THE STUDIO 400 TOWERS OVER THE COMPETITION.

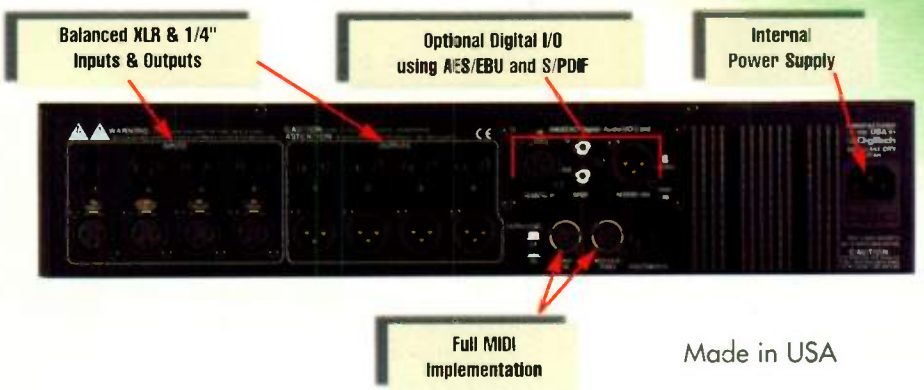
What if you could get the processing power of four independent multi-effects processors, capable of doing up to 8 different, truly professional quality effects at once all in one affordable box? And how about throwing in balanced XLR analog and digital I/O capability?

Well, it's here, the new Studio 400 from DigiTech. It does all of the above and much more! Use up to 8 high quality effects at one time in any order in an endless number of combinations. Choose from multiple Reverbs, Delays, Choruses, Flangers, Auto Panner, Intelligent Pitch Shifting, Rotary Speaker Simulator, Compressors and more.

The Studio 400's quick and easy editing capabilities make changing effects and parameters painless. And for automated studios, an extensive modifier section lets you control up to 8 parameters per program via MIDI or with the Studio 400's unique dynamic and LFO parameters. Digital studios can access the Studio 400 in the digital domain using both AES/EBU and S/PDIF formats with the optional digital I/O.

Looks like the competition just can't measure up. Get the facts. Then get the Studio 400 from your local DigiTech dealer.

	STUDIO 400	ENSONIQ DP/4+	TC M2000	ENSONIQ DP/2
Ins/Outs	4/4 - 1/4" TRS + XLR	4/4 - 1/4" TRS	2/2 - XLR	2/2 - 1/4" TRS
8 different Effects in any order	yes	no	no	no
Graphic Display	yes	no	yes	no
A/D	18 bit 128X	16 bit	20 bit 64X	16 bit
D/A	20 bit 8X	16 bit	20 bit 64X	16 bit
Sampling Freq.	44.1, 48kHz*	n/a	32, 44.1, 48kHz	n/a
Freq Response	20-20kHz	2-18kHz	10-20kHz	2-16kHz
Digital I/O	AES/EBU, S-PDIF (optional plug-in)	none	AES/EBU, S-PDIF	none
THD @ 1kHz	<0.003%	<0.0032%	0.003%	<0.0032%
S/N ratio	-96dB	-90dB	> -96dB	-90dB
Power Supply	Internal	Internal	Internal	External



Made in USA

DigiTech

All product trademarks are the property of their respective owners.

Distributed exclusively by ARBITER GROUP PLC, Wilberforce Road, London, NW9 6AX. Tel: 0181 202 1199 Fax: 0181 202 7076. Web site at: http://www.demon.co.uk/arbiter

Styles on offer in Band-in-a-Box.

▶ multiple MIDI port support would not go amiss, *Band-in-a-Box* for Windows represents amazing value for money. It's a genuinely useful songwriting and music creation tool that should have a place in any well-equipped MIDI studio — and if you want to swap files between different computer platforms, this is easy to do, as the standard *BIAB* file format can be read by PC, Atari and Macintosh.

info

£ PG Music *Band-in-a-Box* v7.0e £89.95; upgrade from previous versions £45. Optional accessories include four performance styles disks, two tutorial videos and a CD-ROM.
A Arbiter Music Technology, Wilberforce Road, London NW9 6AX.
T 0181 970 1910.
F 0181 202 7076.
W http://www.demon.co.uk/arbiter
E PG Music email: 72060,1401@compuserve.com
W PG Music web site: www.pgmusic.com

SSEYO *KOAN PRO* 1.2

A Koan is a paradox or an unanswerable puzzle and derives from Japanese Zen Buddhism, where Koans are employed by Zen masters to confound the rational, mundane mind and facilitate enlightenment. *Koan Pro* is a powerful generative music application from UK developers Sseyo and is best suited to creating free-flowing ambient music liberated from the constraints of conventional musical forms. This is achieved using the Sseyo Koan Music Engine (SKME), which generates music in response to your input.

The *Koan Pro* package consists of two floppy disks containing the installation files for 32-bit Windows 95 and 16-bit Windows 3.1, plus a well-written manual. To help get you started there are tutorials, a selection of good demo songs, rhythm templates, and comprehensive on-line and contextual Help. The *Koan Pro* mouse and keyboard shortcuts conform to standard Windows conventions, and there is extensive use throughout of the right mouse shortcut menu. Values are entered from mouse or keyboard, and *Koan Pro* will respond to input from an external controller such as a MIDI keyboard or MIDI guitar. Musical pieces can also be imported or saved as a type 0 MIDI file.

POWER VIEW

The main page in *Koan Pro* is the Power view: tracks are displayed horizontally, with the Track Definition table to the left. The Envelope view scrolls left to right along the time line. Track and patch names, MIDI channel and Mute status are constantly on view, and the *Koan* edit windows for voice types and playback parameters are shown via the buttons situated above the display. The top tool bars feature the usual file-handling shortcuts, transport controls, piece definitions, and the rule definitions dialogues. The status bar displays information about menu, grid and toolbar items, together with tempo, time signature and play timings.

BASICS

Koan Pro operates through the interaction of Voice types, Rules and Envelopes, which together determine the playback characteristics of a track and govern how a connected instrument's voices react over time. The five Voice types determine the basic role of each instrument that is used: ▶

BRIAN ENO: *GENERATIVE MUSIC 1*

If you get the chance, check out Brian Eno's *Generative Music 1* (available from Sseyo at £39). This is wonderful atmospheric music created with *Koan Pro* and is certainly worth a listen. The package consists of a well-presented package featuring an eerie Anton Corbijn photograph of Eno on the box front, a booklet containing extracts from Eno's diary and a floppy disk with the musical pieces, plus *Koan Plus* playback software. The pieces should be played through a Creative Labs AWE32, SB32, AWE64 or TDK soundcard, as extensive use is made of the EMU 8000 controllers exclusive to these cards.

Total Harmony

The new Vocalist Performer from DigiTech brings incredibly life-like three-part harmonies within the range of *every* performer. The most affordable harmoniser yet - and so easy to use! Just hit the key and scale buttons and you're free to concentrate on *your* performance!

- **Up To 3 Part Harmony (Original + 2 Voices) Of Stunning Quality**
- **Auto Doubling Effect**
- **50 User Presets With 6 Style Variations**
- **XLR Mic Input/ Stereo Outputs**
- **Digital Reverb**
- **A/B Part Programming (For Bridge, Chorus Etc.)**
- **Optional Footswitch For A/B Switching, Reverb and Bypass**
- **Ideal For Live Use**

Other Vocalist Products From DigiTech...

VOCALIST WORKSTATION
• Up to 5 part intelligent harmony • Chordal, Scalic and Vocoder Modes • 'Gender Bender'© • Digital Reverb • 50 User/50 Factory Presets • MIDI Control • Pitch Correction

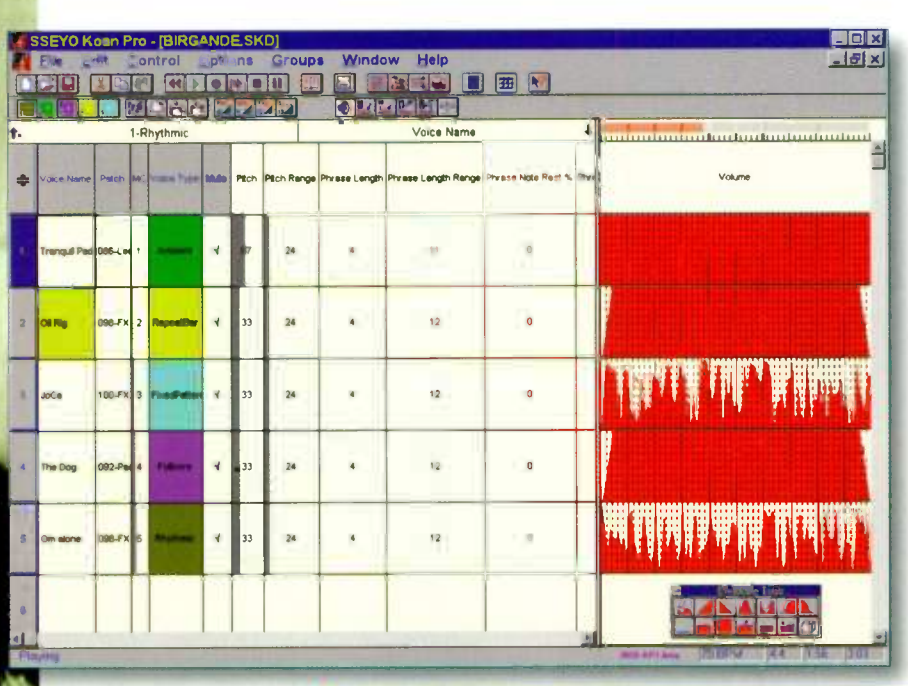
MIDI VOCALIST
• Up to 5 part intelligent harmony • Chordal, Scalic and Vocoder Modes • Comprehensive MIDI Control • XLR Mic. Input • Ideal For MIDI File Use

STUDIO VOCALIST
• Up to 5 part intelligent harmony • Chordal, Scalic and Vocoder Modes • 'Gender Bender'© • 99 User/99 Factory Presets • 48v Phantom Power • MIDI Control • Pitch Correction • Separate Outs For Each Voice

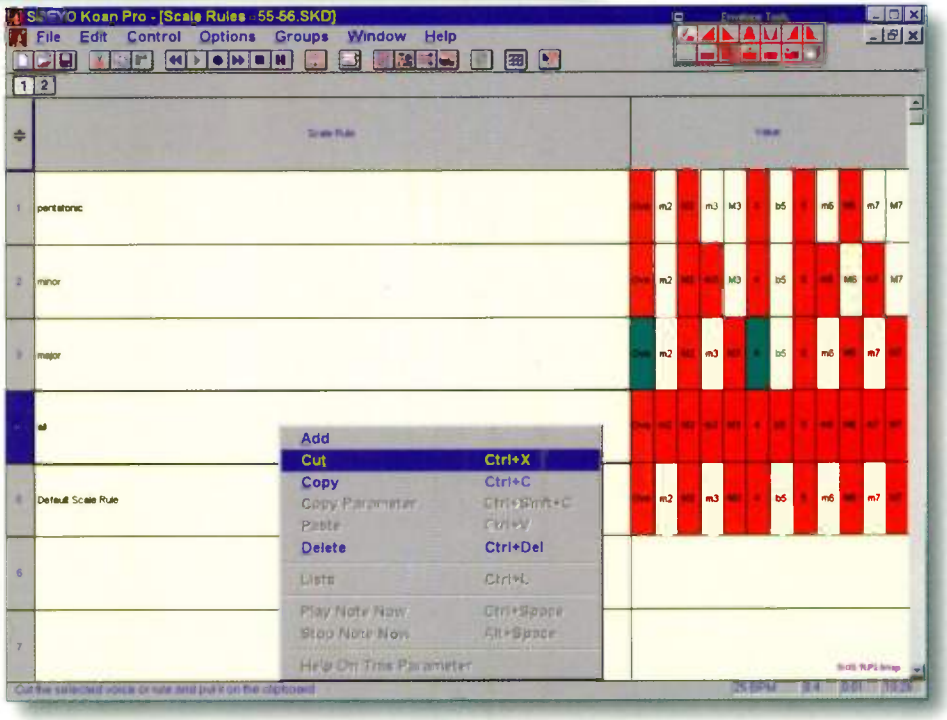
DigiTech

Distributed exclusively by
ARBITER GROUP PLC
Wilberforce Rd. London NW9 6AX
Tel: 0181 202 1199 Fax: 0181 202 7076
Web: http://www.demon.co.uk/arbiter

WRH



The Koan Pro Power view displays instrument voice parameters and the envelope view.



The Koan Pro scale rule editor determines the pitch of each note played.

- The 'Follows' Voice type references and mimics the qualities of another voice and is used to create echo and counterpoint.
- The 'Repeat Bar' Voice type reiterates material used in earlier bars.
- The 'Fixed Pattern' Voice type plays notes based on a note sequence and/or note lengths entered in the Pattern Editor grid, and can be used to introduce melodic material.
- The 'Ambient' Voice type is used to create notes with specific durations and can produce drones.
- The 'Rhythmic' Voice type is primarily controlled by the program's Phrase Length and Phrase Gap parameters. The Harmony and Scale rules calculate the pitch of each note that is played, and note durations conform to the Rhythm rules.

Rules are based on measures of probability — that is to say, they determine the likelihood of an event occurring over the duration of the piece. For example, when applied to the Scale rule, an event probability of zero means that that particular note will not be played at all, while a probability of 20 means that the note has a 20% chance of being played.

Envelopes are edited graphically, with changes entered from the envelope toolbar, and can be applied for the control of volume, velocity, pan, tempo, velocity range, velocity change and velocity change range. Every value in *Koan Pro* can have a List associated with it: this forms a pool of possible factors that the voice can be influenced by — for example, a list of specific instrument voices could

be used to restrict a random program change selection setting. In fact, the interaction between the rules can be a mind-boggling affair, since there are around 150 parameters to tweak and rules can be applied at the Piece level (globally), or to individual instruments at Voice level. You must be prepared to adopt an experimental approach!

Space prohibits more than a cursory examination of the staggering range of voice- and phrase-shaping possibilities afforded by *Koan Pro*, but a few of the other options include controllers for reverb, chorus, portamento, sustain, expression, damper and softness. If you have a Creative Labs AWE32 soundcard, you can also take advantage of the special provision made within *Koan Pro* for controlling this card's EMU 8000 sound generator (featuring LFOs, oscillators and voice envelope parameters) and Creative's proprietary SoundFonts.

To get an idea of how *Koan Pro* works, load in the '55-56' demo song — a slow, pleasantly mutating piano and choir piece written by Tim Didymus — from the SKD folder in the *Koan Pro* directory. Soloing a track will enable you to listen to it in isolation, to assess its content and hear accurately the effects of parameter changes as you make them.

> "These programs can do far more than help you beat writer's block."

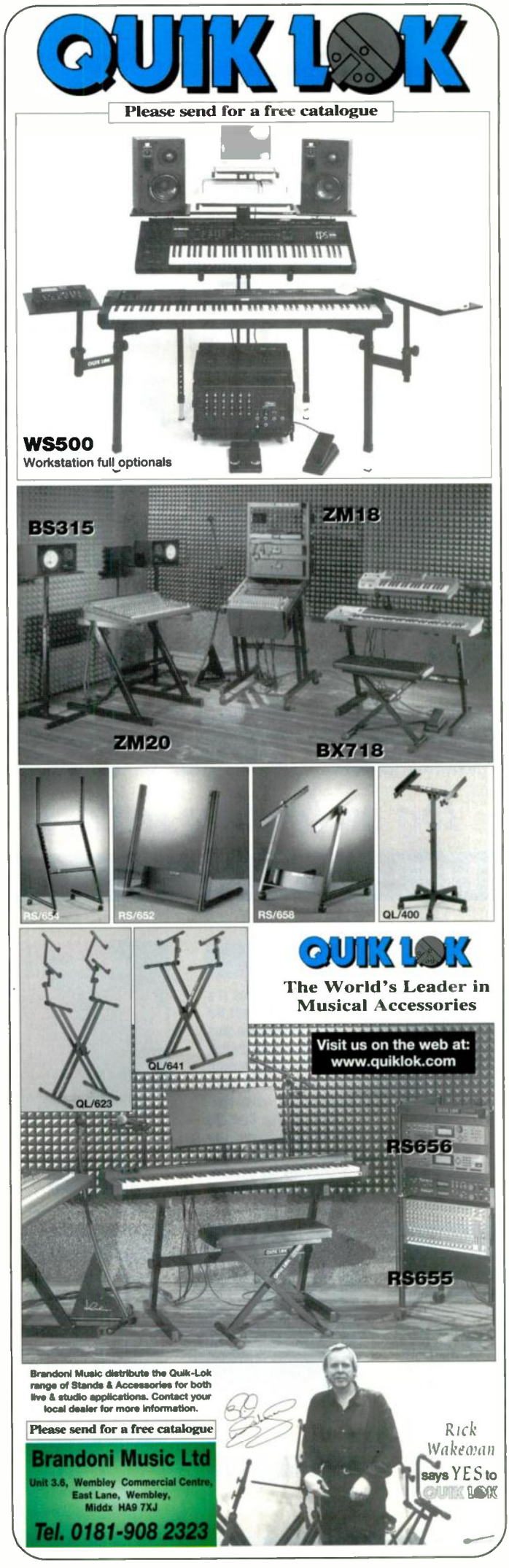
SUMMARY

As a significant proportion of my own musical output falls into the ambient/minimalist category, I was keen to find out what *Koan Pro* could do, and I was soon able to produce simple evolving ambient pieces, which were spoilt only by the occasional dissonant note or inappropriate phrase. These glitches were almost certainly caused by my lack of expertise, and were easy to correct in *Cubase* and *WaveLab*. Although *Koan Pro* is well written and stable, I did not find it a particularly easy program to learn; the user interface appears rather daunting initially, and although this is partly due to the stark, almost DOS-like graphics and minimal use of colour, it's mainly down to the number and interactive complexity of the features available. But it's well worth persevering, and the more I used *Koan Pro*, the more I liked it. I'm sure that newcomers with an interest in making ambient music will find that, after the initially steep learning curve, *Koan Pro* is a very intriguing and exciting program with tremendous depth, and will prove to be a valuable musical asset.

A final remark on copyright: when you use *Koan Pro* to originate your own musical recordings, copyright resides with you as the author. However, if the program is used to generate music in real time for public broadcast or performance, or for commercial purposes (such as to provide background music for public places such as hotel foyers, reception rooms and lobbies, and telephone hold systems) a license must be first obtained from Sseyo.

info

E *Koan Pro* £164.44 including VAT.
A Sseyo Ltd, Weir Bank, Monkey Island Lane, Bray, Berks SL6 2ED.
T 01628 29828.
F 01628 29829.
E koaninfo@Sseyo.com
B Compuserve: GO Sseyo
W http://www.Sseyo.com



CALL US FOR A FREE DEMO CD AND CATALOGUE

Sounds Good

SSS
SAMPLING SOUND SYSTEM

NOW SHIPPING and EXCLUSIVE to EAST★WEST the Sampling Sound System CD-ROMS from leading sound developer SOUNDS GOOD are available in MIXED MODE (Audio/AIFF/WAV) for only £19.95! or AKAI CD-ROMS for £39.95! PLUS! as a special FREE BONUS the mixed mode CD-ROMS (excluding Roots Reggae) include STEINBERG'S CUBASIS AUDIO LIGHT SEQUENCER and HARD DISK RECORDER. The SSS series uses tempos in even 10's and a set number of keys to provide one huge library of interchangeable loops and riffs.

ONLY £19.95/AKAI CD-ROMS ONLY £39.95

LAIDBACK features coo and laidback grooves i the spirit of David Sylvia and Peter Gabriel Another winner from th producers of Drum Tools

BRUSHED features rock and pop grooves played with different kinds of brushes: hot rods, blasticks, wire and plastic brushes. You get full and separated loops.

The grooves on SSS POPPED have been inspired by Cream, Who, Small Faces, New Order, Pulp, Oasis, U2. From the producers of Sweden's 'ROXETTE' and DrumTools.

Part of the Virtual Band series everything on Roots Reggae is played live by real reggae musicians. The CD-ROM contains great samples for Ambient and Dub.

G-SOUL features grooves, gtr riffs, hits, basses, synths, FX etc. The beats, booming basses and gangsta attitude is wrapped up in a glassy TLC style production.

HOUSE includes drum bass & synth loops, drum & perc hits, basses, string & FX pads, chords, stabs & hits, synths & organs. Tempos range from 110 to 140 bpm.

COUNTRY samples, many pitched towards Bluegrass. Loops and riffs in 4 keys at different tempos. Drums bass, guitar, pedal steel mandolin, banjo etc

ORDER TOLL FREE 0800-393-027

log on for new releases - www.soundsonline.com

THE WORLD'S FINEST SELECTION OF

NEW!

PITBULL

Drum 'N' Bass at it's best - extreme beats for Jungle producers plus individual drum samples. The loops are grouped by tempo in 5 bpm increments from 150-170 bpm. The CD-ROM version includes the Audio CD for ease of auditioning the sounds. The only Jungle CD-ROM.

★★★★★
SOS REVIEW

LA RIOT 3

SOS said in review "Conclusion: LA Riot 3 is a hard act to follow - the sheer amount of usable and inspired sounds create an all-American urban soundscape of immense realism. LA Riot 3 is quite simply a classic". KEYBOARD agreed-2CD Set £59.95

NEW!

HOUSE PARTY

NEW from the L.A. RIOT team - the ultimate HOUSE 2-CD SET. You get over 50 produced Chart Busting House Tracks in Construction Kit format in BPM and Key groups for easy combining of kits. (incl. over 3601 Drum Loops) Thousands of possible combinations! 2-CDs

SONIC MADNESS

From 'NINE INCH NAILS' Sound Designer Keith Hillebrandt. "Much of the work on this CD is brilliant, and would be great inspiration for anyone into stretching their boundaries" - (Keyboard USA). Incls. Atmospheres, Hard FX, Textures, Ambiance, Oscillators, Envelope Triggered Loops-bpm'd Cutting edge sounds.

★★★★★
KEYBOARD REVIEW

PERCUSSIONWORKS

A great amount of time and vast experience went into making Percussionworks the musician/producer's WORKHORSE - 2 CDs of amazing percussion from 7 of New York City's best. This is what's needed to make great music. 100's of percussion samples and loops all digitally recorded. (2-CD Set))

★★★★★
KEYBOARD REVIEW

DEF HOUSE

More than 1000 House loops and samples, the perfect tool for re-mixers, producers and composers a like. As a special bonus you get individual Bass and selected Drum sounds. The CD-ROM version features TemP'nKey programs mapped with all the loops at 31 different tempos (from 110 bpm to 140 bpm).

NEW!

100's MORE CDs IN OUR FREE CATALOGUE • CALL US FOR A FREE DEMO CD
•NEMESYS •RAREFACTION •SAMPLEHEADS •SOUND ARTS •SOUNDS GOOD (SSS SERIES

100 CD JUKEBOXES NOW AT LEADING DEALERS

PURCHASE ALL THE LATEST SOUNDS ON LINE

Now you can go online to our website http://www.soundsonline.com and search for 1000's of samples and loops by keywords, listen to your selection, purchase just the sounds you need with a secure credit card transaction, and download the selected sounds immediately, anytime, anywhere in the world.

•Don't you wish you could search for the sounds you need in the comfort of your home or studio, listen to your selection, and save money by purchasing just the sounds you need? Well now you can, for the first time ever electronic delivery of sounds is now a reality. Search and listen to the world's largest online database of sounds by key-word (category, type, title, style, bpm) and purchase your selection with a secure credit card transaction.

•REGISTER and enter a draw each month for a FREE AKAI SAMPLER.

•SEARCH for CD/CD-ROM products by category, type, title, style etc.) and order online for next day delivery.

•ORDER a FREE Catalogue and FREE Demo CD online.

•PURCHASE other music products and merchandise.

•GET latest CD/CD-ROM REVIEWS and information.

NO WAITING, NO SHIPPING, GET IT NOW!

EAST★WEST

SAMPLED SOUNDS ON CD & CD-ROM

NEW!

HYPNOTICA

NEW from the creators of Technophobia! and Tekno/Industrial - HYPNOTICA is loaded with cutting edge textures, trance and ambient loops, FX, Mind blowing Sweeps, Galactic Noises, Hypnotic sequences. Magic sounds for your next RAVE (East-West)

★★★★★
SOS REVIEW

SMOOV GROOVES

SMOOV GROOVES is the sequel to the critically acclaimed "Funky Ass Loops" from Sonny T. & Michael B. (S) and is the finest collection of smoov grooves & 70's funk. Tempos range from 60-108 BPM. First you get a full mix of each loop, followed by the drums, bass, etc.

NEW!

ELECTRONICA

ELECTRONICA features electro industrial loops and samples, many with a construction kit format and MIDIFILES. The MIDIFILE loops contain all the loop elements to enable you change samples, you can fully customize each loop - 100'S of loops and MIDIfiles

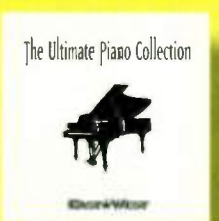
SCORING TOOLS

A composers dream come true. Immaculately recorded with a 60 piece world class orchestra SCORING TOOLS gives ORIGINAL orchestral loops in seven different styles of music - Adventure, Fanfare, Mysterious, Magical, Romantic, Suspense, Western; all you have to do is add your own melodies.

NEW!

ULTIMATE PIANOS

"The Ultimate Piano Collection is, in my experience, as close to the real thing as technology will currently allow" - SOS Review. The Ultimate Piano collection includes a Fazioli F228, Steinway D, Steinway C and Boesendorfer 225. Triple 5 Star review in KEYBOARD and SOUND ON SOUND.



★★★★★
SOS REVIEW

ORDER INFORMATION

EAST-WEST (UK), SUITE 1A, 25 MEETING HOUSE LANE, BRIGHTON, EAST SUSSEX BN1 1HB ENGLAND. In the United Kingdom call TOLL FREE (ORDERS ONLY) 0800-393027; for general business or to request information call 01273-736733; from other countries call (44) 1273-736733 or fax us 24 hours a day at (44) 1273-328881. Internet (eastwestsounds.com). All prices include VAT. If ordering by credit card (VISA, MASTERCARD, ACCESS, SWITCH, EUROCARD, DELTA, AMEX accepted) include your card number and expiration date. All mail orders must be pre-paid by credit card, postal orders, bank draft, building soc. cheque or by international money order (please do NOT send cash by post). SHIPPING/HANDLING: UK Post FREE; (NEXT DAY) £3; EC countries; Airmail £5, Express Airmail £10 (add 17.5% VAT if you live in the EC). EC countries, please provide an international VAT number if you have one. E&O.E

EXCLUSIVE UK DISTRIBUTORS FOR •CHRONIC MUSIC •EAST WEST •MEGAMIDI
SOUND HUNTERS •UNIVERS SONS •WC MUSIC RESEARCH •QUANTUM LEAP •AND MORE

SPEC CHECK

CHECKING THE FULL SPECIFICATION OF YOUR PC

Sometimes a new PC will be delivered with parts missing, or incorrect ones fitted. MARTIN WALKER breaks down a typical specification into byte-sized chunks, and shows you how to find out what's actually inside the case.

When you buy a new computer, it can be difficult to get to grips with everything at once; unless you know where to look, it's hard to check that what you actually receive is what appears on the invoice. It's not unknown for a PC to arrive with an odd component missing (8Mb of memory instead of 16Mb) or a wrong part accidentally installed (a different size of hard drive, for instance). A full check will only take a few minutes, and it will be easier to get the problem sorted out if you discover it within the first few days of ownership. Much of the information can be found on the initial page of text data that appears courtesy of your BIOS during the initial boot-up of the PC. When this is on screen, use the Pause key (above the cursor keys) to give you time to read everything. Pressing any other key allows you to continue.

It is also useful to re-check this data after any upgrades have been fitted, to ensure that they are being recognised by the system. For instance, if you upgrade with unsuitable types of memory for a particular machine (you should use a reputable supplier who can advise you properly), these checks will highlight installation problems. For instance, a friend of mine upgraded from 16Mb to 32Mb of memory, but his BIOS still insisted that only 24Mb were present. This turned out to be because one of the two SIMM boards supplied contained slower RAM chips — a phone call resulted in a quick replacement being sent.

For hard disk recording, it is often useful to know the make and model of your drive. Unfortunately, the only way to determine this is to physically remove the cover of your PC and look inside at the drive label. Even then, if the maker's name is fairly easy to find, the model number may not be as obvious. This information tends to be useful only when you're telephoning sequencer help lines in case of performance problems, or if you need to find the performance figures to check against software requirements — unless you're just paranoid, and want to check that you have been supplied with what you paid for. Knowing the model number of the drive allows you to find out technical data such as Average Access Time from the manufacturer's web site, which can be useful when you're choosing a MIDI/Audio sequencer.

Finally, when buying a new monitor, remember that it's the diagonal dimension that determines the rated size. However, not all the tube can be used for display purposes — some will be under the edge of the casing, and not all monitor screens allow you to use all the visible tube area — some still have a significant black border beyond the active display. If you are buying a machine with such a display from a high-street shop, ask to see the viewing area increased to a border of half an inch or less on each of its four sides. If this is not possible, don't accept promises that it can all be changed by software settings — some 15-inch monitors end up no bigger than 14-inch ones, but you will still pay more for them.

SOS

PROCESSOR SPEED & TYPE

The speed will be shown on the BIOS screen, along with the manufacturer's name. If the speed is not what you expected, then either the supplied processor is the wrong one, or the machine has had its internal jumper settings incorrectly adjusted. Unless you are confident fiddling about inside PCs, this is something that is best sorted out by the manufacturer. Cyrix chips are rated by their performance comparative to the nearest equivalent Pentium, and in fact a P166+ runs at 133MHz rather than 166MHz, so in this case don't worry if your machine shows a different clock speed. 'MMX Upgradeable' is often a crafty ploy by retailers to make you think initially that you're getting a faster MMX processor, when in fact it simply means that you get the standard Pentium, but can pay more money in the future and buy the real thing as a direct plug-in replacement (which also means writing off the existing one). If you actually have an MMX processor fitted, the BIOS screen should normally show this.

CASE

The box in which your PC components sit can be supplied in several varieties. Desktop cases, as you might suspect, normally sit horizontally on the desktop with the monitor screen perched on top, and are very popular. PC musicians may prefer to opt for a mini tower case (normally about the same price). This stands vertically, and is often placed at the side of the monitor on the desk, but the advantage for musicians is that it is easy to place on the floor, or under a desk, where the noise of the internal cooling-fan will be far less obtrusive. Midi tower systems are slightly larger, allowing more individual disk drives to be accommodated, and the Full Tower system case is larger again — if you anticipate fitting multiple removable drives for hard disk recording, have a look at these options before buying.

HARD DISK DRIVE SIZE

The hard disk drives supplied nowadays tend to start at about 1.5Gb, and this is adequate for many people. If you want to try audio hard disk recording then a better alternative might be a 2 or 2.5Gb version — when you're buying a complete system, the price increase will often only be a few tens of pounds. To find out the size of your drive, double-click on the Your Computer icon on the Windows 95 desktop. You will see an entry labelled 'Hard Disk (C:)'. Clicking on this will show you the amount of free space, as well as total capacity, but for a more graphic representation, click with your right mouse button on the hard disk icon and then select 'Properties' to see a bar chart with the same information. Normally, drives will be of the EIDE (Extended Integrated Drive Electronics) type. If you have one of the alternative SCSI (Small Computer System Interface) devices, their size can be checked in exactly the same way.

RAM & CACHE SIZE

The BIOS screen will also tell you what memory has been installed in your computer. This will be in the form 'Base Memory: 640K' (the full amount of the bottom 1Mb that is available, as the remaining 384K is overlaid by the BIOS), and 'Extended Memory: 15360K' for a 16Mb machine, and 31744K for a 32Mb machine). If your memory is of the EDO type then most BIOS entries will show this. Mine displays 'EDO RAM in Banks: 1, 2' showing that both pairs of 8Mb SIMMs are of the EDO variety.

The processor contains a small amount of fast memory called an internal cache, to speed up the retrieval of recently used information. A secondary cache, sitting between this and the main RAM, can result in some spectacular performance boosts. Pipeline Burst cache memory is used in conjunction with the EDO type of main RAM. The BIOS screen will again show the amount currently installed in your machine, along the lines of 'Cache Memory: 512K'. The figure will be either 256 or 512K; the latter gives you slightly better performance. Often 256K is hard-wired to the motherboard, and an additional 256K supplied on a small plug-in circuit known as a COAST (Cache On A STick). If your machine only shows 256K when you've paid for the full 512K, this extra board has not been fitted.

SUPA DUPA MULTIMEDIA PC

- Intel Pentium 160MHz Processor
  MMX upgradeable
- 16Mb RAM
  512K Pipeline Burst Cache Memory
- 1.5Gb EIDE HDD
- Fast Graphics Card 2Mb SGRAM
- 15-inch Super VGA L/R N/I 0.28 dot pitch Monitor
- 1.44Mb floppy drive
  12x EIDE CD-ROM
- Mini Tower Case
- Windows 95 UK keyboard
  Mouse
  Windows 95

GRAPHICS CARD

The amount of memory on the graphics card (used exclusively for drawing the screen) determines the maximum resolution and maximum number of colours available. For music use, with a 14- or 15-inch screen, most people will be happy with a screen of 800 by 600 pixels in size, with 256 colours. Up to 800 by 600 at 64,000 colours, or 1024 by 768 displays at 256 colours can be achieved with only 1Mb on board. If you need a higher-resolution display (1280 by 1024 is readable on a 17-inch screen), or more simultaneous colours, then a 2Mb card is a better proposition: this will manage 1024 by 768 at 65,000 colours. Normally the graphic drivers supplied with the card will check on RAM amount, and any resolutions higher than those that can be supported will either not appear at all, or be 'greyed out' in any display menu. Make sure that both the graphics card and the monitor screen support your desired resolution at a minimum of 75Hz refresh rate. This means that the entire screen will be redrawn at least 75 times a second, which results in less flicker, so less eyestrain and fewer potential headaches.

MONITOR

The size of the screen is always measured by the diagonal dimension of the tube, not all of which is displayed. Fourteen-inch monitors should have an active diagonal display size of about 12.75 inches; 15- and 17-inchers have diagonals of about 13.75 and 15.5 inches respectively. For those with white Rolls Royces and holiday homes in the Bahamas, your 21-inch monitors end up at about 19.5 inches. The figure 0.28 in our monitor specification refers to the 'dot pitch', and the lower this figure, the better the picture definition. Cheaper and smaller monitors are likely to have 0.31 inch, better is 0.28 inch, and 0.25 inch should give one of the crispest pictures you could hope for with larger screen sizes. 'L/R' stands for 'low radiation', and this is a measure of how small the electromagnetic emissions are — nearly all monitors nowadays meet stringent regulations, to ensure that you don't get headaches or start glowing in the dark after spending all day in front of the computer. 'N/I' stands for non-interlaced, and this determines the amount of flicker of the picture. An interlaced display is drawn by first scanning all the odd-numbered lines from top to bottom, and then returning to the top to draw all the even-numbered ones. This results in flicker, whereas a non-interlaced display is completely redrawn each time, giving a much better picture. All of these details can be checked in your monitor manual.

CD-ROM & FLOPPY DRIVE

The speeds of CD-ROM drives are referenced to the data-transfer rate of a standard single-speed CD audio drive (150K per second). So a typical 8x speed drive should have a theoretical speed of 1.2Mb per second, and a 12x drive of 1.8Mb per second. I say theoretical, because many of the higher-speed drives occupy your computer's processor 60% or more of the time in shifting this data elsewhere, such as into graphics RAM to appear as on-screen images. In the real world, these figures may not be achieved all of the time. Since many CD-ROM drives show no front-panel model numbers, you might like to check that the actual speed is as stated, using one of the many testers available.

All floppy-disk drives currently supplied are of the 3.5-inch 1.44Mb variety. The only thing to watch out for when you first buy a machine is that the floppy drive will successfully read disks written on a previous drive. Sometimes one or the other will be slightly out of alignment, and it's far easier to get a replacement if you spot this quickly. This happened to me on my latest upgrade. Although floppy disks I had written using my previous PC were struggling to load on the new machine, this could well have been the fault of the previous drive. However, when I tried to install several applications from floppies supplied by a manufacturer, the same problem occurred, pointing to the new drive as culprit. My supplier replaced the faulty drive in about 10 minutes (another advantage of using a local dealer).

KEYBOARD, MOUSE & WINDOWS 95

The difference between the Windows 95 and the standard keyboard is the three extra keys (one on the left, two on the right of the spacebar). You'll find more information about these in May '97's PC Notes. A UK keyboard is one that has a pound (£) sign appearing above the '3' key, and several other keys are in different places from the American version. You are unlikely to be offered anything but a UK keyboard in this country. The mouse will either have two or three buttons — in my experience, very few people ever use the extra middle button (or even find a suitable three-button driver to use with it).

The Windows 95 operating system may be provided already installed, but even if it is, insist that that the Windows 95 CD-ROM is also supplied. If, for whatever reason, you ever have to re-install Windows 95, you will need it. Sometimes the installation data will be copied as an image of the entire CD-ROM onto your hard drive, so that installation can be carried out without the separate disk, but ask for it even so: it's better to be safe than sorry!

LEANER, HARDER, FASTER

SPRING-CLEANING YOUR PC

Computers have a habit of attracting more than their fair share of unwanted files. MARTIN WALKER shows you how to clear away the cobwebs, and streamline the operation of your PC at the same time.

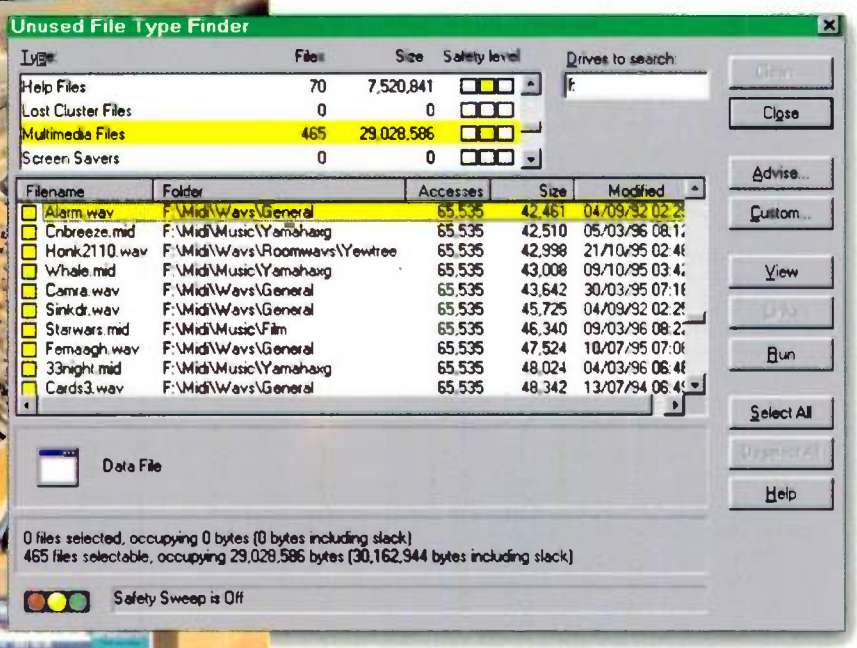


Figure 1: Clearing out the clutter is easy with a program such as CleanSweep, which sorts appropriate files into categories for you to inspect before possible deletion.

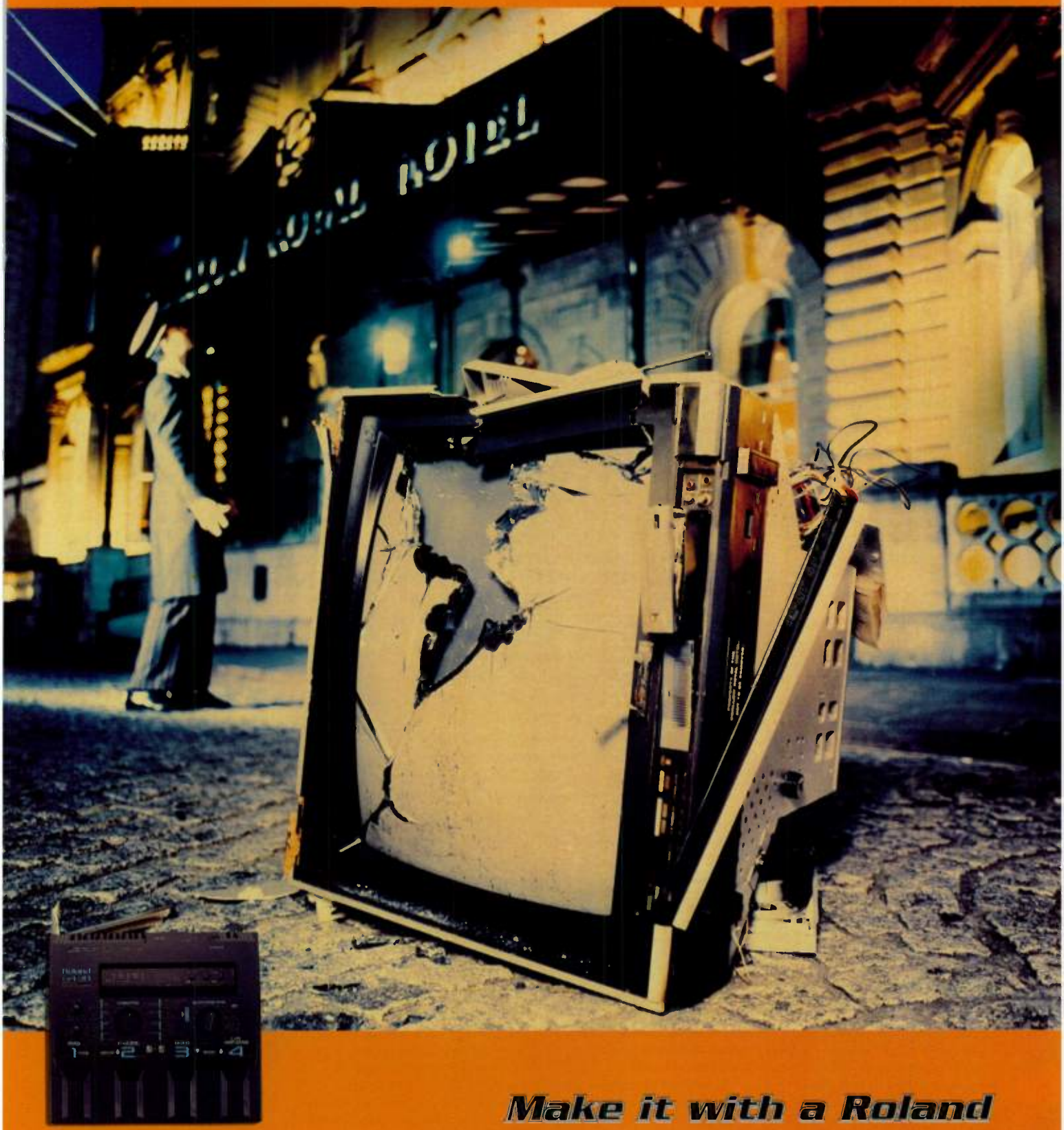
Spring-cleaning is one of those traditional activities that's calculated to clear away the winter blues. It involves lots of dusting and airing, cleaning of windows to let in more of the spring sunshine, and, more often than not, checking that your favourite paintbrush still has some bristles left and making a few trips to the local DIY superstore. It's still not too late to provide the same treatment for your PC. After all, many people's hard disks end up containing a host of outdated applications, stray and lost files, and forgotten shareware programs that earned no more than one quick look after falling off the cover of a computer magazine. With a little bit of effort, it's not unusual to regain 50Mb or more of hard disk space. While having a clear-out, many people will find that the contents of their hard disk strongly resemble Steptoe's yard, with hordes of disorganised folders everywhere. If nothing else, re-organising the contents of your hard drive will make it easier to find files in future, and you may well also uncover yet more candidates for deletion.

There are additional benefits to PC spring-cleaning above and beyond that of increased hard disk space and organisation. Badly behaved installations don't just leave a trail of files in their wake: sometimes they leave drivers installed, even if the program itself is long gone. By finding and removing these, you may speed up the operation of your PC (faster boot-up times and more memory available when it's up and running). While we're about it, this is also an ideal time to check on the Internet that you have the most recent driver versions, to get maximum performance from your hardware. So, just like traditional spring-cleaning, this gives you a chance not only to tidy up and thoroughly clear out the system, but also to streamline the way your PC works, and make it just that little bit more pleasant to use on a day-to-day basis.

FIGHTING THE FLAB

If you want to clear a bit more space on your hard disk, there are probably plenty of superfluous files. If you already follow a sensible regime when installing new versions of programs on your hard disk, at least you won't have the clutter of obsolete applications (see 'Removing Old Programs', later in this article). For most people, the first and easiest way of regaining some space will be to search out and destroy any remaining temporary files. Many applications create files for temporary use, perhaps holding previous edits of programs (for Undo functions), or blocks of text saved during editing (used by cut, copy and paste functions), but normally a well-behaved application will delete all of these on exit. However, not all applications are well behaved, and if you ever suffer from a crash, any temporary files open at the time will remain on your system. These are easy to find, though, as they normally have filenames that end in 'TMP'. You can root them out using the standard Find function on the Taskbar, typing in *.TMP and then, if you're happy that they contain no useful data, delete the lot. Occasionally, their contents may be of use — if you've just had a crash, a remaining temporary file may just contain some or all of the data that you were working on shortly before it happened. In this ▶

For 25 years musicians the world over have made it with Roland instruments.
No others sound as real. No others have the warmth and the depth.
When you want to make music, make it with a Roland.



Make it with a Roland

After 20 years of continuous Roland guitar synthesis, you might think you know what a Roland guitar synthesizer can do.
Think again. The all-new GR-30 has even better tracking and even more stunning sound quality. The truly innovative new harmoniser and arpeggiator will make you sound better than you ever thought possible. And it's more affordable, too.
It's never been so easy to sound so good. Make it with a Roland.

Roland

For details of this and other new Roland products call the Roland brochure hotline: 01792 515020
Roland (UK) Ltd. Atlantic Close, Swansea Enterprise Park, Swansea SA7 9FJ. UK web site: http://www.roland.co.uk

SPRING-CLEANING YOUR PC

case, it's well worth looking at the file in the original application — it could save you a lot of retyping.

The next most popular category for extinction is the BAK file, created automatically by many programs when you save a new version (just in case you change your mind). Making backups is a sensible way to work, whether you do it manually or use the Autosave feature provided by many programs; but, periodically, it's worth clearing out ancient ones. The best time to do this is just after you've saved a backup version of your data in compressed format onto another drive, so you still have copies of it in case of accidents.

When some installations put updated versions of system files onto your hard disk, they keep the file that was replaced, but change its filename extension to .001 (or .002 if .001 already exists, and so on). You can delete these if you know that the old version will never be needed again, but this can be a dangerous area — the *QSound* plug-in for *Sound Forge* writes a hidden file called Dkmtu.000, and if you delete this you lose an install. Be careful!

Windows 95 often seems to leave things in the Windows\spool\printers folder: this holds files that you have printed, but Windows doesn't always clear them out after printing is completed. Anything found in here can normally be deleted. If you use the Internet, your browser will probably have a cache of several megabytes. This is used to store recently used pages and graphics — to speed things up if the same pages are required again. You can purge these periodically from an option in the browser itself, although their total size will never grow beyond the size you've chosen for the cache.

There are many other types of files that you could probably whittle away at, to give you a bit more hard disk space, but on a musician's machine, multimedia files are the gluttons: it's often quite easy to free up tens of megabytes at a stroke by removing unwanted audio and video files. Many software packages provide helpful tutorials — *Sound Forge* is one example; during installation it places a 5Mb batch of WAV files in its folder. If you have looked at these tutorials, they can safely be deleted. After all, most of today's software is now supplied on CD-ROM, so the files will still be there if you need to refer to them again. The only downside here is that most programs supplied on floppy disk (as well as certain CD-ROMs) hold their data in compressed format, only expanding it when you install the software. In such cases, you may have to re-install the software to get the tutorial files back. Any WAV or MID files supplied for demo purposes with sequencers, audio editors, and soundcards can also be deleted if you don't use them.

> "People who blindly press the 'OK' button when an installation folder is suggested often end up with hard disk contents resembling tribal totem poles."

On the video side, some packages install multimedia tutorials on your hard disk, which, more often than not, have filenames ending in AVI. These tend to be huge but, thankfully, many manufacturers now leave them on the CD-ROM to be run directly, providing a Start Menu shortcut that prompts you to place the correct disk in your CD-ROM drive. Another example of

CLEANSWEEP 3.0 REVIEW

When I was writing 'Essential Accessories for the PC Musician' for April '97's *SOS*, I mentioned *CleanSweep v3.0* in the text, but it arrived a month later than promised and missed the deadline, so it was actually the previous *CleanSweep 95* that I reviewed, and which appeared in the screenshot. To save any confusion, the packaging of the version 3 is shown here — do make sure that you get this one, as there are significant improvements. Once again, its main claim to fame is the ability to monitor the installation of applications. It not only records a full list of new files added to your computer, but also notes any overwriting of existing files with older versions, and any alterations to existing INI files such as adding or deleting lines, as well as recording any changes to the Registry. What this means in practice is that whether the new application provides its own uninstall facility or not, if you want to remove it, *CleanSweep* will exactly reverse the process, not only removing every single file associated with the application, but also removing all traces of it elsewhere.

The beauty of this technology is that it happens automatically — *CleanSweep* sits in the background, and when you run any Setup or Install it will pop up to ask if you wish to monitor the installation. This new version even copes with programs that insist on re-booting the machine to finish their installation — popping up again to let you save its install log when your PC returns to the desktop. Quite frankly, without this program I would rarely try out 'cover-mounted' CD-ROM software, and it would certainly be a nightmare removing review software when the associated hardware goes back to the distributor.

New features include Safety Sweep (which prevents you deleting any questionable files unless you specifically ask it to give you full control), Update-It (which can automatically download the latest version of *CleanSweep* over the Internet for you), and Registry Genie (a safer way to edit the Registry, if you're feeling brave). The far more useful Registry Sweep cleans up your Registry by removing redundant references, and a new and improved knowledge base of 1000 applications allows much more thorough removal of pre-*CleanSweep*-monitored applications, now the program knows what files are involved. The graphics have been tweaked, and you can now easily view logs to check what actually happened during an installation. Although this new version took up 15Mb on my system as opposed to 5Mb for the previous version, it's so useful that I won't grumble. *CleanSweep 3.0* is available from most software outlets, and the street price is about £40.

CleanSweep 3.0 is one of the most thorough uninstallers you can get!

6-8
ST NICHOLAS STREET,
IPSWICH, SUFFOLK
IP1 1TJ

MARKS

27 KING STREET
CAMBRIDGE
CAMBRIDGESHIRE
CB1 1LH

01473 287872 or 01473 254150

9 Months 0%, 1,2,3 years credit available (New low 23.9 APR). Written quote upon request. Credit details taken in 2 minutes, Approval within the hour. Subject to status

AKAI

New Akai S 20
Portable Sampler / sequencer
£499
Call for more info

AKAI MPC 2000 Sampler / Sequencer	One Month Only £999
AKAI DR8D HARD DISK RECORDER 1Gig / Midiboard	£2250
AKAI DR16 Hard Disk Recorder	CALL
AKAI S2000 SAMPLER ~~£999~~	CALL
AKAI CD3000XL	CALL

AKAI S3000 XL Sampler ~~£1799~~	CALL
AKAI S3200 XL Sampler ~~£2499~~	CALL
AKAI U40 Rif-O-Matic	£139
AKAI SG01V 256 Vintage Sounds Module	£279
AKAI SG01P Piano Sounds Module	£279
AKAI SG01K GM Sound Module	£279

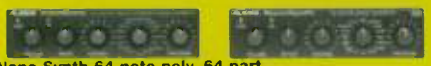
SIMMS CHIPS AVAILABLE AT NEW LOW PRICES

ALESIS

Monitor Bundle
Alesis Monitor One's with RA100 Amp
£549

Nano Modules From Alesis

Nano Piano 250 Sounds	£339
Nano Bass Module	£249

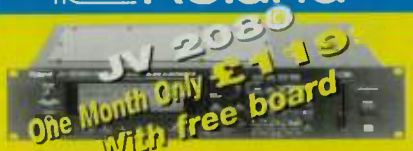


Nano Synth 64 note poly, 64 part, 512 presets, 128 users	Only £375
Alesis Point Seven Monitors	£229
Alesis Studio 12 R Rack Mixer	£CALL
Nanoverb	£159
Nano Compressor	£149
QS8 Synth	£CALL
QS7 Synth	£CALL
QS6 Synth	NEW LOW £CALL
Alesis QSR module	£CALL
QUADARVERB II Multi / FX	Special £549
MICROVERB 4 Multi / FX	Special £229
DM5 DRUM MODULE	Special £379
MIDI VERB 4 Multi / FX	Special £299
3630 compressor	Special £199
MEQ230 EQ	£225
MONITOR ONE'S	£299
MONITOR TWO'S	£699
SR 16 DRUM MACHINE	£219
R100 POWER Ref Amp	£299

SONY

JE500 2 Track Minidisc
Now In Stock £299

Roland



ROLAND JP 8000 Synth	£CALL
ROLAND VK7 Combo Organ	£1699
ROLAND 2080 Module	£Lowest
ROLAND VS880 V Expanded any spec	£CALL
ROLAND RD 600 Piano	£CALL
ROLAND MC 303	£CALL
BOSS SX700 Studio Effects	£CALL
ROLAND PMA5 PIANO MODULE	£425
ROLAND A90 KEYBOARD	£CALL
ROLAND XP10 KEYBOARD	£579
ROLAND XP50 WORKSTATION	New Low £999
ROLAND JV1080 MODULE	£CALL
ROLAND XP80 WORKSTATION	£CALL
ROLAND SC88 PRO	£599
ROLAND A33 MOTHER KEYBOARD	£355
ROLAND MBD1 DRUM & BASS MODULE	£399
ROLAND MOC 1 ORCHESTRIAL MODULE	£299
ROLAND (JV BOARDS) 60's & 70's, WORLD, VINTAGE, ORCHESTRAL, SESSIONS POP & NEW DRUM & BASS	LOWEST PRICE £219

MIXER MAD

NEW STUDIOMASTER Rotary 14 Input	£219
STUDIOMASTER TRILOGY 12:2	£579
STUDIOMASTER TRILOGY 16:2	£699
STUDIOMASTER DIAMOND CLUB 8:2	NOW ONLY £199 DELIVERED
SAMSON MPL 1502	£259
SAMSON MPL 1604	£599
MACKIE 1202 VLZ	£389
MACKIE 1402 VLZ	£589
MACKIE 1604 VLZ	£939
BEHRINGER MX 1602 EURODESK	£199
YAMAHA M/X12:4 WITH EFFECTS & GRAPHIC	£379
YAMAHA PROMIX 03D	£BEST
YAMAHA PROMIX 02R	£BEST

YAMAHA

Monitor Bundle
Yamaha NS10 Monitors with A100 Amp
£549

YAMAHA A 3000 Sampler	£CALL
YAMAHA AN1X Synth	£1199
YAMAHA VL70 M Module	£CALL
YAMAHA PM50M Piano Module	£CALL
YAMAHA QY700 Tone Module	£CALL
YAMAHA CS1X Synth	£CALL
YAMAHA SU10 Micro Sampler	£299
YAMAHA MU90 Tone Module	£CALL
YAMAHA MDF II MIDI Data Filer	£319
YAMAHA REV500 multieffects	£CALL

KORG

Korg N364 Workstation	£CALL
Korg Trinity	New Low Price £Call
Korg Prophecy	New Low Price £Call
Trinity Plus	New Low Price £Call
X5D KEYBOARD	New Low Price £Call

TASCAM

The amazing new 564 minidisk recorder. Speak to our digital recording experts

TASCAM Porta 414	£329
TASCAM DA/P1 Portable DAT	£CALL
TASCAM 424 MKII PORTASTUDIO	£449
TASCAM DA30 MKII DAT Machine	£1199
TASCAM DA20 DAT Machine	£699

MOTHER KEYBOARDS

Fatar Studio Logic

SL161	£219
SL760	£439
SL880	£589
SL1100	£699

Evolution Synthesis

MK 149 with pitch and modulation wheels, touch sensitive keyboard	£109

E-MU

ORBIT V2	£725
PLANET PHATT	£725
ESI-32 SAMPLER SCSI	£899
LAUNCH PAD	£335
E6400	£1995

MICROPHONES

Shure • Audio Technica • Beyer Dynamic • AKG
For The Lowest Prices
AT 4033 - Audio Technica
Recording Mic inc Cradle Only £399

SALE - SALE

*NEW - EX DEMO - SECOND HAND

*Yamaha MT50 Portastudio	£279
*Yamaha MD4 Mini disk recorder	£779
*Yamaha MT4X Portastudio	£420
*Yamaha MU50 Module	£279
*Yamaha ProMix 01 Mixer	£1395
*Korg NS5R Tone module	£475
Roland D110 module	£175
Alesis Midiverb 11	£99
Boss DR5 rythm section	£199
Yamaha FB01 module	£80
Korg DF1 Midi data filer	£80
Yamaha FX500 multi f/x unit	£99
Studiomaster Ufex Noise Gates	£125
Boss Dr Synth Module	£125
Tascam Porta two studio	£225
Dod Tech 8 multi effects	£225
Korg M3R Module	£299
*Yamaha P50M piano module	£279
*Akai DR8 Hard disk Recorder 1 gig MIDI	£2250
A33 keyboard Roland ex demo	£320
*Alesis Q2 Multi f/x	£499
Boss DR550 Drum machine	£70
Roland MS1 sampler	£199
Yamaha RA24 Drum	£95
Casio CSM10PP piano module	£45
*Studiomaster 16-2 mixer (gold)	£550

* *NEW*

BANKERS DRAFTS – INSTANT DESPATCH
PERSONAL CHEQUES – 5 DAY CLEARANCE
CHEQUES

CARD **CREDIT CARDS**
We accept all major credit cards.
INSTANT DESPATCH

CALL NOW

FOR BETTER THAN A PRICE MATCH

WITH THREE STORES **NEXT DAY**
ACROSS EAST ANGLIA **DELIVERY**
WE BUY FOR CASH

City Link

01473 287872 or 01473 254150

WRH

SHURE ART lexicon Marshall beyerdynamic SENNHEISER Digitech PHILIPS
ZETEX BEHRINGER AKG Stanton FATAR CARLSBRO QUIKLOK SONY

SPRING-CLEANING YOUR PC

Figure 2: It's well worth exploring the options provided in Tweak UI — you might even discover an option to change some little thing that has annoyed you for months!

WE HAVE THE TECHNOLOGY

Although you can do all this trimming by hand, using Find for each category of file, there are several programs that can automate the process. *WinDelete* is excellent value, *CleanSweep* is very comprehensive, and *Norton Utilities* provides the Space Wizard, which has an interesting additional feature. Although it can take a long time, it will compare the contents of identically sized files to find duplicates, even if they have different names. This produced several surprises on my machine, including two graphics files belonging to *First Aid 95* that, despite having different filenames, were identical. However, you still have to be careful if you're deleting one of any pair of duplicate files, since if they have different filenames you're likely to get a 'Missing File' error next time an associated program calls them.

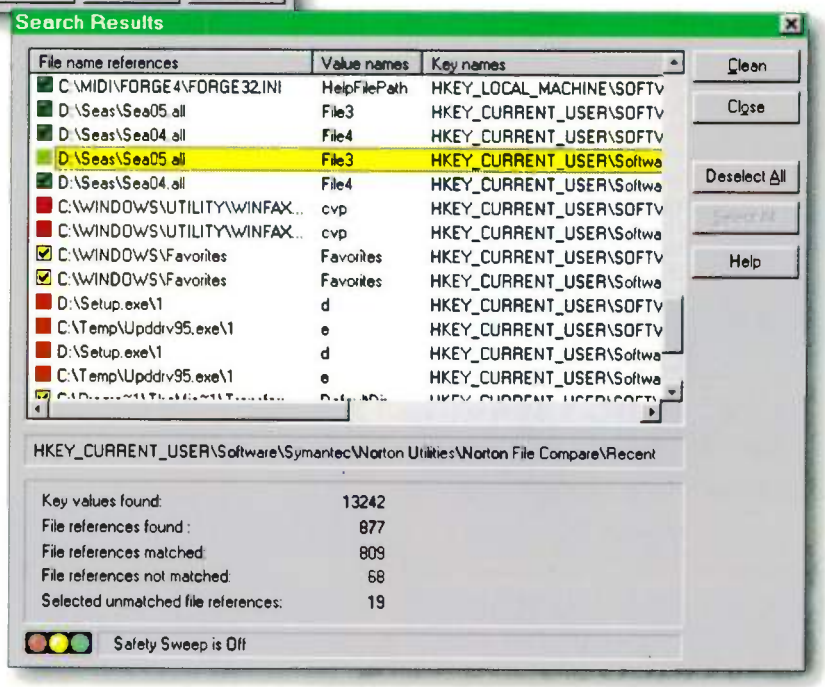


Figure 3: This is the results screen from my CleanSweep Registry Sweep — 68 references with no matching files! Of these, 19 were deemed safe enough to back up and then delete. The highlighted entry, for example, is because I deleted Norton File Compare from my system — this entry in the Registry was made the final time I compared two files, and is now obviously redundant.

POWER TOYS

If you don't already have these (and there are numerous copies on the cover disks provided with many computer magazines), they are well worth installing, particularly the *Tweak UI* option. This provides an extra applet in Control Panel, allowing you to tweak many aspects of Windows 95 that would otherwise only be accessible by directly editing the Registry. For instance, you can get rid of all those little arrows that appear on Shortcut icons, and speed up the menus that cascade from the Taskbar (Menu Speed). These default to waiting about a second before displaying the next menu, and this feels to me like walking through treacle. The Documents section on the Start menu allows you to quickly open a document you've worked on recently by clicking on it. If you currently have a huge list of file entries in the Documents section, you can arrange for this to be cleared automatically every time you boot up (in the Paranoia section!). There are also several repair functions that can be useful (see Figure 2). Although there's no help file as such, you can click on the question mark at the top of the dialogue box, and then get an explanation for each option by clicking on it. Considering that Microsoft provide the *Power Toys* free of charge, they are an absolute bargain!

wasted space is 'cosmetic' backdrops and designer screensavers. Although some packages come with screensavers advertising the company (these will have an SCR suffix and can be quickly disposed of), other glamorous packages include whole suites of designer backdrops for you to use as wallpaper when running the application. The latest version of *Norton Utilities* comes with a 1Mb selection of 14 designer styles, ranging from fluffy clouds, through hi-tech metal and marble, to a particularly natty walnut finish — just right for personalising your programs! Although it's nice to have these options, once you've chosen a personalised colour scheme, it's silly to leave the rest of the options on your drive: the most popular graphics formats to investigate here are BMP and GIF.

REMOVING OLD PROGRAMS

Although removing programs by hand is far easier to do if you've previously installed a program into its own unique folder, many initialisation files and Windows system files are dropped into unexpected places on your hard disk, and these can be very difficult to track down. Also, the Registry is still likely to contain various references to the program, which are best removed by an automated utility. If you have ever used a dedicated uninstall program such as *WinDelete*, *UnInstaller* or *CleanSweep*, you will never want to return to the old ways of attempting to remove files by hand (see the *CleanSweep 3.0* review on page 118). If applications do provide their own

AN1x
CONTROL SYNTHESIZER
FAT is BEAUTIFUL.
Fill your ears with the biggest, fattest sounding keyboard ever conceived - the Yamaha AN1x.
Thanks to Yamaha's unique Analog Physical Modeling synthesis, the AN1x digitally generates all the analogue power you ever dreamed of in an unbelievably flexible and controllable, 10-note polyphonic synth.
It's a breeze to use with intuitive knobs and a single operating level giving access to the very heart of the machine. There's an arpeggiator, a 16-step Sequencer for quickly generating sophisticated loops, and a 4-track parameter recorder capturing real time knob movements.
Take control by visiting your nearest Yamaha Hi-Tech dealer, or call 01908 369269 for a free information pack.
£899
SSP inc VAT
YAMAHA
Yamaha-Kemble Music (UK) Ltd. Pro Music Division

SPRING-CLEANING YOUR PC

uninstall option, this will often look for an associated Install.log file that was created during installation, so leave any log files well alone. Thankfully, most recent programs seem far better at removing themselves — using their own uninstall routines — than they were in the past, some even providing a reassuring check list of what they're currently doing. If any uninstall program leaves the program folder behind after deleting the program files, this is probably because there are still files in it saved after the Install.log was created, such as your data or preference settings. Have a look with a text editor, and then delete them along with the folder itself if you're happy that nothing of value remains.

CLEANING THE REGISTRY

For many people, the Registry is an area shrouded in mystery, despite many references to it, and remains a no-go area. It first appeared in Windows 95, and was designed to streamline the approach used in Windows 3.1, which used individual INI files for each and every application.

> "By all means try published tweaks to the Registry which appear in magazines and application help files, but don't underestimate the damage that can be done if anything goes wrong."

Although Windows 95 still recognises INI files used by 16-bit applications, most 32-bit native Windows 95 versions incorporate equivalent data within the Registry. Grouping all the information in this way not only makes it easier to maintain a full backup in the event of system failure, but also allows different users to have their own set of preferences. Each PC will have its own unique Registry, and this is first created when you install Windows 95. It consists of two hidden files: SYSTEM.DAT holds the hardware- and computer-specific data, and USER.DAT holds the entries relating to the individual user.

During the installation procedure, Windows 95 builds up a database of what hardware you have in your PC. It does the same as each subsequent piece of software or hardware is installed. Having full details of system hardware and software gives it a much better chance of spotting hardware incompatibilities, driver errors and so on. Unfortunately, this level of sophistication means that any editing of the Registry should not be undertaken unless you know exactly what you want to change, and have detailed instructions on how to do it. I've had six pieces of software published over the years, and am currently on my fourth PC, but I still steer clear of fiddling about with the Registry. By all means try the published tweaks to the Registry that appear in magazines and application help files, but don't underestimate the damage that can be done if anything goes wrong. *Always* make a backup of the Registry before changing a value. If the worst happens, and your machine freezes next time you boot it up, you can recover by manually restoring the old version of the Registry.

The main difficulty is that a single piece of software may have a dozen or more references within the Registry, all in different places. Changing or removing two or three of them may leave your system with a permanent 'limp', which might only be resolved by completely re-installing Windows 95. The easiest way to approach the Registry is to use one of the semi-automatic maintenance programs provided with *WinProbe95*, *First Aid 95*, and *CleanSweep 3*. These trawl through the Registry looking for references to programs that no longer exist on your hard drive. With the amount of software that goes in and out of my machine, I tend to run one of these once every month or two. Even so, the references it comes up with (see screenshot) will mean little to most people, and it's still worth backing up the Registry before allowing the program to remove these entries, just in case. You've probably guessed by now that I think this area is a bit of a minefield. Editing the Registry is sometimes the only way to change certain aspects of the system, and I suspect that this was why Microsoft released *Tweak UI* (see the 'Power Toys' box): to allow people to perform the commonest system tweaks from the comfort of a point-and-click interface.

INSTALLING NEW SOFTWARE

When you're installing new applications, rather than accepting the suggested default destination folder, it's well worth spending a little time coming up with a approach that'll make finding your files easier in the future. People who blindly press the 'OK' button when an installation folder is suggested often end up with hard disk contents resembling tribal totem poles. This is because of the vast number of applications that prefer to create a new folder in the root (C:\) directory; better applications at least place themselves inside the existing 'Program Files' folder, and leave the root folder uncluttered.

Everybody will evolve their own approach, but on my system I like to keep documents and MIDI stuff in their own separate folders, and so have ▶

WHEN I WERE A LAD

People whose PC experience stretches as far back as the DOS era may well have more ordered ways of dealing with folders. In those halcyon days of text-only screens (like those you still see when first booting up your PC), only 25 lines of text normally appeared on screen before the topmost rapidly scrolled out of sight, never to return. To make things easier to read, the general rule was to try to have no more than 25 entries in any one folder, so that its entire contents could be viewed on screen at once. This may sound laughable now, but there's some sense in this philosophy, as you will probably appreciate when scrolling through a typical Windows folder with its hundreds of entries.

FAVOURITE FOLDERS

One thing that makes day-to-day work more pleasurable is making sure that, when you open or save a file from an application, the default directory is where you like to store files associated with that program. There are several ways to do this, depending on the program. Many allow you to specify it in the 'Start In' entry of Properties (right-click on the Shortcut to the program to find this, either on a desktop shortcut or a shortcut when editing the Taskbar). Others have an entry in the appropriate INI file, with a default folder, accessed either through a preferences menu in the program itself, or, failing this, by editing the INI file directly using something like *Notepad*. This may sound complicated, but it only has to be done once, and it's a good feeling when you want to load a file and the correct folder always opens up automatically.

Studiospares

the new catalogue is out NOW

1997/98

More products and price reductions than ever

Studiospares Ltd.
61-63 Rochester Place, London NW1 9JU
Tel 0171 482 1692 FAX 0171 485 4168
E-MAIL 101745 1553@ compuserve.com

Studiospares Deutschland GmbH.
Kölnerstrasse 195-197, 50226 Frechen, Köln, Germany.
Telefon 0 2234 92 27 10 FAX 0 2234 92 27 15
E-MAIL Studiospares@t-online.de

Please send the new 1997/8 catalogue to
Name .....
Address .....
.....
.....
Post code .....7/97 Sound on Sound

created two folders in the root directory called DOCUMENT and MIDI. Inside the DOCUMENT folder live all my *SOS* articles and reviews, personal and business letters, accounts and so on, each in their own sub-folders. The big advantage of separating out the documents (rather than allowing them to pile up by default in several word-processor or database folders), is that you can then back up the entire DOCUMENT folder on a regular basis without having to separate out any program files. Having regular backups is also a godsend if any of your files ever get corrupted or accidentally deleted.

In my MIDI folder, each main application has its own separate folder within; data files end up in the MUSIC folder, and the smaller programs all end up in a folder labelled UTILITY. Again, the advantage of this approach is that as and when you get an upgrade or a new version of a particular program, you know instantly where the old one lives, which makes it far easier to dispose of it if you don't have a dedicated uninstall program. A useful technique is to choose a folder name containing the version number of the application, for example 'Cubase20' for *Cubase version 2.0*. Then when you install a new version, it's easy to see which is which, if you need to manually remove the bulk of the files used by the old version to release hard disk space. Always use a new folder filename when you're installing an updated application — putting it in an existing folder 'over the top' of the previous one is tempting providence, to say the least!

There are several schools of thought on the cleanest way to deal with a major software upgrade. Until recently, I always preferred to leave the previous version on the hard disk until the new one had been checked out, as manufacturers have an annoying habit of removing old features when adding new ones. This also gives you a chance to double-check that any personal preferences, colour schemes and data files are copied across to the new folder before you delete the contents of the old one. However, with the arrival of uninstall utilities (which are far more thorough at removing every reference to the previous version), you may end up uninstalling a few system files common to both versions, which the newer version still needs.

Just ignoring the old version that's still on your hard disk may cause you a lot of head-scratching

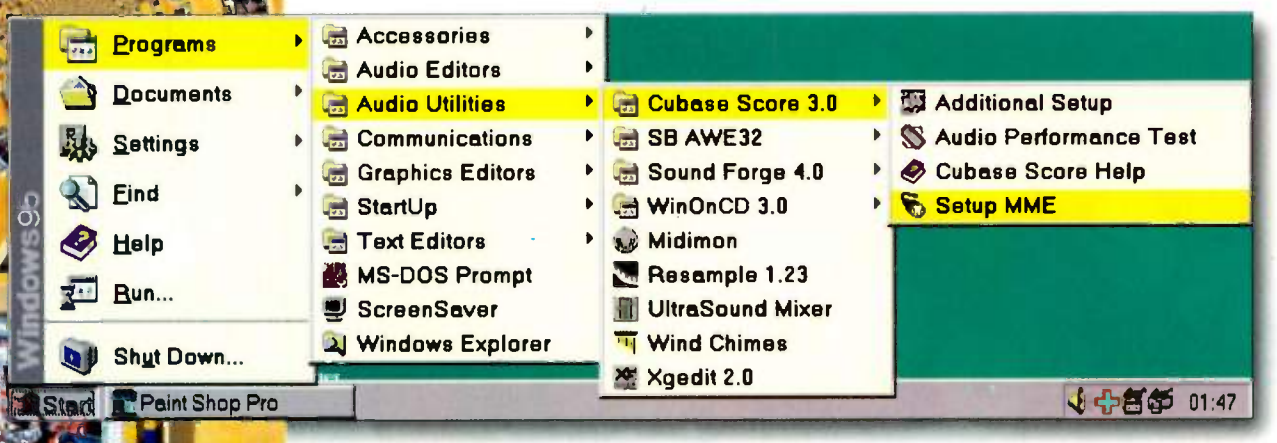


Figure 4: A neatly organised Start menu can make it far easier to find applications in a hurry. Grouping your programs into several sub-folders lets you avoid wading through huge lists of applications every time you want to start up something new.

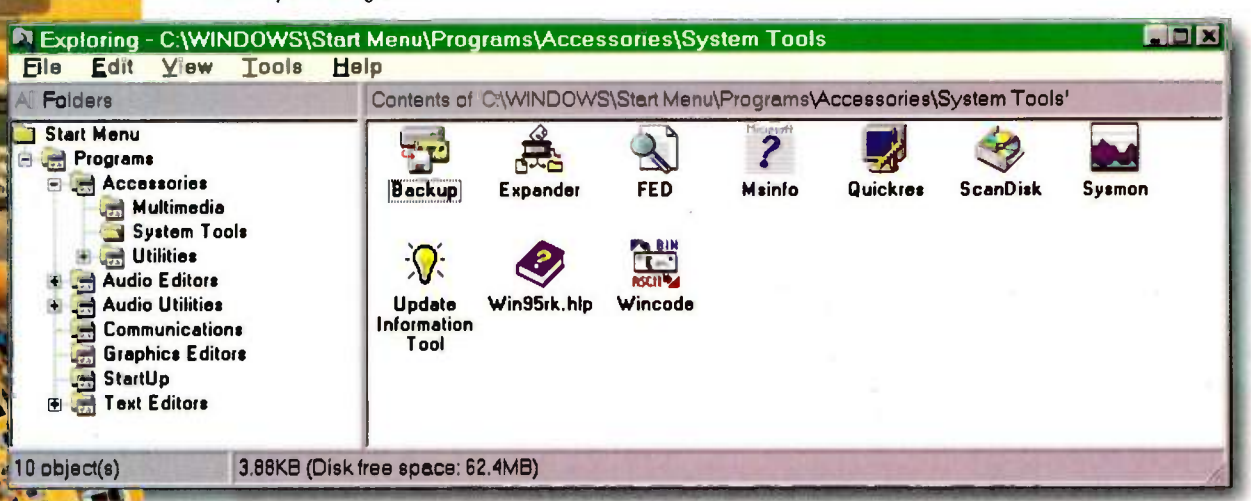


Figure 5: Editing the Start menu is exactly the same as file housekeeping in Explorer — simply drag and drop the icons where you want them, and create new folders to provide sensible categories for your applications.

You need accurate monitors? You need Active Monitors.

Genelec have been producing active monitors for the recording and broadcast industry for nearly twenty years. Their relentless R&D program and manufacturing expertise has made the 1029A possible. 1029's are equally at home in use with a DAW, in mobiles, on a meter bridge, in edit suites or in project studios. **With a list price of £750 per pair (Inc. VAT),** they'll fit into almost any budget too.

In my experience, the three key elements of any Genelec, monitoring system are quality accuracy & consistency, which pretty much says it all!

Hugh Robjohns - Sound on Sound, February 1997.

These baby Genelecs are quite simply stunning! ...clean, neutral and well balanced - everything a decent monitor loudspeaker should be.

Anthony Timson - Audio Media, February 1997

Hear them at: Active Sound - Watford • Andertons Music Company - Guildford • Audio Engineering - Dublin • Axis Audio - Stockport • Blue Systems - Saffron Walden • Dawsons - Warrington • Funky Junk - London N7 • KGM - Wakefield • Music Solutions - Stevenage • The M Corporation - Ringwood • Mediaspec - Glasgow • Sound Control - Dundee • Sound Control - Dunfermline • Sound Control - Edinburgh • Sound Control - Glasgow • Sound Control - Manchester • Sound Control - Newcastle • Michael Stevens & Partners - Bromley • Turnkey - London WC2.

GENELEC® LEADS... others follow.

Project Audio Ltd
5 Castle Road, London NW1 8PR
Tel : 0171 428 9700 Fax: 0171 428 9699
e-mail: project.audio@zetnet.co.uk

GENELEC®
ACTIVE MONITORING

SPRING-CLEANING YOUR PC

later, if you ever accidentally boot up the old version of the program without realising it. Various DLL files in the Windows System folder will probably have been updated by the newer version and, while well-written programs tend to maintain compatibility as they evolve, there's no guarantee that an older program will function properly with system files rewritten for the newer version. Probably the best solution when installing a major upgrade is to double-check that you've saved any preference files into a temporary directory (for subsequent use by the new version), and then run your uninstall to give you a clean slate before installing the new version.

ORGANISING THE START MENU

The easiest way to make day-to-day PC navigating easier is to organise your Start menu. Rather than leaving the host of root entries that appear by default, re-arrange them into several new folders and you'll end up with an easily navigated selection (see Figure 4), which makes it easy to launch any application without wading through a huge list of entries. You can edit the Start menu either through Explorer (in the Windows\Start Menu folder), or arrive at the same place by selecting Settings, then Taskbar, from the Taskbar itself (see Figure 5). Most people prefer to have an entry for each application in the Start menu, but create shortcuts only on the Desktop for the most frequently used applications. Probably the quickest way to add a desktop shortcut is while you're editing the Start menu — simply right-click and drag an icon from a Start menu folder, and then drop it on the desktop, and select the Create Shortcut Here option.

CONCLUSION

Some people still prefer not to bother about adopting a more careful regime during program installation and day-to-day use, ending up with bloated hard drives and often unnecessarily sluggish performance as well. There is a remedy, although it's somewhat more drastic and time-consuming, and not for the squeamish. Back up all your data, reformat the hard disk, then reinstall Windows 95, and all of your applications, finally restoring your data files from the backup. Although this sounds a bit frightening, and takes some hours to do, I certainly know some people who work this way: they start from scratch several times each year, whenever, as they put it, 'things start to go flaky'. I've never had to resort to this method, although I have had to reinstall Windows 95 over the top of itself three or four times to recover from small inexplicable problems, probably caused by badly behaved installations (or my fiddling with the Registry!). I much prefer to try to keep things a little more organised in the first place. It's a bit like having a library — in an organised PC, when you want to find something, at least you know the right shelf to start looking on. I've seen other people's PCs that resemble nothing more than a huge mountain of books piled up in the middle of the room. Everything is in there — somewhere!

Panasonic SV-3800

SEE THE PANASONIC SV3800 AT THESE AUTHORISED HHB DAT CENTRES

ANDERTONS MUSIC CO
Guildford Tel: 01483 38212

AXIS AUDIO SYSTEMS
Stockport Tel: 0161 474 7626

BLUE INDUSTRIES LTD
Saffron Walden Tel: 01799 584095

DIGITAL VILLAGE
Barnet, Herts Tel: 0181 440 3440

DIGITAL VILLAGE
Croydon Tel: 0181 407 8444

EDDIE MOORS MUSIC
Bournemouth Tel: 01202 395135

THE GUITAR & AMP CENTRE
Brighton Tel: 01273 676835

THE M CORPORATION
Nottingham Tel: 0115 9474070

THE M CORPORATION
Ringwood, Hampshire Tel: 01425 470007

MUSIC CONNECTIONS
Birmingham Tel: 0121 212 4777

MUSIC CONNECTIONS
Bristol Tel: 0117 946 7700

MUSIC CONNECTIONS
Chelmsford Tel: 01245 354777

MUSIC CONNECTIONS
Chelsea Tel: 0171 731 5993

MUSIC CONNECTIONS
Leeds Tel: 01943 850533

MUSIC CONNECTIONS
Southampton Tel: 01703 233444

MUSIC VILLAGE
Chadwell Heath, Essex Tel: 0181 598 9506

MUSIC VILLAGE
Cambridge Tel: 01223 324536

RAPER & WAYMAN
London N4 Tel: 0181 800 8288

SOUND CONTROL
Dunfirmline Tel: 01383 733353

SOUND CONTROL
Edinburgh Tel: 0131 557 3986

SOUND CONTROL
Glasgow Tel: 0141 204 0322

SOUND CONTROL
Manchester Tel: 0161 877 6262

SOUND CONTROL
Newcastle Tel: 0191 232 4175

SUTEKINA
London WC2 Tel: 0171 836 0127

HHB Communications Limited
73-75 Scrubs Lane · London NW10 6QU · UK
Tel: 0181 962 5000 Fax: 0181 962 5050 E-Mail: sales@hhb.co.uk
Visit HHB on line at http://www.hhb.co.uk

A PANASONIC SV3800 PROFESSIONAL DAT RECORDER FOR £935*

WE'VE COMPROMISED ON PRICE, SO YOU DON'T HAVE TO COMPROMISE ON QUALITY

*** PREVIOUSLY £1099 EX VAT, NOW £935 EX VAT (£1099 INC VAT). SUGGESTED SELLING PRICES.**

Legendary sound and build qualities have made Panasonic Professional DAT Recorders the choice of countless major recording studios and broadcast facilities around the world. And features like 20-bit DACs, 44.1/48kHz sampling rates and a full complement of consumer and professional digital I/Os have made the excellent SV3800 the most popular model in the current Panasonic range.

Remarkably, its also the least expensive. Just £935* (excluding VAT) now buys you the mastering DAT recorder that professionals swear by.

So why compromise with an 'uprated' consumer DAT recorder when you can have a fully professional Panasonic SV3800 in your rack?

For details of your nearest HHB DAT Centre, call HHB Communications today.

For consistently low block error rates and superior archival security, always use HHB Professional DAT Tape.

Panasonic SV-3800 DAT Digital Audio Tape

HHb DISTRIBUTION

Distributed by: HHB Communications Ltd · 73-75 Scrubs Lane, London NW10 6QU, UK
Tel: 0181 962 5000 · Fax: 0181 962 5050 · E-Mail: sales@hhb.co.uk · HHB On-line: http://www.hhb.co.uk

Sutekina Pro Audio

ORANGE COMPUTERS

Sutekina Pro Audio has teamed up with Orange to bring you a reliable PC, built with the musician in mind. Configured for the music market, these machines are fast, reliable and compatible with Sutekina's wide range of software and soundcards. The PC market is ever changing so call Sutekina and get the info on the right package for you. All Orange PC's come bundled with software and pro Turtle Beach and Yamaha Soundcards.

P133 PACKAGE
- 16 Mb
- 1.2 Gig Drive
- 8 x CD rom Drive
- 15 " monitor
- Turtle Beach TBS 2000

P200 PACKAGE
- 32 Meg
- 2.1 Gig drive
- 12 x Cd rom
- 17 " Monitor
- 2 mb Graphics card
- Turle beach Tropez Plus

Remember when you buy on Orange PC from Sutekina you get a 20% discount off the r.r.p. of all future software purchases!
Orange, The Voice of the World

EMAGIC

EMAGIC LOGIC AUDIO 2.6

Now the Professionals Choice for integrated Midi and Audio sequencer this new version offers exceptional new DSP facilities.

- Integrated graphic sequencing with audio
- Multiple Linked Editors
- 90 Different Screensets
- Midi groove Templates
- Extensive Synchronisation Options
- Digital factory including Timestrech and Pitch Machine
- Audio to Midi Groove
- Stereo Sample Editor
- Full Colour Arrange Window

BOTH INCLUDE A FREE MIDI INTERFACE!

MAC £549 PC £329

EMAGIC AUDIOWERK 8

With 8 analogue outputs, 2 inputs and stereo digital I/O, the Audiowerk 8 PCI card looks to be every thing that hard disk recording has been waiting for. Available for Mac or Windows 95, it is the perfect interface for Logic Audio. Audiowerks comes shipped with virtual multitracker and two cards can be run simultaneously. Call to arrange for a demo

£499

EMAGIC MICRO LOGIC 2.0

Entry level PC sequencer excellent facilities for the price

- Unlimited no. of tracks, sequences and events
- GM Mixer
- Score edit windows
- Support of up to 16 midi channels
- Up to 128xWAV file playback
- Graphic Arrange Window

£59

EMAGIC LOGIC AUDIO DISCOVERY

A scaled down version of Logic Audio which supports Apple AV computers and IBM PC Soundcards.

- Integrated graphic sequencing with audio
- Multiple Linked Editors
- 90 Different Screensets
- Time Machine 1
- Stereo Sample Editor
- Full Colour Arrange Window

INCLUDES A FREE MIDI INTERFACE

£269

TURTLE BEACH

Turtle Beaches Multisound cards have long been the industry standard audio soundcard for the PC. The award winning Turtle Beach Soundcards have complemented the PC hard disk recording revolution giving the professional and home users outstanding audio quality while offering exceptional value. Their latest range of cards cover every application from audio recording through to playing games so if your looking to turn you PC into a professional recording studio or simply upgrade you old Soundblaster then look no further.

TBS 2000

32 Voice Wavetable Soundcard

- 4Mb Wavetable Rom
- Windows 95 Plug 'n Play Compatible
- Fully Games Compatible
- IDE/ATAPI CD Rom Interface
- Up to 48Khz Cd Audio Quality recording
- Free Audio Software

£139

FIJI

Pro-Series Audio Capture and Playback Board

- 20 Bit DAC/ADC
- >97 dB Signal to Noise Ratio (A Weighted)
- Hurrican Architecture
- Enhanced Full Duplex recording
- Motorola 56002 Digital Signal Processor
- Optional SPDIF Digital I/O
- Wavebalster Socket

£329

TROPEZ PLUS

32 Voice Wavetable Soundcard

- 4Mb Wavetable Rom
- Samplestore Upgradeable to 12MB Ram
- Windows 95 Plug 'n Play Compatible
- Fully Games Compatible
- IDE/ATAPI CD Rom Interface
- Up to 48Khz Cd Audio Quality recording
- Free Audio Software

£249

PINNACLE

Pro-Series Sound Card from the very best in digital Audio Technology

- Same as above +
- Hardware wavetable Synthesis (Kurzwiel Synth)
- Fully Multimedia Compatible
- User expandable Sample set (up to 48MB Ram)
- Stereo Mic & Line Inputs & Outputs
- Optional SPDIF Digital I/O
- Includes Digital Orhestrator Plus.

£449

SOUNDFORGE

SOFTWARE

£259

OPCODE

STUDIO 64X

- 4 in, 6 out midi patchbay
- 64 Midi channels
- OMS compatible
- Mac or PC

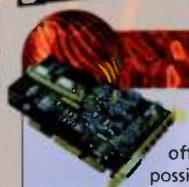
£259

8 PORT SE

- 8 in 8 Out PC interface
- 128 Midi Channels
- Serial host interface
- Laptop compatible

£389

TERRATEC



ESW 64

This new card from Terrotec offers everything you could possibly want from a PC soundcard. It features Full Extended Duplex Recording, a 64 voice sampler with resonant filters, 2 stereo inputs and outputs, digital I/D, 32 midi channels and a powerful in-built wavetable synth. Altogether this is probably a landmark for low cost professional soundcards.

£449

ADDRESS
10 DENMARK ST,
LONDON
WC2H 8LS

DELIVERY
Next day service available in most of the UK. Call for details on European & Worldwide export.

SALES & CUSTOMER SUPPORT
Competitive pricing and customer care are our upmost priorities

Freephone 0800 371129

YAMAHA

U.K. Exclusive Only at Sutekina!

YAMAHA MU80

For multi-media fanatics, the MU80 combines instant plug and play compatibility with the best sound and features available anywhere.

- 729 outstanding voices
- 21 drum kits
- 32 part multi-timbral
- 64 Note poly
- 2 Midi Ports
- 5 independent effects blocks
- Built in Computer host port
- Fully integrated A/D inputs for mixing sound sources with internal voices and effects

WAS £699 NOW £399

Visit the new Sutekina Pro Audio show room - where everything is always on demo!

YAMAHA 03D

Digital Mixer

Last year the Yamaha 02R set the Pro Audio world on fire with it's features and sound quality. Now comes the 03D, a 26 input version. Internal automation, surround sound, digital delay and dynamics on every channel, 2 internal effects sends with speaker simulator and so much more. If the 02R was to big or out of your price range check out the 03D NOW!!!

£2995

ZOOM 1204

Multi Effects

The Zoom 1204 is the best value for money multi effects on the market. True stereo processing allows 2 independent effects at once. Vocoder and rotary effects are also included. If you need that extra effect and are on a budget, the 1204 is for you

£159

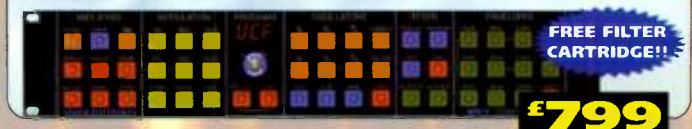
STUDIO ELECTRONICS

ATC1 Tone Cameleon

The ATC 1 Tone chameleon is the future of Analog. Featuring a unique inter - changeable filter cartridge-based system, the possibilities are endless for recreating the classic synth sounds of yesterday or bringing analog into the next millennium. Filter types include the TB 303, ARP 2600, Oberhiem S.E.M. And Mini Moog.

- 2 oscillators
- 3 envelopes
- 2 lfo's
- Sends over midi
- external input
- midi clock to LFO

Sutekina West End Exclusive



FREE FILTER CARTRIDGE!!

£799

KORG PROPHECY

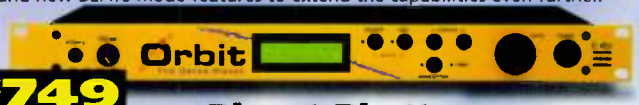
Lead Synth

If you haven't got a Korg Prophecy order yours now at the incredible new price of... £699

EMU

Orbit V2

The techno module gets a boost in the form of more presets, more BEATS, and new BEATS mode features to extend the capabilities even further.



£749

Planet Phatt

640 of the newest, hippest, phattest dounds on the planet. Whether you do rap, hip hop, R & B, funk, or are looking to add some new earthliness to your current rig, Planet Phatt delivers the groove with a new, improved BEATS mode which features 100 BEATS and 28 Songs.

£POA

MUTRONICS

The Mutator

is a stereo analogue filter and envelope follower with full control facilities. It contains two independent voltage controlled filters similar to those found in analogue synthesizers, which can be used to treat any external sound source. Each filter can be controlled from it's own LFO and/or it's envelope follower section, which extracts the envelope contour of an input signal and applies it to control the cut-off frequency of the filter.

"this is without a doubt the best-sounding retro-filter I have come across. Hear it and weep."

Sound On Sound (July 1996)

£699

PAYMENT

0% finance available on the phone or over the counter on all items. All major credit cards accepted.

INFORMATION

This advert shows only a selection of our current stock. Please call for full product range.

WRH

TUBE & TRAIN INFORMATION

We are 2 mins walk from Tottenham Court Road tube. Approx 10 mins from Euston, Kings X, Charing X & Paddington

TOTTENHAM COURT RD

Sutekina Pro Audio

KURZWEIL

Sutekina Pro Audio, Europe's number one choice for Kurzweil Selection, Servicing and product support.

KURZWEIL K2500

Kurzweil introduces a new generation of professional instruments utilising their acclaimed VAST technology- the K2500 Production Series. Built on the features that made the award winning K2000 series the professional's choice world wide, the K2500 goes several steps further. It combines an extensive ROM based synthesizer with a powerful sampler, on board effects and V.A.S.T. processing in one complete design.

Checkout these features...

- True 48 voice polyphony using four oscillators per voice - That's 192 oscillators!!
- Reads Akai, Roland, Ensoniq samples and programs without the sampling option. Also reads AIFF & Wav Files
- Upgradeable to 128 Meg ram
- 32 track sequencer
- World Class Kurzweil Sound set on board
- Intuitive operating system stored in flash ROM (for software updates via floppy disk and SCSI)
- Sampling option with analog & Digital I/O and Sample while you play capability
- V.A.S.T. Variable Architecture Synthesis Technology with 60 DSP functions per voice processing

K2500 76 NOTE SEMI WEIGHTED KEYBOARD £2895

K2500 88 NOTE FULLY WEIGHTED KEYBOARD £3195

ADD A SAMPLE OPTION OR 20 MB ROM SET FOR £399 EACH

LET SUTEKINA PRO AUDIO UPGRADE YOUR KURZWEIL WITH THE MANY OPTIONS AVAILABLE

KURZWEIL K2VX

- all the features of the K2000 with an exceptional 24 mb of on board rom sounds jam packed into a SCSI fitted keyboard

£2195 WITH SAMPLE OPTION **£2595**

KURZWEIL PC88

WITH FLIGHT CASE

The best sounding piano in the world built into an extremely flexible 88 Note midi controller.
Add the GM expansion Board for only £399

£1699

EMU

E6400

The latest generation of EMU samplers delivers more power, more features and cost less than ever before.
The E6400 is the ideal affordable entry in the line and it is entirely upgradeable to the ultimate sampling power of the E4XT.

- 64 Voice poly
- Expandable to 128 mb of ram
- V3 available Soon
- Z-plane filters

£2599 INC 32MB & NOMAI 540MB DRIVE

ESi 32

Emu's entry line budget sampler. 32 voice polyphony, digital filters, time compression, scsi, and so many more features are packed into this machine.
The new output expander is out soon!!!

£899

or £1299 INC 8MB & NOMAI 540MB DRIVE

PEAVEY

SX & SP SAMPLERS

The DPM SP is a 16 bit sample playback module.
The DPM SX is a sampling Xpander module.
At Sutekina we can offer the pair for only...

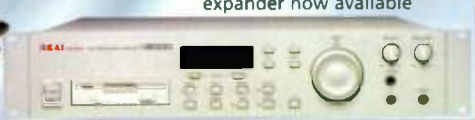
£599

AKAI

S2000

The Most popular entry level Sampler on the market

- Upgradeable to 32 meg
- M.E.S.A. editing software
- SCSI Fitted
- Effects board and output expander now available



£899

or £1299 INC 8MB & NOMAI 540MB DRIVE

CD3000i PLUS

Last few remaining

- 8 Free CD Roms
- 8 meg on board
- Internal effects
- Built in Cd Rom Drive
- Analog Sample fitted

£1599

ADDRESS
10 DENMARK ST,
LONDON
WC2H 8LS

DELIVERY
Next day service available in most of the UK. Call for details on European & Worldwide export.

SALES & CUSTOMER SUPPORT
Competitive pricing and customer care are our upmost priorities

Freephone 0800 371129

WORLD OF MUSIC

MACKIE

Mackie are world renowned for bringing the 8 buss recording console into the home studio budget. Used by artists such as Prince, U2, Peter gabriel, Boyz II Men, Def Leopard and Bush. Their Quality is uncompromised by their price. Now, Mackie have put their same 8 Buss technology into developing the ideal range of world class compact mixers.
At Sutekina we are so confident in Mackie's Quality that we will Provide an instant loan or replacement should your mixer ever get sick within 1 year of purchase.

1202 VLZ

- 4 Mono, 4 Stereo Channels
- True XLR Balanced Outputs
- Alternative outs for 2 Track Routing your recorder
- 4 Mic Ins with inserts
- Phantom power
- Seperate control room outs

£299

1402 VLZ

All the same features of the 1202 VLZ Plus...

- 60 MM faders on all channels
- 6 Mic Preamps with inserts
- 6 Mono , 4 Stereo channels

£429

1604 VLZ

The Best mixer under a thousand pounds on the market. Ideal for live, recording or submixing into a larger console. Team the 1604 VLZ with an 8 track digital recorder and you've got the perfect project studio. Mackie have definately set the new standard, just check out these features...

- 16 independent channels with XLR Mic preamps
- 60 mm faders
- 4 direct sub groups
- 8 direct outs for 8 track recording
- 8 insert points
- 6 Aux send & returns
- 3 band EQ with mid sweep
- Control room & XLR balance

£POA

FREE LOOM!!

SONY DTCA6

New from Sony, the pioneers of the Dat format, comes the DTC A6, A8 and A9 range of DAT players. Featuring super bit mapping for 20-bit-equivalent sound quality, all three machines offer advanced performance features together with superb build quality. All are capable of recording at 44.1 khz via the digital or analogue inputs.
The DTC A6 Features:

- Phono in/out
- Optical & Coaxial digital in/out
- Super bit mapping
- ABS time record
- Infra red remote

10 FREE DAT TAPES

£649

PHILIPS DCC

The DCC is a good alternative to dat when looking for quality mastering on a budget. The 951 is a flagship model, a tabletop unit packed with features. Combine that with the 134 portable playback model and you've got a great package.

DCC 170 PORTABLE £299 WITH FREE DCC 134 PLAYBACK & 5 FREE TAPES

PACKAGE DEAL
DCC 951 & 134 + 10 tapes
£349

FOCUSRITE

VOICEBOX

The voice box provides a signal path of exceptional clarity and smoothness for mic recording, combining an ultra-high quality mic pre-amp, an all-new Focusrite EQ optimised for voice, and full focusrite dynamics. Frequency ranges and EQ characteristics have been carefully adapted, after extensive listening tests, for optimum performance. The Voicebox can be used as a stand-alone unit for direct to disk recording, or as an upgrade for the input section of a console.
Call Sutekina to arrange a demo.

£989

MONITORS & AMPS

No where else in the West End can you find such a huge range of Studio monitors to choose from than Sutekina Pro Audio. Switch instantly between Yamaha NS10's to Dynaudio M2's to Event 20/20's to Tannoy AMS 8's and let your ears be the deciding factor. In need of an amplifier? Let Sutekina find the right match for you. *Check out these packages...*

TANNOY SYSTEM 600 & SAMSON SERVO 150

- Phat low end and crisp high end make Tannoy a popular choice for Dance music Reference Monitors
- Call for packages prices on PBM 6.5's, System 800's and PBM 8's

£499

EVENT 20/20 & SAMSON SERVO 240

- **Sutekina Pro Audio "thumbs up"** Built in Sub Woofer provides powerful low end while keeping the mid range stunningly accurate. Turn these ones UP and check out a sound only found in £1500 monitors.

£629

20/20's and Servo 500

£529

DYNAUDIO BM10 & SAMSON SERVO 500

The studio monitors from Denmark.These are becoming more and more popular within the pro audio industry and you can't find a better monitor for the same money to match these!

£889

EVENT P8 ACTIVE SPEAKERS

- All the clarity of the 20/20 with built in perfectly matched amp

£799

YAMAHA NS10 & SAMSON SERVO 150

INCLUDING LEADS!!

- Ns 10's are in every pro studio for a reason. Their flat response gives you the perfect radio mix.

£449

JOEMEEK

JOEMEEK VC3 PRO CHANNEL

the Joemeek channel philosophy on a budget. A classic high performance microphone pre amp, Joemeek optical compressor and Joemeek enhancer. The VC3 is essential as a front end for any hard disk or digital recording system.

SUTEKINA PRO AUDIO THUMBS UP!

FREE MIC LEAD

£299

PAYMENT
0% finance available on the phone or over the counter on all items.
All major credit cards accepted.

INFORMATION
This advert shows only a selection of our current stock. Please call for full product range.

TUBE & TRAIN INFORMATION
We are 2 mins walk from Tottenham Court Road tube.
Approx 10 mins from Euston, Kings X, Charing X & Paddington

As Martin Russ explained in his 'Model World' feature on the theory behind physical modelling synthesis, last month, the principles beind this type of synthesis needn't be applied only to digital synths. One forward-thinking individual who's been using analogue modular synths to put modelling techniques into practice for many years is veteran UK electronic musician Ron Berry. (See *SOS* February 1996 for an interview). Ron leads a multi-faceted life, dividing his time between various music recording activities, freelance designing for electronics companies, and converting country abodes into home recording studios.

The Modular

RON BERRY • ACOUSTIC MODELLING WITH AN ANALOGUE MODULAR SYNTH

Somewhere in the North-East of England, electronic musician and designer Ron Berry has been applying an old-style analogue modular synth to the creation of a very contemporary phenomenon — physical modelling synthesis. JONATHAN MILLER finds out how it's done.

While renowned for having always built his own electronic instrumentation and recording equipment, Ron has also been experimenting with acoustic modelling, using techniques gleaned from an article he read in a specialist computer magazine as far back as 1980. This admittedly heavy reading detailed pioneering research being carried out by Americans Kevin Karplus and Alex Strong, who took a computer register, loaded it with random numbers, then created a type of cyclical delay to reorganise the numbers. The result, apparently, was a very realistic string sound — pretty impressive stuff at a time when UK popular music circles were still awed at the simplistic analogue synth tones of Gary Numan and Orchestral Manoeuvres In The Dark.

THE WONDERFUL WORLD OF ACOUSTIC MODELLING

Looking back, Ron claimed his first thought upon assessing this breakthrough was, "Hey, you could do that by using an analogue delay line and feeding pulsed noise into it." Spurred on by his initial success in wiring up a flanger unit with a built-in delay line to a noise envelope generator, and looping it around itself until it was almost feeding back — "...a most impressive noise!" — he promptly set about adding the necessary modules to his modular synth to enable him to put his own new-found theories into practice: "I found more articles by people who'd been analysing musical instruments to find out how they worked. Various American, French and Swiss institutions were also trying to make acoustic models, but they were all working on massive computer mainframe installations and it took them a long time to compile and write these programs. I thought I could make better use of my time by doing it in the old-fashioned analogue way, because I already had the synthesizers. All I needed to do was add a few modules and all of a sudden I was in the wonderful world of acoustic modelling, although this eventually took 12 months to do successfully!"

Realising he was possibly onto a good thing, Ron looked into patenting his analogue acoustic modelling techniques, only to find this prohibitively expensive. Instead, in 1988, he published his findings in a paper entitled *Experiments In Computer-Controlled Acoustic Modelling (A Step Backwards?)*; the abstract describes a series of experiments in the electronic modelling of the acoustics of a variety of real instruments, and a truly affordable computer system used to construct them. Ron wrote: "This work arose out of the desire to create electronic instruments very cheaply and in a reasonable amount of time, but which,

nevertheless, sounded like *real* instruments. As a musician working with, and tiring of, traditional synthesis methods, obtaining that peculiar quality of sound that only real instruments have was the goal, within limits set by time and expense."

PET SOUNDS

Several years ago, I attended a seminar held at the now defunct Projects UK arts centre and recording complex in Newcastle-upon-Tyne, in which Ron ably demonstrated his findings, to a small but suitably captivated audience, by way of a series of taped acoustic modelling sound examples. I recall being particularly impressed by a strange, physically impossible 'instrument' producing the interesting effect of famed astrologer Patrick Moore's voice exciting the resonant modes of a bell model! So, to paraphrase another popular television show, how does he do that?

Ron's self-built analogue modular synth, on which he carried out his physical modelling experiments.

For the majority of us, this is mind-boggling subject matter. I was therefore delighted when Ron invited me to his spacious countryside studio for a spot of hands-on acoustic modelling — of the more basic variety, of course! For the purpose of this introductory lesson, Ron chose to guide me through the creation of two simple acoustic models of real instruments — a trumpet, then the slightly more complex saxophone. First, though, let's explore a few basic principles. Over to Ron...

"Acoustic modelling goes back to the days when people were experimenting with echoes. With an echo, if you stand 50 feet away from a high wall and clap your hands, you'll first hear your own clap. The sound then heads for the wall at 1,100 feet per second, where it comes across a different medium — something solid instead of air — reflects 50 feet back again and you hear the echo, roughly a tenth of a second later.

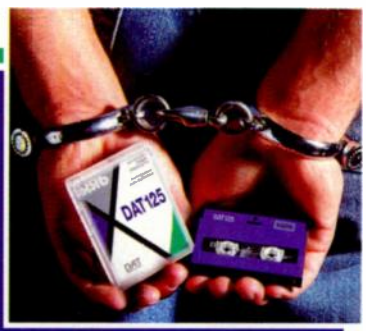
"In the '50s and '60s electronic designers started looking at what an echo did, and produced electronic devices that allowed you to send sound into something and get it back again a tenth of a second later, or whatever. One such device was ▶

Bondage.
A subject close to our hearts.

A specially developed formulation bonds the ultra-fine magnetic particles of HHB DAT Tape to the base film, ensuring that block error rates stay consistently low – even after 100 passes. It's just one of the reasons why HHB is independently proven to be the most dependable DAT tape that money can buy.

HHB Advanced Media Products. Don't record on anything less. Tel: +44 181 962 5000

HHB Communications Ltd · 73-75 Scrubs Lane, London NW10 6QU, UK · Fax: +44 181 962 5050 · HHB on-line: http://www.hhb.co.uk



HHB
ADVANCED MEDIA PRODUCTS

▶ the tape echo, where sound is converted into an electrical signal, put onto tape, then taken off the tape a little later, converted back into an electrical signal, then back into sound.

"Later effects such as phasing and flanging are really about modelling air movements, so when you're discussing the modelling of musical instruments, it must be remembered that you're also modelling acoustic phenomena. That's really the methodology of acoustic modelling: you look at how something functions acoustically, and try to look for ways of simulating it electronically. If you're working with pure electronics, then you're working with voltages, trying to find ways of getting electrical signals to go around a circuit in a similar way to a sound propagating around an instrument. If you're using a computer, you're looking at electrical signals converted to numbers, and the success of the model is related to the way in which the numbers flow through the algorithm you're using."

MODELLING PRINCIPLES

"Obviously, there are degrees of accuracy in acoustic modelling. By way of an analogy, you could have a crude plastic model roughly in the shape of a steam engine. This model is *recognisable* as a steam engine, yet you could have another model that is absolutely perfect in every detail, but with no moving parts. Or you could have a full-scale working model that pulls kids around a park. They're all steam engines, but different sorts of models.

"Acoustic modelling with electronics in a modular synthesizer limits the number of devices that are available to you — once you run out of modules, that's it. All the models that I do are really basic, but that doesn't bother me because I'm not interested in producing a model that's perfectly accurate in every detail. By using computers and working with algorithms you have access to a more elaborate set of functions and create a more detailed model, but the principles are the same. With computing the limit is processing power.

"When acoustically modelling real instruments, there's a difficulty in that you have to decide how the instrument is going to be played. Playing a modelled trumpet on a keyboard is a lot different to playing the real thing using your mouth, and it's the same with a saxophone. The saxophone is an *extremely* expressive instrument and this expression is directly related to how the performer plays it. Breath control is a very sensitive and subtle achievement. Again, by playing a model of a saxophone on a keyboard, you've simply got a keyboard that sounds like a saxphone, but you haven't got the expression of the real thing. To get this expression, you really have to get the model to behave like a saxophone, with some kind of breath control and a set of valves so you can pick out all the possible notes and harmonics.

"In the case of a trumpet, the valves make it possible to reach notes that aren't in the natural horn overtone series. To model a trumpet really accurately you should theoretically have an instrument that's got push buttons, to represent the valves, and a breath controller — but then you're not that far away from a real trumpet, so why bother, since it would be just as hard to play!"

PIPE DREAM

"Before moving on to the specific modelling of these instruments, we need to briefly look at the acoustic working mechanics of a pipe. After all, both the horn and saxophone are essentially musical 'pipes'. If you analyse a musical horn at its most basic level, you've got a pipe and somebody putting their lips around one end — obviously with some kind of mouthpiece to make it easier to blow — and a flare at the end. But we'll go into that later.

"Let's see at how this works: the first thing you've got [see Figure 1] is the pipe, with lips at one end. When the lips are closed the pipe is blocked, but when you make a sound with the lips, this sound has to travel down the pipe at 1,100 feet per second, or one foot per millisecond. If we say the pipe's four feet long, this first sound is going to arrive at the end of the pipe after four milliseconds. Since this is a fairly high-pressure situation, the sound emerges into the air at the end of the pipe and suddenly expands, creating a big disturbance. The sound carries on through the air and into the ear, but because of this sudden transient drop in pressure as the sound spreads out into the air, some of the pressure drop travels back down inside the pipe and hits the lips again eight milliseconds later — like the hand-clap hitting the wall, as described earlier. However, in the case of the pipe, the sound then reverberates back out of the end again, so you eventually get a reverberation effect, with a series of echoes eight milliseconds apart but decaying with each echo as the sound loses energy.

"The next thing you have to look at is what is happening with the lips. If the person is vibrating their lips at a certain frequency to produce a note, the lips could be closed when this first signal gets back to them, as above. Alternatively, they could

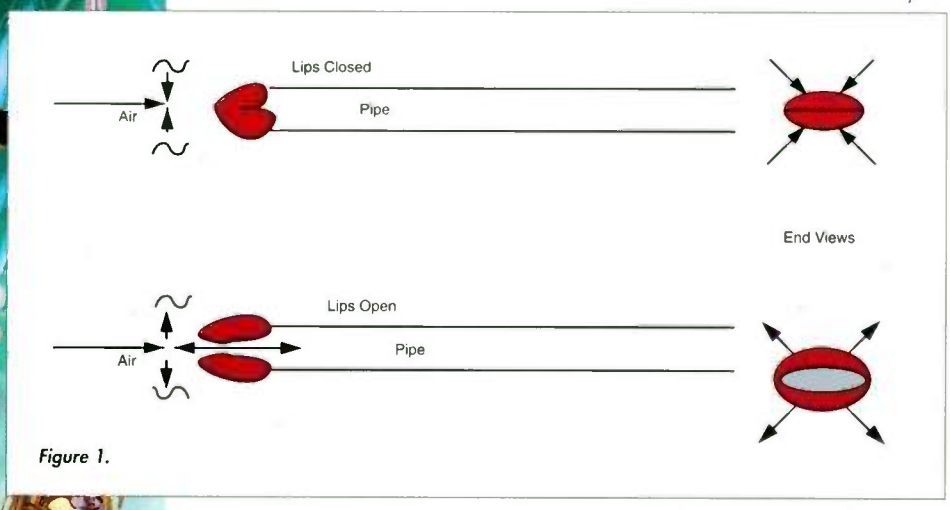
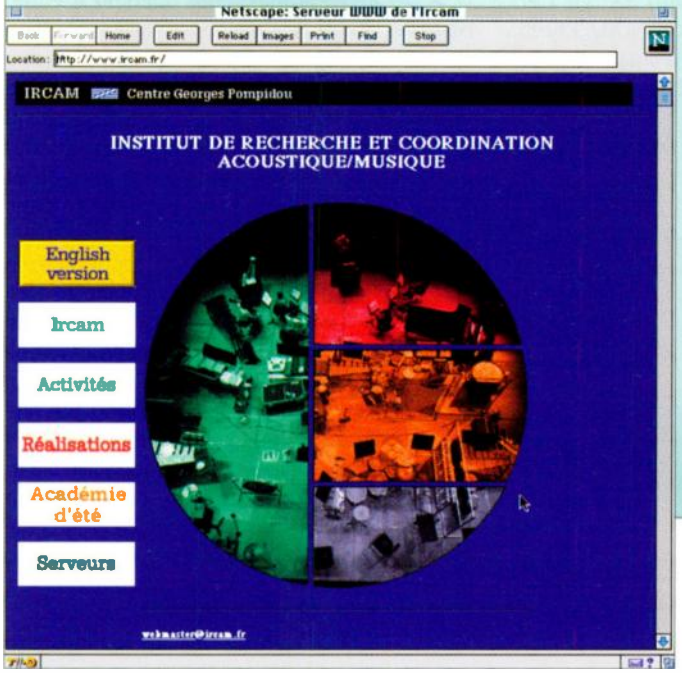


Figure 1.

IT'S MORE FUN TO COMPUTE?

Computer software provides another way of getting into modelling, using the same kind of building blocks as the analogue modular approach, and is capable of producing some interesting results for relatively little outlay, providing you already own the necessary computer platform. The only source of commercial acoustic modelling software I know of is IRCAM (the Institute for Research and Co-ordination in Acoustics and Music, in Paris — check out Paul Tingen's revealing tour of the facility in *SOS* December 1996). Software is obtained by subscription to their Forum user group. Subscribing to the 'Analysis/Synthesis' section for a private individual costs around 1700 Francs per year, for which you get a wealth of Apple Macintosh-compatible software, plus updates. The modelling software section is called *Modalys*, and allows the creation of virtual instruments from scratch, using parameters that relate to the physical sound and sound-production mechanisms of real instruments, but which are not constrained by the limits of the real world.

Ron: "The models developed by institutions up to now have been scientifically based and very mathematically correct — reams of formulas on waveguide theory and much more in-depth study of reed behaviour; complex formulas I can barely understand, let alone manage on the modelling synth. The horn models I've heard are very complex, taking into account things like valve position — the ones you press — along the tube reed/housing shape. Some sound very good, but take an immense amount of computing power and some I've seen you still play by typing! Perhaps the *Modalys* software will allow you to play around with things as easily as my modelling synth can. I have a feeling that Opcode or Digidesign, both of whom work closely with IRCAM, will produce something more commercial before too long."



info

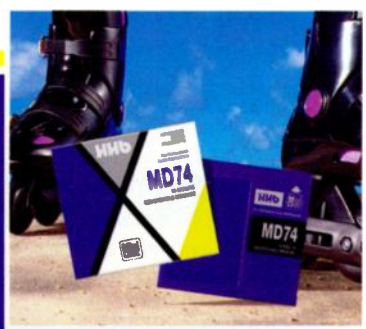
IRCAM, 1 Place Igor-Stravinsky, 75004 Paris, France.
T +33 1 44 78 49 62.
F +33 1 44 78 15 40.
E admin-forum@ircam.fr
W http://www.ircam.fr

be open, to let some more air through, so this time the sound reflection could be different as it meets a partially blocked pipe. The reflection is governed very strongly by whatever conditions it encounters: if the lips are fully open and there is air coming out, you get the force of two air pressures against one another — they might cancel; they might not. If the lips are only partially open, because the air has dispersed and the lips are collapsing, or the air pressure is building up and forcing the lips apart, then there's going to be a non-linear reflection. The amplitude of the reflection is being changed. It's being heavily modulated by the action of the lips. When the rate of vibration of the lips roughly matches the fundamental of the pipe, this is when the horn player produces a constant note."

THE MODEL

"We should now have some understanding of how it's working: sound travels down a pipe and each time it comes back it meets a different condition. The ▶

Consumers.
Take their formats (but let them keep their error rates).



Block error rates on HHB professional MiniDiscs are 10 times lower than those of some consumer media.
HHB Advanced Media Products. Don't record on anything less. Tel: +44 181 962 5000
HHB Communications Ltd · 73-75 Scrubs Lane, London NW10 6QU, UK · Fax: +44 181 962 5050 · HHB on-line: http://www.hhb.co.uk
HHB
ADVANCED MEDIA PRODUCTS

▶ lips are like a valve opening and closing very rapidly, letting air through. So if you wanted to make a model of that, first you'd have to ask yourself whether you were working with a computer program or with electronics. Electronically, I need something that I can send a signal into and get a signal out of some time later, which is a standard electronic device — a delay line.

"As previously stated, a four-foot pipe would require an 8ms delay. Likewise, we've already established that the lips are vibrating like a valve that is, in turn, controlling a reflection. In the electronic world [as depicted in Figure 2] this is achieved with a voltage controlled amplifier (VCA). A VCA is also just like a valve, with input, output and control stages. When there's no control voltage nothing gets through, and, conversely, when the voltage is set to maximum everything gets through — what goes in comes out. If you can rapidly control that, you can control the frequency, as in the pipe. By connecting the output of the VCA to the input of the delay line, and the output of the delay line back into itself and back to the VCA you, in effect, create the pipe using a delay, with the VCA acting as a valve or 'lips'.

"Next, we need something to vibrate the lips — some kind of oscillator. Through stroboscopic experiments with a glass pipe, researchers have found that lips actually vibrate in a sine wave pattern, which is easily achievable with an oscillator that is connected to the VCA control input — the sine wave minimum shutting the VCA off and the maximum opening it wide. However, the sine wave is not only controlling the reflection down the pipe, but also providing the 'air' that is coming in, so we also feed the sine wave in via a mixer, so it's controlling itself [a look at Figure 2 will help you to understand this more easily]. And that's an electronic model of our musical pipe, at its absolute basic level.

"All that's needed to complete a basic horn model is something to turn the sine wave source on and off at the start and end of the note; an envelope generator and a second VCA can do this. Also, some way of controlling the sine wave frequency and the horn length (delay time) loosely together is needed to play different notes. As these two devices [the sine wave oscillator and the delay line] are voltage controlled, connection to a voltage source such as a keyboard can do this.

"Playing with settings is the key to getting a wide variety of horn sounds, and even substituting the sine wave can produce interesting horn effects on source sounds."

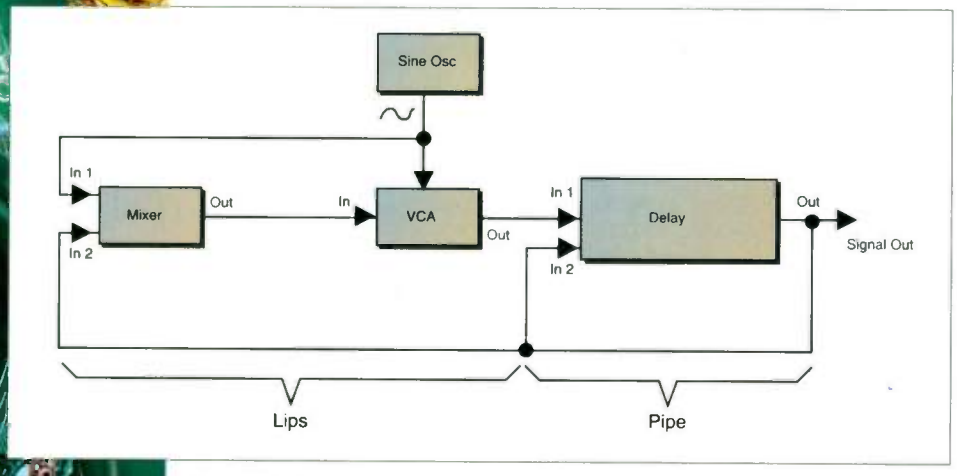


Figure 2: Ron's basic pipe model, described as a modular synth routing diagram.

BLOW YOUR OWN TRUMPET

"The reason why a trumpet sounds so nice is that you've got this wonderful thing going on where a sound is evolving by going up a pipe and then being modified by itself, creating overtones and distortions. These overtones are also being modified and reflected up and down the instrument, producing even more overtones, each one different to the one before. So you've got this beautiful overlapping system where, as the sound is dying away, it's producing more and more overtones each time it's reflected by the lips mechanism. This is why a trumpet sounds as it does. If you think about it, it's very hard to reproduce that sound in any way other than by making a model of it. I think that's why many electronic instruments' trumpet patches don't sound very realistic, because they're not taking into account that continually evolving harmonic mechanism.

"A number of additional modules are required to electronically model a trumpet [see Figure 3]: firstly, as I already mentioned, you can't have a trumpet unless you can play notes and stop notes, so there has to be a way of turning the sine wave on and off. To do this we need another VCA. We also need something, such as a keyboard, to play the sound. Something to give expression would also be handy, so here an extra couple of modules are used simply to produce vibrato. We could also add an extra length of 'pipe' so that the same notes can take longer to build up.

"Trumpets have flares on the end, so we also

HERE'S ONE THEY MADE EARLIER...

Those with an overwhelming desire to put Ron's findings into practice for themselves may be interested in the fact that Gateshead-based Digital Audio & Computer Systems (DACS) Limited — for whom Ron often freelances — are developing a commercially viable modular synthesizer with acoustic modelling capabilities, based upon Ron's unique instrument as referred to in this article. They are not envisaging mass production, but instead plan to offer custom-built systems in a small way for whoever might want them, much along the same lines as America's Serge and Germany's Doepfer standard modular synthesizers. Models of such things as plucked strings, drums, gongs, bells, wind and brass, plus unusual hybrids, imaginary instruments and, of course, really weird effects, can be achieved with the type of system Ron has designed.

A DACS Limited, Stonehills, Shields Road, Pelaw, Gateshead NE10 0HW.
T 0191 438 5585.
F 0191 438 6967.
E mjumbo@globalnet.co.uk

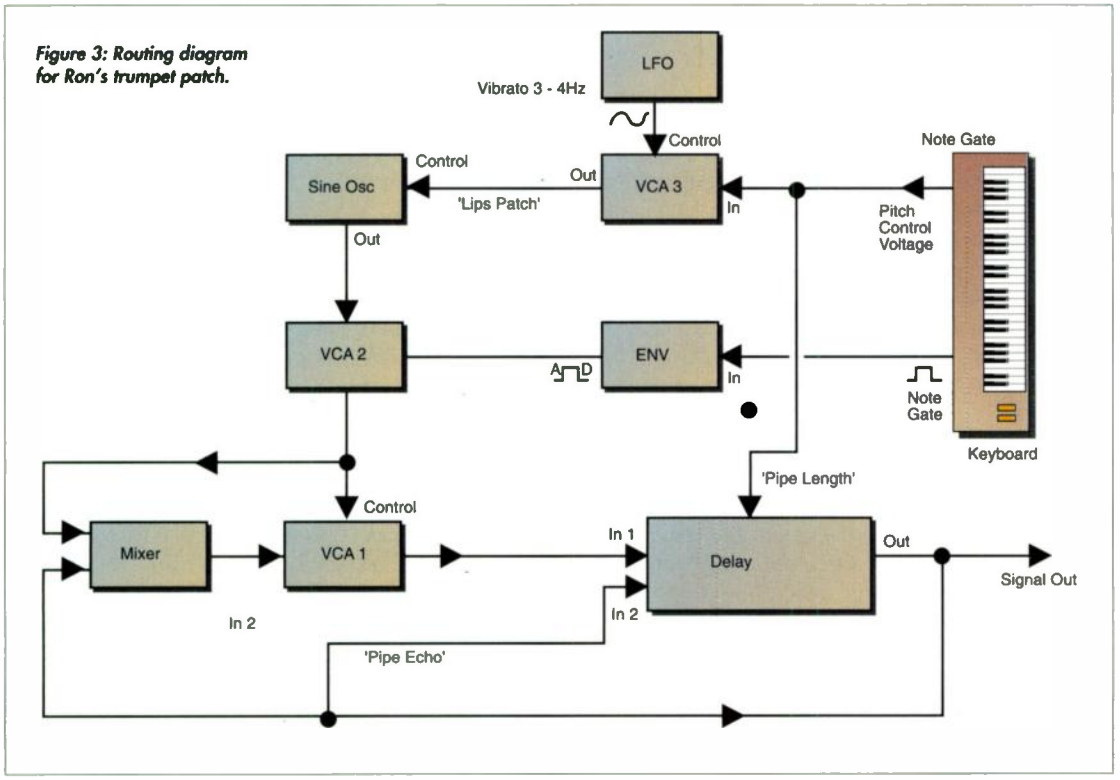


Figure 3: Routing diagram for Ron's trumpet patch.

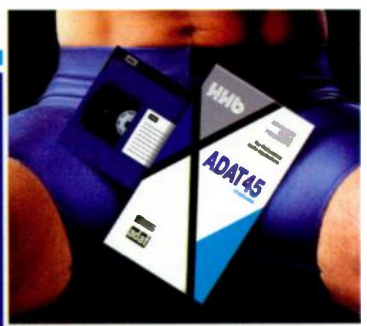
need to know how a flare works. On a computer you could add another 50 lines of code, or whatever, to simulate this, but in electronics we need extra modules — or do we? From a listener's point of view, one of the things the flare on a real trumpet does is project sound forward. If it simply came out of a straight pipe, the sound would go all over the place, but since it's a horn shape, it tends to go forward. You get an increase in the level of the sound at certain frequencies that the horn can control. When the frequency is very low, the horn really has no effect, because the horn is so small and the wavelengths are so big. One thing you can do is use a bit of EQ to make it sound more raspy.

"The delay line I use for these models includes a simple low-pass filter, like a tone control. It's also got a feedback control, for convenience. I call these Voltage Controlled Resonators, or VCRs. They control the way in which high frequencies propagate through the circuit. The overtones are being generated by the VCA and mixer, and then filtered off, so the high-end ones decay faster than the lower ones. This has a mellowing effect — like having an instrument with a wide-bore pipe."

MISTER SAX

"Moving on to the saxophone, the same kind of considerations apply but the action is slightly different. Very simply, a saxophone has a reed at ▶

Warning.
Too much slack in your pack can hit you where it hurts.



Slack windings can result in tape snapping. HHB ADAT tapes use precision engineered cases and hubs to minimise tape pack slack and ensure accurate tape handling.

HHB Advanced Media Products. Don't record on anything less. Tel: +44 181 962 5000
HHB Communications Ltd · 73-75 Scrubs Lane, London NW10 6QU, UK · Fax: +44 181 962 5050 · HHB on-line: http://www.hhb.co.uk

HHB
ADVANCED MEDIA PRODUCTS

▶ the end of a pipe, so first you must create a patch to represent the pipe — we can use the same one as in the trumpet. The thing that's different is that the reed is a vibrating membrane with its own mass and resonance. This time it's the *reed* trying to control things, in sympathy with a variable-length tuned pipe, rather than a trumpet player controlling and vibrating his or her lips to target the required pipe harmonic. The reed is a valve, as explained in the trumpet example, so the delay and the valve work in something like the same way. The main difference is that in the saxophone model the valve is driven by the reed and the pipe working closely together into a self-oscillating system, with the lips almost passive, except for articulating the note. In the real instrument, the reed *is* the valve, of course, and the energy from the air pressure flowing from the mouth sustains the note.

"To play a note, the gain through VCA2 [see Figure 4] is raised until the whole system oscillates when a key is pressed. The limiter shown in the diagram works electrically like the elastic limit of a real reed and stops the whole thing from going into overload. The first voltage-controlled filter (VCF1) has a resonant peak that can be adjusted and tuned to make the 'reed' more live or dead. A live reed picks up overtones or overblowing more readily.

"Again, to make the saxophone model a bit more realistic, I use extra modules to add playability and bring more life into the sound. The keyboard triggers an envelope generator that provides the signal that turns VCA2 on or off. This is modified *en route* by another VCA that is set to add a little tremolo from a low-frequency oscillator (LFO) to the system gain. No human can, nor would want to, play a perfectly static note, so the tremolo helps to keep the sound 'live'.

"The other thing you need to bear in mind is that there is air turbulence around the reed — how much depends on how it's played. Players use this to create a sleazy jazz-sounding saxophone. I personally love that sound, so I've included some extra modules to try and simulate aspects of this — a noise source, with another VCA to turn the noise on and off, and another VCF set to match the kind of turbulence you might expect to hear around a reed.

"Since the saxophone is a resonating, self-oscillating system, there needs to be something that will limit the amplitude of the vibrations. A real reed does this when it reaches the limit of its travel one way or the other. In the model, a limiter is needed to prevent system overload clipping. For convenience in the model, a simple soft-amplitude limiter is included in the delay line module — crude, but it works. With a real trumpet it's more to do with how loud you can blow it

NEW WAVE: MODELLING WITH THE KORG WAVESTATION

After I saw Ron Berry's techniques in action, I was inspired to try to replicate some of his experiments, in the hope of getting a few interesting new sounds for my sampler. After a few abortive attempts using a digital delay, I hit on the idea of using the effects section of my Korg Wavestation. After a bit of fiddling, I came up with the technique detailed below. Before going any further, I'd better make something clear: this technique is purely for sample fodder — you're not going to turn your Wavestation into a Prophecy, more's the pity. Compared to Ron's modelling synthesiser, it's a bit primitive, too!

Although I used a Wavestation for my experiments, I'm sure any modern Korg synth with two effect processors could replicate or even better this sound with a bit of fiddling. It's a kind of hybrid of flute, clarinet and didgeridoo, using a pair of simple waveforms as a driver, the stereo parametric equaliser as a kind of 'pre shaper' and the stereo delay as a resonator.

1. First you need to set up a waveform to drive the effects. I used wave 138, 'Ch', and wave 427, 'Cello'. Combine them with wave 427 at a lower level and you should hear an unimpressive quacking sound.

2. Now assign the stereo parametric EQ to FX1 and enter the following parameters:

- High freq: 20.0Hz
- High level: +3dB
- Mid freq: 100
- Mid width: 59
- Mid level: +12dB
- Low level: 0dB

3. Next, assign the stereo delay to FX2 and enter the following:

- Dry/wet mix: WET
- Delay time: see below
- L/R delay factor: 1:1
- Feedback: 96

4. Set the delay time to the shortest value (1ms), and play the keys in turn until you hear a strong resonant note — in this case, B5, the second highest on the keyboard. You should hear a nice flutish sound with a distinct chiff at the beginning. If you then add vibrato to the driver waveform, you'll notice that by the time it gets through the resonant stage, it's gained an unusual and very natural sound which can't easily be replicated by adding it in the sampler.

5. Now increment the delay time, finding the delay time that produces the right resonance for each note. Here's what I got from the top down:

- 1ms B5
- 2ms B4
- 3ms E4
- 4ms B3
- 6ms E3
- 8ms E2
- 9ms A2

By giving the L/R delay factor different settings, you can get a lot more resonant notes, and I've also noticed that a few notes have more than one good-sounding delay time, so using the dual delay could produce more complex timbres. Changing the EQ settings alters the character of the sound considerably — perhaps there's scope for some sample crossfading there. It's also interesting to drive the resonator with a noise pulse, which yields an interesting harsh pluck sound. Try changing the polarity of the delay feedback too, as this generates different harmonics.

If any readers come up with a good combination of waves and resonators, perhaps they could share them with the rest of us. Join the society of stone-age sound modellers! *Norman Fay*

before your lips hurt! In the trumpet model, amplitude is mostly controlled by the sine wave level, which is actually quite low."

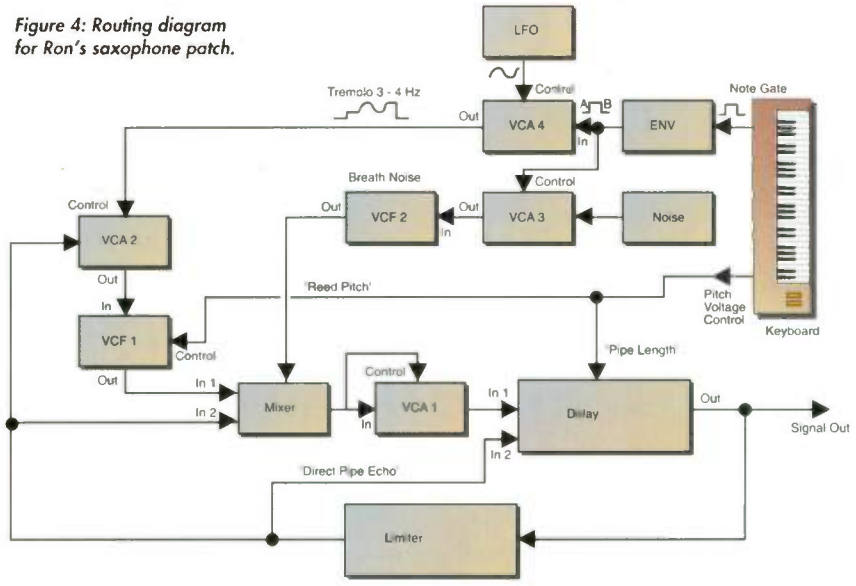
MODULAR MODELLING

It should be remembered that the block diagrams featured in this article are really just the simplest building blocks of acoustic modelling, the key to which is experimentation. As Ron says, "I've continued to experiment with patches, but I didn't get into acoustic modelling just to make an instrument that allowed me to sound like a saxophone or piano. What interests me is that you can take the models apart, rearrange and feed things into them. You can make models that can't really exist in reality, but *are* possible in the electronic world.

"When you make an acoustic model of something — say a saxophone — the fact remains that even if you have a realistic-sounding saxophone on a keyboard, you simply end up finding out what a terrible sax player you are. Playing a *bona fide* saxophone with a reed in your mouth is a totally different ball game to playing one on a keyboard. You have to work really hard just to make it sound like a third-rate sax player, so you won't find me using those kind of timbres in my own music that much. You're more likely to find me trying out models that go through from trumpet to sax, say, or feeding a sax sound into a trumpet model. Or how about a plucked trumpet?

"It's for these reasons that I feel I'm treading a different path to people like Yamaha who naturally are making commercially orientated acoustic modelling synthesizers because they want to sell lots of keyboards." SOS

Figure 4: Routing diagram for Ron's saxophone patch.



GLYPH

Are you serious about storage?

GLOBAL DISTRIBUTION

After taking America by storm, the Glyph range of storage solutions are now available in Europe.

Glyph differ from the rest by optimizing the GHD series for maximum performance and throughput in digital audio & video applications. All single drive 4GB or 9GB tabletop & rack mount units come with a 24 hour advanced replacement* warranty in the first year. The rack mount units come equipped with their unique SuspenShock - shock mounting.

1 & 2U HD > 2 x 9GB Hot Swap
The following are available In both Rack & super quite table top:
2, 4, 9GB HD SCSI AV optimized
CD-ROM, CD-R, SCSI Switchers
Jazz, Tape Backup & Hot Swaps.
The AutoLoader - freedom!
Unattended duplication of CDR's.
Now Burn 25 CDR's from PC or Mac in 8 hours.
Call for a dealer near you.

Glyph is a Digidesign Development Partner
... digital media storage & accessories

Distributed in the U.K by:
The Global Distribution Group
PO Box 39, ASHDON
Saffron Walden
Essex CB10 2FT

Tel: +44 (0) 1799 584925
Fax: +44 (0) 1799 584094
Email:Sales@Globaldistribution.com
Http://www.Globaldistribution.com

The Leading PC Music Production Store

Millennium Music Software

Specialists in PC midi sequencing, digital recording and hi-tech music production. Helpful service, Academic orders welcome, Fast delivery into Europe, Complete studio installations. Over 4 years dedicated service to Hi-Tech music makers worldwide

Now open till 8.00 every Wednesday!! Call in and check-out the latest gear on our informal Wednesday night get togethers. Free coffee for all.

AN1x — YAMAHA

This fabulous new synth will be with us by the time you read this ad.

Only **£899**

Trinity — KORG

There's never been a better time to buy a Trinity. With the price slashed down to just £1,499.00 for the basic model and options reduced as well, one of the most desirable keyboards of the decade is now very affordable. Too good to be true? Wrong. The only problem is getting our hands on them!! Limited amounts are coming in so call now to get your name on one.

Options available:

HDR-TRI	Hard Disk recorder option. Inc S/P DIF i/o and SCSI port. Enables 4 track digital recording locked to the internal sequencer with unparalleled ease of use.
DI-TRI	ADAT interface. Output 4 audio channels down one light-pipe!!
PBS-TRI	Playback sampler option. Allows Trinity to load and playback up to 8 MB of samples in Akai, .wav and .aiff formats.
SCSI-Option	SCSI interface allows data to be saved to external SCSI device.
Solo-TRI	Adds the sounds from the Korg Prophecy to your Trinity.

Basic model **£1,499**

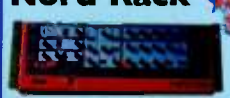
Clavia Nord Lead Synths — nord

New low prices

Nord Lead — nord

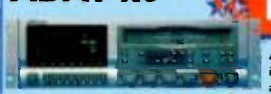
Now only **£999**

Nord Rack — nord



Only **£799**

ADAT xt — ALESIS



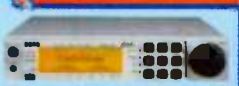
Alesis ADAT XT the industry standard digital audio recorder is now available at Millennium. Give us a call and checkout some of the amazing package deals we're doing with ADAT's and Mackie desks.

MR Rack — ENSONIQ

Packed full of 14MB of heart-stopping sounds plus 20MB of Urban Dance Project Sounds Absolutely FREE!!

£999

NS5R — KORG



New from Korg this little silver box certainly delivers the goods. Check out these specs:
64 voice poly
12 Mbytes ROM
1049 programs, 384 combis, 32 drum progs
128 user memories
Fully GM compatible with GS & XG Sound maps.
Expandable using Wave-Blaster compatible daughter boards.
Computer interface

£POA

Studiologic — FATAR

Full range in stock

ESI 32 — E-MU

There really is nothing to beat this sampler at just £899.00. Did you know it had resonant filters, excellent midi control, 4 outputs and timestretch. Neither did we - we just thought it sounded good! Forget other pastey white boxes these things are the best!! We supply a package including a SCSI ESI-32, Zip Drive with 100MB RAM for just £1049.00 Inc VAT and free access to the complete EMU sample library on CD ROM.

£899

D90 — FOSTEX

8 Track Digital Recorder woth vari - pitch, ADAT interface and optional SCSI adapter. comes standard with approx 30 mins record time. Upgradable.

£POA

DMT8vl — FOSTEX

£899

1202vlz — MACKIE

only £289.00
4 mic/line inputs 8 line inputs
2 Aux sends, 2 stereo returns
Unique Alt 3 & 4 outputs (ideal for computer digital recording).

Best Deals

03D — YAMAHA

Now in Stock

£2,999

DA-20 — TASCAM

DAT Recorder

£699

MD4 — YAMAHA

Mini Disk 4 track digital recorder

Includes Free Mic and Headphones

Best Deals

Millennium PC Packages

We supply tailor-made computer systems to suit your requirements and your budget. If you want to get started in the world of making music we can take the headache out of buying a music computer. We install all the software / soundcards / interfaces etc. and get the whole thing up and running so that everything works from day one. And get this - it's cheaper than you might think!!

Pro Audio V6.0 — CAKEWALK

It's here at last! The world's favourite Windows midi sequencer has just taken a giant leap forward to bring new audio processing features and herald a new era in PC Music Production.

Featurs include:
Time Stretch/Compression
Pitch Shifting
EQ
Delay
Chorus Reverb Flanger
ActiveX support for audio plug-ins
StudioWare™ Design your own virtual work suface for all your midi/sysex gear and control it all from Cakewalk Pro Audio 6.0

Pinnacle / Fiji — Turtle Beach

Stereo 20 bit digital audio card with optional S/P DIF interface, Kurzweil synth, midi interface with 3 ports, daughterboard connector AND a stereo sampler upgradeable to 48MB. Also includes Midi Orchestrator plus midi/audio sequencer. £439.00

Turtle Beach Fiji also in stock. Same as the Pinnacle but with no synth or sampler £339.00

£439

Sound Forge — SONIC FOUNDRY

Never before has audio editing been so easy. This is so cool! Loads of effects and tools, almost every audio format catered for, and loads of on-line help and tutorials. This is the choice for those who want to get the job done!! Optional plug-ins for Noise Reduction, Spectral Analysis and Batch Processing

£279

Music Time — MUSICTIME

This must be the world's favourite 16 staff notation package.

Now only **£79**

WRH

creamw@re

tripleDAT

The magical system from Creamw@re goes from strength to strength. We have shipped several fully configured TripleDAT systems and they are quite simply amazing. You can literally add multiple audio tracks alongside your midi sequencer. When you've got the song done complete with audio tracks (vocals, guitar, himalayan nose flute etc) you can record all the midi stuff into TripleDAT as well so you have a multi-track audio master, (just like the real thing!) Add effects (in real time!!) without having to loop out to your FX rack - just load up the effects in TripleDAT and away you go! Once you've done that you're ready to master the whole lot down to a stereo track still within TripleDAT. When you've got the track(s) done don't bother with the DAT - just pop in a blank CD and create the ultimate demo - a finished Red Book compatible

Audio CD ready to take to the pressing plant!! If off line editing is your game then TripleDAT will save you time and money - it's perfect for quickly overlaying audio tracks for commercial production or for broadcasters who want to do their own editing at home rather than having to go to a studio. We can supply this Dreamw@re fully configured including one of our now legendary super fast pentium PCs, CD Writer and 2 GB SCSI hard disk for less than the price of a Makie 8 Buss !! Frightening isn't it?

Yamaha CDR 400
x4 CD Recorders Now In Stock

Wavelab 1.6

Real time effects editing on the PC with optional plug ins for De-Click and De-Noise. The spec of this product reads like the effects list at Abbey Road!!
Now includes Red Book CD Recording

£399

AudioWerk 8

emagic

8 outs and digital I/o for Logic Audio Mac or PC

£499

Re-Birth RB338

Stanberg

2 TB303's and a TR808 for Windows'95 and Power Mac users
£149.95 Now In Stock!!

Cubase V3.0, Score, VST

All formats in stock

£279

E-MU

E-MU Systems Top Samplers

"When you choose your sampler, you have to really ask yourself how you are going to use it?!
If what you are looking for is a simple sample playback machine just to do time compression, then the market is full of products for you. However, if what you need is going to be at the heart of your midi setup and not only provide you with the basic features but also more hardware capabilities, fabulous synthesis abilities and astonishing realtime control functions, there is going to be no contest...E-Mu is for you.!!!!
E-Mu Systems has the edge in all departments:

- easy to comprehend and use interface
- 64 voices expandable to 128
- 8 analog outputs expandable to 16
- 4MB of RAM expandable to 128MB
- Numerous quality DSP functions with undo facility, bpm time compression, sample scrub on pitch wheel and 3-D doppler effect
- 22 brilliant filters ranging from 2-pole lowpass to highpass, bandpass, vocal, phasers, morphing and everybody's favourite, the Bat-phaser.
- Audition from SCSI : Choose from your 500 loops without loading every single one of them in.
- 18 step realtime control patchbay which enables you to control your filters frequency or resonance per zone using any midi controller
- 16 midi channels expandable to 32
- You can add a 18-bit digital dual effects board and a digital I/O and Ascii keyboard input board to your e6400 while the EIVx and EIVTurbo have them as standard.

When version 3.0 comes out, E-Mu systems products will reach a different dimension:

- You will get fully fledged 48 track sequencer
- You will have the ability to install their 16MB Rom board containing around 700 presets. This will transform ANY of the current top E-Mu samplers into a powerful ROM based synthesizer.
- You will have access to 8MB or 16MB flashram boards
- And a lot more.

Please note that all the top E-MU samplers are compatible with Akai S1000/S1100 and all Roland S700 series automatically.

Come in and try one and be "E-Mued" for life...!!!"

XG

YAMAHA

DB50xg £99.95
SW60xg £129.95
MU10xg £189.95

DP Pro

ENSONIQ

Effects processing for the post Millennium period. Choose from a host of smooth sounding effects algorithms to produce sound textures as individual as your fingerprint. With digital i/o and 24 bit converters as options you can upgrade as your budget allows

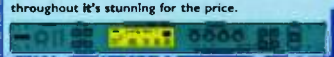
Ensoniq DP/4 + and DP/2 in Stock!!

RRP **£999**

REV500

YAMAHA

Get the big syudio sound with this excellent reverb, 20 bit effects throughout it's stunning for the price.



£349

FX

LA — **GCX-2** Compressor Gate RRP £189
EQX2 Dual 3 Brand Parametric EQ RRP £249
MPX1 Mic Preamp Comp/Exp/Gate/DeEsser/EQ RRP £29
MLX2 Dual Mic/Line Preamp with DI RRP £19

Nanuverb
£159.00

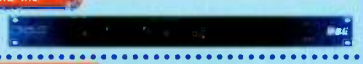
Behringer Composer
Industry standard dual channel auto- compressor, limiter, gate.
£CALL!

Behringer Ultrafex II
Widely accepted as the best affordable sonic enhancer on the market.
£CALL!

ENSONIQ

DP2 Dual channel effects processor
• Dual 24 bit DSP • 600 presets • midi control
£Low

BBE Sound Inc — **362** Sonic Maximizer



£Call

YAMAHA — **SPX 990**
In Stock!

YAMAHA — **REV 100**
Professional quality digital reverb for just
£179

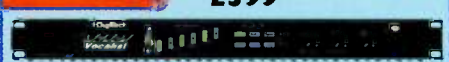
DigiTech — **Studio Twin**
Affordable multi effects processor with stereo SDISC processing.

£235

DigiTech — **Studio Quad V2.0**
Industry standard Multi effects with dual SDISC processing - up to 4 simultaneous parallel effects - that's 4 effects processors in one!!

£449

DigiTech — **Midi Vocalist**
£399



DigiTech — **Studio 400**
Massive bank of effects with Dual SDISC processing, digital i/o and much more. This is the dream machine!!
£CALL!

lexicon — **Alex CALL**
Reflex CALL

ART
Tube MP Valve Mic Preamp for crystal clear vocals. Makes your budget recordings sound very expensive!
£149

Millennium Music Software

T: (0115) 955 2200

172 Derby Road, Nottm. NG7 1LR
T: (0115) 955 2200 F: (0115) 952 0876

VISA SWITCH

Organ transplant

ROLAND VK7 VIRTUAL MODELLING TONEWHEEL ORGAN

Much hard graft has been put in by electronic instrument manufacturers over the years in an attempt to transfuse the essence of the tonewheel organ into a MIDI-compatible keyboard. NICK MAGNUS dissects Roland's latest virtual modelling approach, and pronounces the operation a complete success.

As the Editor of this magazine has remarked before, it's ironic that physical modelling, the most recent development in synth technology and a result of the latest in high-speed processor chips and DSP power, has so far been most successfully used to recreate the sounds of the past. Take a look at Clavia's Nord Lead, and Roland's JP8000 — both unashamedly and deliberately designed to impersonate those analogue synths of years gone by. Even Roland's V Guitar system uses sophisticated modelling techniques to emulate the sounds of knackered old valve amps.

Roland's newest Virtual Modelling instrument, the VK7, continues the nostalgia theme. The VK7 is a recreation of the tonewheel organs first developed in the 1930s, and still hugely popular to this day. Although various Hammond soundalikes have been unleashed on the market lately, this is Roland's first effort in this area for seven years (since the VK1000), so perhaps it's time they had another crack at it, using the new technology that's now available. In 1980, Korg launched the analogue-based CX and BX organs, arguably the first successful dedicated Hammond impersonations. In 1990, Roland's VK1000 used S+S synthesis to achieve its goal, and more recent units have employed sample replay methods in the quest for the perfect tonewheel emulation. So can Virtual Modelling show any appreciable improvements over these older methods? Let's take a closer look.

A CLOSER LOOK

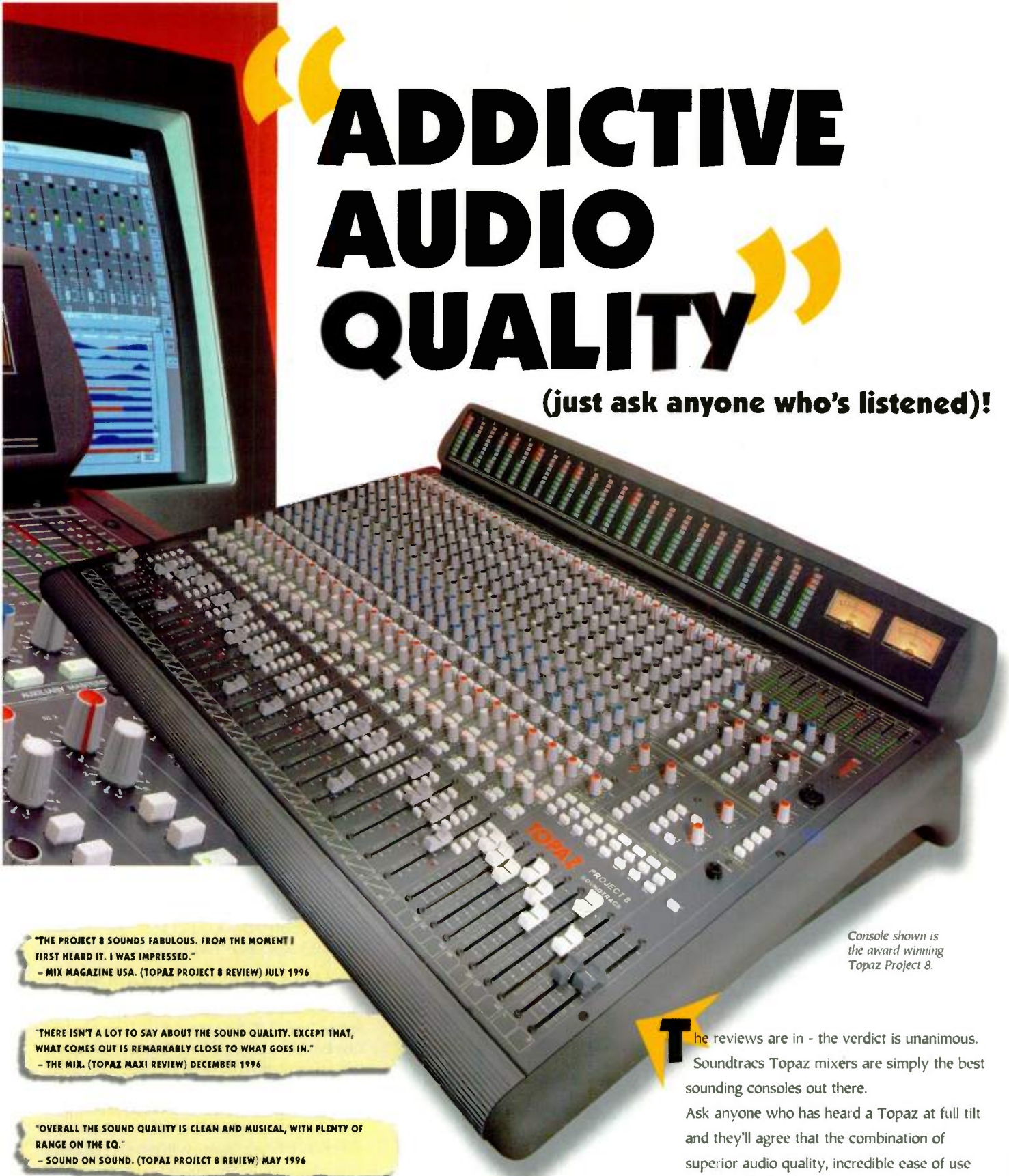
Apart from the different panel placement and controls, the VK7 bears more than a passing resemblance to a Hammond XB2, sharing a practically identical wooden cabinet and dimensions, although it's actually slimmer, being a mere 10cm high. While not perhaps the most exciting instrument to look at, it is nevertheless very solidly built, and everything about the design is sensible and uncluttered. The panel switches are fat and chunky, with embedded LEDs where appropriate, and the legending is a good size, easily readable even in my dimly lit studio.

The keyboard is a 61-note C-to-C affair with a pleasant, firm action that doesn't rattle disturbingly when subjected to those wild glissandi beloved of organists. To the left of the keyboard is a panel that houses the drawbars (Roland call them harmonic bars, presumably for copyright reasons), the rotary effect controls, and three buttons which determine whether the drawbars will affect the Main, Sub or Pedal registrations.

The panel above the keyboard is home to all the remaining controls: eight grey patch-selector buttons and Bank select, plus four similar buttons for organ percussion (no, not the drum type); at the right-hand end, six more grey buttons select a category of Orchestral Voices, more on which later. Four rotary ▶

"ADDICTIVE AUDIO QUALITY"

(just ask anyone who's listened)!



Console shown is the award winning Topaz Project 8.

"THE PROJECT 8 SOUNDS FABULOUS. FROM THE MOMENT I FIRST HEARD IT, I WAS IMPRESSED."
– MIX MAGAZINE USA. (TOPAZ PROJECT 8 REVIEW) JULY 1996

"THERE ISN'T A LOT TO SAY ABOUT THE SOUND QUALITY. EXCEPT THAT, WHAT COMES OUT IS REMARKABLY CLOSE TO WHAT GOES IN."
– THE MIX. (TOPAZ MAXI REVIEW) DECEMBER 1996

"OVERALL THE SOUND QUALITY IS CLEAN AND MUSICAL, WITH PLENTY OF RANGE ON THE EQ."
– SOUND ON SOUND. (TOPAZ PROJECT 8 REVIEW) MAY 1996

"I CAN'T SAY ENOUGH GOOD THINGS ABOUT IT. THE EQ IS A STANDOUT IN THIS FINE SOUNDING MIXER."
– MIX MAGAZINE USA. (TOPAZ PROJECT 8 REVIEW) JULY 1996

"IT HAS A CLEAN AND TRANSPARENT SOUND QUALITY TO IT. MANY APPLICATIONS IN LIVE, HARD DISK RECORDING AND GENERAL STUDIO APPLICATIONS."
– SOUND ON SOUND. (TOPAZ MINI REVIEW) NOVEMBER 1995

"THE OVERALL SOUND QUALITY WAS IMMENSELY BOUNCY, CAPTIVATING AND ENORMOUSLY WELL-LIKED. ADDICTIVE SOUND QUALITY"
– THE MIX. (TOPAZ PROJECT 8 REVIEW) JANUARY 1997

The reviews are in - the verdict is unanimous. Soundtracs Topaz mixers are simply the best sounding consoles out there.

Ask anyone who has heard a Topaz at full tilt and they'll agree that the combination of superior audio quality, incredible ease of use and massive feature set is just unbeatable.

In fact, completely addictive.

So why degrade your sound with an inferior mixer.

Choose the best.

Choose a Soundtracs Topaz.

by SOUNDTRACS **TOPAZ**
PROJECT 8 CONSOLE

For further information call Freephone 0800 374994.

Distributed in the UK by beyerdynamic 17 Albert Drive, Burgess Hill, West Sussex RH15 9TN

Roland VK7

pros & cons

ROLAND VK7 £1699

pros

- Extremely authentic tonewheel sound.
- Good amp simulations.
- Great effects.
- Very easy to edit and operate.
- Well designed and solidly built.

cons

- Expensive compared with existing alternatives.
- Not an ideal master keyboard due to lack of performance controllers, namely pitch and modulation wheels.

summary

Excellent, authentic tonewheel organ sounds without the need for external units to compensate for any deficiencies in the effects. Easy to operate, easy to edit, full MIDI spec: price aside, a must for any organ aficionado's arsenal.

SOUND ON SOUND

knobs give access to overdrive, Orchestral level, reverb and master volume. The remaining small black push buttons perform tasks such as edit on/off, vibrato on/off, keyboard assignments, and cursor, value and write functions. At the centre is an LCD display to aid navigation through the editing process.

Around the back are the usual connections — stereo out, phones, MIDI and mains power, plus sockets for two external controller pedals and an expression pedal. As on the XB2, an 11-pin connector is provided should you wish to connect a mechanical rotary speaker to the VK7. The MIDI sockets vary from the norm: there are two Ins and one Out, as opposed to the usual In/Out/Thru. This is to allow various combinations of external keyboard, bass pedals and sequencer to be connected; the thru status of each input is changeable from the System MIDI Edit page.

SOUND ARCHITECTURE

The VK7 is 4-part multitimbral, consisting of Upper Manual (Main), Lower Manual (Sub), Orchestral Voices and Pedals. These can be addressed on separate MIDI channels in a studio or sequencer environment. For live performances, all four parts can be accessed at once using combinations of keyboard splitting, layering, and a set of MIDI bass pedals or remote MIDI keyboard. There are 64 (8x8) organ presets (the Main registration plays across the entire keyboard), and these can be used as a sort of library of sound templates when you're creating any of the 16 user-programmable presets (which can contain splits, layers, effects, and so on).

There are now a fair number of instruments dedicated to tonewheel organ impersonations, ranging in authenticity from excellent to indifferent. In this review, I'll be drawing comparisons with the 1991 Hammond XB2 (see the 'Feature Comparison' box), regarded by many as one of the best examples, and also at present one of the closest equivalent keyboard-equipped units to the VK7.

What often takes the edge off even the most accurate basic sound on many units is their inbuilt effects, specifically the rotary effect and overdrive. To achieve a believably authentic sound, you often need to acquire external valve preamps, Leslie simulators and so on, bypassing the internal effects altogether — and these can increase the cost of the instrument by several hundred quid, as well as making a lot more kit to cart around if you're playing away from home. So do the wonders of Virtual Modelling mean that the VK7 can stand alone, without need of outboard processing?

PRESET SOUNDS

I have to confess to being biased towards butch, beefy organ sounds that purr, grind and swirl. On first play, the VK7's presets appear to dwell largely on Diapasons, Tibias, Theatre organs and those cheesy jazz organ sounds that DX7s excel at. Sure, the presets have to appeal to the widest range of potential users, but I still felt that I wasn't hearing what I'd really hoped for. It turned out, though, that this was largely due to the way the rotary effect had been set up for most of the presets. Generally speaking, the rotary's slow speed was too slow, sometimes to the point that I found myself hitting the bypass switch repeatedly to make sure it was working at all. Coupled with that, the acceleration and deceleration times were extremely long: well out of line with your average Leslie. Happily, all these things and more can be edited and saved, and once the requisite adjustments have been made, the rotary effect acquits itself very well indeed — so much so that I found little to choose between the VK7's rotary and my beloved Dynacord CLS222: the need for one external processor had already been removed.

AMP & SPEAKER SIMULATIONS

The VK7 has six simulated amp/speaker settings: Rotary Types 1 & 2, Stacks 1 & 2, Stack Mix and Combo. The stacks and combos also allow the application of overdrive while the rotary is bypassed. Rotary types 1 and 2 sound similar; type 2 allows for some pretty severe overdrive settings, while type 1 is somewhat cleaner and brighter. The Stacks have a distinctly different quality, with pronounced peaks in the low-mid range, and an undeniably boxy 'speakerish' quality. These all respond quite readily to overdrive. Lastly, the Combo setting produces a sound which is comparatively small and slightly telephonic — useful for simulating the combo organs of the '60s. These amp simulations can be further coloured with a 3-band equaliser.

Also in the effects category is one unusual inclusion — a ring modulator. This prompts the same question as the DLM parameter found on the Roland D70: it's interesting, but what do you do with it? The ring-modulation frequency can be varied, but once set it's fixed (it doesn't track the

ROLAND VK7 AND HAMMOND XB2 COMPARED

	VK7	XB2
Stereo outs	Yes	Yes
Phones	Yes	Yes
Send/return jacks	No	Yes
11-Pin Leslie connector	Yes	Yes
Two MIDI inputs	Yes	No
Pitch/Mod wheels	No	Yes
Rotary effect editable/storable	Yes	No
Overdrive level programmable	Yes	No
Amp/Cabinet simulations	6	None
EQ programmable	Yes, per patch	No, global only
Multitimbrality	4-part	2-part
Additional non-organ voices	Yes	No
Variable organ sound A/R envelope	No	Yes
Patches accessible from panel	64 preset, 16 user	8 user
Total number of presets	80	128
Vintage leakage effect	Yes	No
Panel functions TX/RX via SysEx	Yes	No
SysEx bulk dump	Yes	Yes
Ring modulation effects	Yes	No
External control pedal inputs	3	2
Patch naming	Yes	No
2nd- & 3rd-harmonic percussion together	No	Yes
Percussion assignable to main or sub	Yes	No
Velocity-sensitive percussion	No	Yes
Percussion triggering	Single	Single/Multi
Drawbars 'live' for patch editing	Yes	No
Customisable drawbar wraparound	No	Yes

Buy by spec.

Buy Drawmer

Buy by reputation

Buy Drawmer

Buy the Drawmer MX30 at £225

RRP inc. VAT.

Gated/Compressor/Limiter

Bye Bye Compromise

The Drawmer MX30 is an exciting breakthrough... a dynamics processor from the world's experts for the price of, well... something rather less. Think about it: your music flowing through the professional industry's favourite signal path. A Drawmer for £225. RRP inc. VAT.

Don't compromise your audio excellence. Choose Drawmer. You can afford it.

Brochure hotline: 01924 378669

Web: http://www.proaudio.co.uk/drawmer.htm

E-mail: sales@drawmer.co.uk

"Even absolute beginners will find it difficult to get a bad sound out of the MX30.

Although the MX30 is the budget baby of the Drawmer range, it doesn't have either a budget sound or a budget specification."

Paul White
SOUND ON SOUND

DRAWMER Charlotte Street Business Centre Charlotte Street
Wakefield West Yorkshire WF1 1UH ENGLAND
Tel: +44 (0)1924 378669 Fax: +44 (0)1924 290460

CONTROL FREAK

The VK7 can transmit and receive every single control (bar the cursor and write buttons) as SysEx data. Roland are thoughtful enough to provide the choice of sending the drawbar movements as either SysEx or control changes, with the option of defining which controllers are assigned to which drawbar — great for making tonal adjustments from an external master keyboard. The one snag with SysEx is that the task of inserting events into a sequencer retrospectively (such as Leslie fast/slow, Percussion on/off) means typing in a SysEx string — a rather more tedious job than popping in a quick control change. Still, full marks should be given for including the kitchen sink in the MIDI implementation.

VOICES

STRINGS	Marimba
Strings 1	Attack 1
Strings 2	Attack 2
Octave Str	Attack 3
JP Strings	Attack 4
Solo Violin	
	OTHER
CHOIR	E Piano
Choir	Vibes
Large Choir	Principal
Soft Choir	Pipe flute
VP330 Choir	Full organ
Pop Voice	Nylon GTR
Trumpet Section	Harp
Brass Section	Pop Ocarina
Orch Brass Ens	
	EDIT
BRASS	PARAMETERS
Tenor Sax	Level
Soprano Sax]	Attack Time
Trumpet	Release Time
Horn Section	Brilliance
Tenor Sax	LFO Depth
Section	LFO Speed
	Key shift
BASS	Pitch Fine
Fingered	Vel. Sens
Acoustic	Vel. Offset
Fretless	Chorus send
Picked	Reverb send
Slap	Autoglide on/off
Velicity	Glide rate
	Pitch Control
ATTACK	Sens
Glockenspiel	Mod Control
Xylophone	Sens

▶ keyboard), so it's not possible to create a consistent musical sound that can be played across the keyboard. Its usefulness is further limited by the fact that the ring-modulated sound is stuck with an organ-shaped envelope. I'd be intrigued to know what application the designers had in mind!

WHEELS & PEDALS

Play a vintage Hammond and what do you hear? Extraneous grunge — the more the better! This grunge is the result of crosstalk from all the tonewheels breaking into the sound, creating a whiney, whistling background noise that was once considered undesirable, but is now seen as a distinct asset for a true vintage sound. The VK7 offers the choice of Clean and Vintage settings. Select Vintage, and the whine appears — there's even a parameter to vary the amount. Still in the grunge department, the Key Click level determines how much 'fluffy' spit is heard at the beginning of the note. The VK7 is very thorough in providing for both key-on and key-off click levels.

As is the norm, the VK7 offers both second- and third-harmonic percussion, but with the proviso that you use either one or the other, not both. This is a mild disappointment, as I remember that my old Hammond L100 allowed for both to be on at once, as does the XB2. The XB2 also allows the percussion to be velocity sensitive, as well as having multiple triggering, whereas the VK7 remains staunchly true to the original — no velocity, and single triggering only, so all notes must be released before the percussion will re-sound. On the plus side, the percussion can be assigned to either Main or Sub (upper or lower manual) sounds. Soft/Normal levels are individually definable, as are the fast and slow decay times.

For you pedal wizards, the VK7 is able to simulate either Composite or Individual pedal registrations. Composite uses two drawbars to create the bass sound (as found on models such as the L100); Individual makes use of all nine drawbars to finely sculpt the sound, as on B3 organs.

EFFECTS

The reverb has seven variants — three rooms, two halls, a plate and a delay. The rooms and halls are similar to (if not the same as) those found in the JV-series synths. The plate is reminiscent of the old spring reverbs built into some organs; delay is of the mono type, with a very respectable maximum of around 1500ms available.

True to the original instrument, there are six types of vibrato. The three V settings are of the pitch-vibrato type associated with theatre organs and Blackpool summer holidays, while the three C types are the pulsating variety loved by jazz organists everywhere. The speed of all the vibrato settings is fixed (the XB2 offers slow, medium and fast options).

It's often the case that solid-state overdrive circuits have more in common with fingernails down a blackboard than the smooth growl they aspire to. Roland have made a laudable effort in this department: an overdrive that purrs gently at the lower settings (even on single notes) and rips satisfyingly at full shred. Much of the success of the effect depends on the drawbar registration and chord voicings you're using. You may have noticed that (on an equal-tempered instrument such as an organ) distorted minor chords sound far less pleasant than major ones, but even taking this into consideration, the VK7 copes very well. Overall, the subtler applications of the VK7's overdrive seem to work the best, but one shouldn't complain about being given too much of a thing...

ORCHESTRAL VOICES

Back in 1990, Roland's VK1000 organ sported not only the principal organ sounds, but also a selection of additional voices: some were beautiful, some were strange, but the electric piano sounds were to die for. Making full use of the S+S synthesis around which the instrument was designed, they were totally customisable, with all the constituent harmonics available on the organ drawbars. You could control the levels of second harmonic, hammer thump, tine zing... whatever you wanted. The sound was worthy of being marketed in its own right as a lightweight alternative to the MK80.

Times change, and S+S has fallen by the wayside, to be replaced by samples. I presume that the VK7's Orchestral voices are PCM sounds as opposed to Virtual Modelling — there's nothing in the documentation about this. What you do get is a wider range of extra sounds than the VK1000 had, including a selection of Strings, Choirs, Basses (see the 'Voices' box for the full list). This is fine, but I feel that the sounds are somewhat run of the mill, even too safe. Then again, some of the VK7's voices are quite enjoyable to play — Strings 1 is nice if you're in a sombre mood, the VP330 Choir is a fun salute to the past (why no VP330 strings as well?), and the Full Church Organ is worthy of Vincent Price on one of his spookier days. However, if you don't use assignable foot pedals or an external keyboard controller, the sounds remain static snapshots, due to the VK7's lack of any performance wheels or levers — which were included on the VK1000.

CONCLUSION

The VK7 certainly seems to cut the mustard, with great onboard effects — no outboard gear is necessary short of a mixing desk or suitable amplification. The basic tone is the best I've encountered so far, with plenty of beef and presence, and, incidentally, a very powerful upper octave that screams like a good 'un. So, when's the module coming? SOS

E £1699 including VAT.
A Roland UK Ltd, Atlantic Close, Swansea Enterprise Park, Swansea, West Glamorgan SA7 9FJ.
T Brochure line 01792 515020.
F 01792 310248.
W http://www.roland.co.uk

Stop!!

.....Read the small Print

VS880 VXPanded

with Roland VS8F1 and 1.4 Gig Hard Drive

- Each of the 8 Tracks has 8 Virtual Tracks provide up to 64 Tracks of recording possibilities.
- SCSI output allows work to be backed up to Jaz, Zip or other media for archiving work.
- Non-Destructive Editing for complex or simple remix work
- 2 Independent Multi-Effects processors with RSS™ 3D, Delay, Reverb, Chorus, Vocoder, Overdrive, Distortion, Speaker Simulation, Microphone Simulation, 10Band Graphic EQ
- Effects can be controlled over Midi for on-the-fly changes to parameters
- Midi Time Code Sync and Midi Machine Control to synchronise to your sequencer
- Automated Mixdown to control record, playback and pan levels.
- Dawsons offers 0% Finance on the full package to even make paying for it easier!

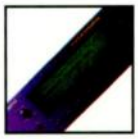
15 Days Satisfaction

Dawsons are offering the VS880 on 15 Days Satisfaction. If you are undecided on whether the VS880 is the unit for you - don't worry. If you buy from us we offer a unique 15 days satisfaction promise. If you return the unit to us within 15 days of delivery alongwith all the manuals and peripherals we will give you a full refund. Please keep your boxes, as missing accessories are subject to replacement fees.....How about that for a deal!

Demo Days

Corin Birchall our Store demonstrator will be demoing the JP8000, MC303, VT1, XP80/XP50 at the following Dawsons stores. Please call for further details

Saturday June 14th 1997 Dawsons St. Helens
Saturday June 21st 1997 Dawsons Stockport
Saturday June 28th 1997 Dawsons Warrington
Saturday July 12th 1997 Dawsons Altrincham
Saturday July 26th 1997 Dawsons Chester



DAWSONS

MAKING MUSIC OUR BUSINESS

Turn over for full prices on all the major Roland products

WRH

AKAI S2000

18Mb inc either ZIP Drive or CD-Rom

Akai S2000 Sampler
18 Meg of fitted Memory!
Time & Space CD
Free Delivery!

£52

£40 Deposit plus 18 monthly payments of £52
Total 0% Credit Price £1085

AKAI S3000XL

18Mb inc either ZIP Drive or CD-Rom

Akai S3000XL Sampler
18 Meg of fitted Memory!
Time & Space CD
Free Delivery!

£88

£99 Deposit plus 18 monthly payments of £88
Total 0% Credit Price £1883

Zip or CD-Rom?

Both the Akai S2000 and S3000XL packages include a choice of Zip Drive with 100Meg Iomega Disks or a CD-Rom Drive with a Time & Space CD-Rom and bias. If you want both items call for a deal!!

AKAI CD3000XL

24Mb & ZIP DRIVE

Akai CD3000XL Sampler
24 Meg of fitted Memory!
Zip Drive & 100 Meg Cart.
Time & Space CD
Free Delivery!

£99

£867 Deposit plus 18 monthly payments of £99
Total 0% Credit Price £2049

AKAI MPC2000

18Mb upgrade inc. & SAMPLE CD

£50

£299 Deposit plus 18 monthly payments of £50
Total 0% Credit Price £1179

Roland JP8000

Inc. Semi-Flightcase worth £99

£72

£199 Deposit plus 18 monthly payments of £72
Total 0% Credit Price £1466

Roland MC303

£40

£165 Deposit plus 10 monthly payments of £40
Total 0% Credit Price £565

Inc. Beyer DT250 Headphones worth £99!!!!

YAMAHA CS1X

£50

£99 Deposit plus 10 monthly payments of £50
Total 0% Credit Price £590

Roland VS880

V2 & Includes 1.4G Drive, Effects Board, Beyer DT250 Headphones

VS880 including 1.4Gig Hard Drive, effects board and Beyer DT250 headphones

£88

£349 Deposit plus 18 monthly payments of £88
Total 0% Credit Price £1867

KORG Trinity

NEW LOW PRICE

£68

£299 Deposit plus 18 monthly payments of £68
Total 0% Credit Price £1487

YAMAHA 03D

Includes EXPANSION CARD

£111

£399 Deposit plus 18 monthly payments of £111
Total 0% Credit Price £2797

If the 03D is bought on 0% Finance we are offering either a ADAT or Tascam or AES-EBU Card in the deal. Call for a price without the card.

E-MU ESI-32 (8 Meg and Zip Drive)

V2.X

£1049

Not available on Interest Free Credit

SPIRIT Absolute Zero Package

NEW PACKAGE

The Classic Absolute Zeros combined with the now almost industry standard software Cubase 1.50 Amp. Available from stock including free delivery and professional speaker cable

£349

SPIRIT Absolute 2s

Absolute 2 combined with the Samson Servo 170 Amp. The system for professional nearfield monitoring. Now available for a new low price including free delivery and professional speaker cable

£421

SPIRIT Absolute 4Ps

£36

Includes speaker stands

£145 Deposit plus 18 monthly payments of £36
Total 0% Credit Price £797

DynAudio BM5

NEW

£30

£95 Deposit plus 10 monthly payments of £30
Total 0% Credit Price £395

GENELEC 1029A

£58

£179 Deposit plus 10 monthly payments of £58
Total 0% Credit Price £750

JoMoX XBASE09

0% FINANCE

£40

£99 Deposit plus 10monthly payments of £40
Total 0% Credit Price £499

Nord Lead

£70

£299 Deposit plus 10 monthly payments of £70
Total 0% Credit Price £975

Call for Rack prices and expansion prices!!!!!!

SPIRIT SX

£479

Fl142

£349

FT142

£299

YAMAHA A3000

18Meg

Including 18 Meg Memory

£55

£299 Deposit plus 18 monthly payments of £55
Total 0% Credit Price £1199

KORG Prophecy

LOW!!!

£83

£199 Deposit plus 6 monthly payments of £83
Total 0% Credit Price £697

Roland XP50

Includes SEMI-FLIGHTCASE WORTH £110

£52

£349 Deposit plus 18 monthly payments of £52
Total 0% Credit Price £1885

AN1X

Includes worth £35

£38

£115 Deposit plus 18 monthly payments of £38
Total 0% Credit Price £897

YAMAHA SU10 Sampler

Includes 3 Sample CDs

£269

Includes CP33 PSU normally £7 and one Creative Essential CD worth £19.95

DM1 8V

£44

£199 Deposit plus 18 monthly payments of £44
Total 0% Credit Price £997

D90 inc Hard Drive

£68

£299 Deposit plus 18 monthly payments of £68
Total 0% Credit Price £1487

SALE for the CENTURY?!!

All items are ex-demo or second hand unless quoted otherwise. These sale items are not available on interest free credit.

Roland DM80	£599	DAC 80 Meg on a sale Akai mt	
Digidesign R1	£399	Drive (Faulty, sold as seen)	£29
E-mu Emulator IIIXP	£949	Roland Juno 6 Synth	£199
Akai CD3000	£1499	LA Audio GX2 Gate	£129
Apple DOS Card for 6100 Computer(DX2/66)	£149	Sony PCM2700 Dat	£1599
MaxPack Sequencer (PC)	£99	Kurzweil K2000R	£1299
Steinberg MusicStation card	£99	Yamaha DX21	£199
Cubase Audio for Mac Ver 2.0 DAE Version	£399	Yamaha DX7 & Case	£299
JazzChord (ATA) Jazz Sware	£20	Mackie CR1604	£699
Tannoy CPA5 Speakers	£149	Roland AR1 **NEW**	£299
Valley PR2A(Com.Lev.DSP)	£999	Tascam DA88(Pristine)	£1899
Quasimidi Technox	£499	EMU EIV 128 Poly Sampler	£3199
Alesis AI2 ADAT A/V Sync	£499	Yamaha SPX90	£399
Tannoy System 8 Mons	£399	Behringer DualFex	£39
Yamaha RCX-1	£39	Alesis ADAT	£1199
Aphex 105 Gate	£199	Yamaha TX81Z	£179
Aphex C2 Big Bottom	£199	Spirit Folio RackPak	£499
Kurzweil K2000(4Meg)	£1699	Behringer MX2642	£525
Akai IB112T	£49	Spirit Folio 12 2 Desktop	£249
Akai SB3001P Piano Board	£99	Akai SG01K	£249
Akai IB302D	£199	Korg MonoPoly	£349
		EMU PROTEUS MPS	£399
		Digi 96/8 ADAT Interface	£749

NEW STUDIO DEPT

Dawsons Music has recognised the need for a more professional and personnel service in Pro-Audio sales and after-sales service, with this in mind, Dawsons are expanding their Pro-Audio operation with effect from NOW and will be offering the following services.

1. Most Pro-Audio equipment will be available for demonstration at the customers studio (by appointment only)
2. 0% Finance available (subject to status)
3. Dawsons Discount Card
4. Special Package Prices available
5. 24 Hour Telephone Sales/Support
6. All equipment demonstrations by experienced studio engineer

Rode NT2 Condenser

This mic is the most incredible value for money we've ever heard. It features multi-patterns and comes with Shock Mount, Case, Dawsons will also include lead & Pop Shield as part of the 0% Finance package.

0%

£40

£99 Deposit plus 10 monthly payments of £40
Total 0% Credit Price £499

Beyer MCE83

Originally costing £99+, this condenser, for use with acoustic instruments ie: acoustic guitars, overhead cymbals. Requires 11-48V phantom supply voltage. Dawsons Deal includes Case, Clip and Mic Lead and delivery.

£188

AudioWerk

£40

£99 Deposit plus 10 monthly payments of £40
Total 0% Credit Price £499

Includes 8 Way Jack to Phone Lead

ProMix 01

£66

£299 Deposit plus 18 monthly payments of £66
Total 0% Credit Price £1497

Includes 8 Way XLR to Jack Lead

E-MU PLANET PHATT

£749

Not available on Interest Free Credit

E-MU ORBIT

£749

Not available on Interest Free Credit

DTC-A6

Includes 16 Free RME RSS DAT Tapes

£50

£199 Deposit plus 10 monthly payments of £50
Total 0% Credit Price £597

AKAI FOSTEX ALESIS TASCAM YAMAHA SPIRIT GENELEC digidesign APHEX Steinberg Roland EMAGIC KURZWEIL DigiTech TIMESPACE KORG lexicon Technics audio-technica MICROMALIS

DAWSONS

MUSIC IS OUR BUSINESS

lexicon

THE ONLY WAY TO BUY

0%

Alex — Included — £299 — Includes Delivery to UK Mainland

Reflex — Included — £349 — Includes Delivery to UK Mainland

MPX1 — Included — £44 — £399 Deposit plus 18 monthly payments of £44 Total 0% Credit Price £1191 Includes Delivery to UK Mainland

PCM80 — Included — £83 0% — £599 Deposit plus 18 monthly payments of £83 Total 0% Credit Price £2093 Includes Delivery to UK Mainland

PCM90 — Included — £100 0% — £785 Deposit plus 18 monthly payments of £100 Total 0% Credit Price £2589 Includes Delivery to UK Mainland

Lexicon's Trophy Shelf!!!

PCM80 Cards

Popper Stoppers
- to reduce Vocal "pop". Includes a clamp to fasten directly to your existing boom stand and smells nicer than old tights!!!!

£39

APHEX SYSTEMS

- 2 separate stereo stages
- Generates true upper harmonics and greatly increases bass presence and impact
- The only unit that truly "excites" without significantly increasing signal peaks
- Adds sparkle to vocals and guitars
- Bigger - pocher Bass response from your whole mix

- Two of the best quality easiest to use auto compressors around in one box
- Unique Easyrider® no-knee compression control
- Fantastically clean quiet signal
- Rotary Speed control varies the Auto compressor's release time

- 4 Band mono / 2 band stereo parametric Valve EQ @ only £[illegible]
- Unique Tubessence® patent - true valve stage without the high heat, short life and signal variability found in other units
- Sweeters the sound of virtually all audio sources
- Extremely flexible high quality EQ - each band has boost/cut, frequency and bandwidth control

- Currently in use on most major tours and in many studios
- The most exciting new valve compressor/limiter for years, with Aphex patent tubessence® valve stage in a 1u box
- Easyrider® and Expressor® controls
- HFX dial allows high levels of compression without losing the high frequency signal

104 C2 — Included — £239 — Includes Delivery to UK Mainland

108 Co — Included — £239 — Includes Delivery to UK Mainland

109 Pq — Included — £399 — Includes Delivery to UK Mainland

661 Pre — Included — 0% — £60 — £763 Deposit plus 10 monthly payments of £60 Total 0% Credit Price £763 Includes Delivery to UK Mainland

Call for details on the Aphex 106 4-Channel Easyrider Compressor @ £399, Aphex 107 2-Channel Mic Preamp with Tubessence™ @ £549 and the Aphex 105 4-Channel Logic Assisted Gate @ £399

Call us on the Mouse Gets it!!!

THE ONLY WAY TO BUY

www.dawsonsmusic.demon.co.uk

Yes it's true. Dawsons Music are now on the World Wide Web, surfing it with the best of them. You will find an up-to-date 2nd hand list, details of new products, information request forms, finance forms for you to fill in, software updates for the popular sequencers, midi files for you to download as well as a competition. Link up to www.dawsonsmusic.demon.co.uk.

Accept no imitations. We are the No. 1 Mail Order/Finance Music Company in the UK. It's official - you told us!!! - thanks

24 Hour Telephone Sales and Support — 24 HOUR

Dawsons offers 24 hour service. We are open 24 hours a day for sales and technical enquiries. Try calling the other shops on a Sunday or a bank holiday - some day you may have to!

tel: 01925 245422

15 Days Satisfaction

If you are not completely satisfied with your purchase, simply return it in its original condition within 15 days, and we'll give you your money back. Just send it back to the store where you made your purchase, along with your receipt, manuals and all original packaging. We'll gladly exchange it, offer you a different product of equal value, or give you a full refund. Please keep your boxes, as missing accessories are subject to replacement fees. Due to certain legal restrictions, computers and computer software are exempt from this policy. Additionally, certain Pro-audio and recording systems may also be exempt, however this will be fully explained to you before you make your purchase.

Package Deals and 0% Finance

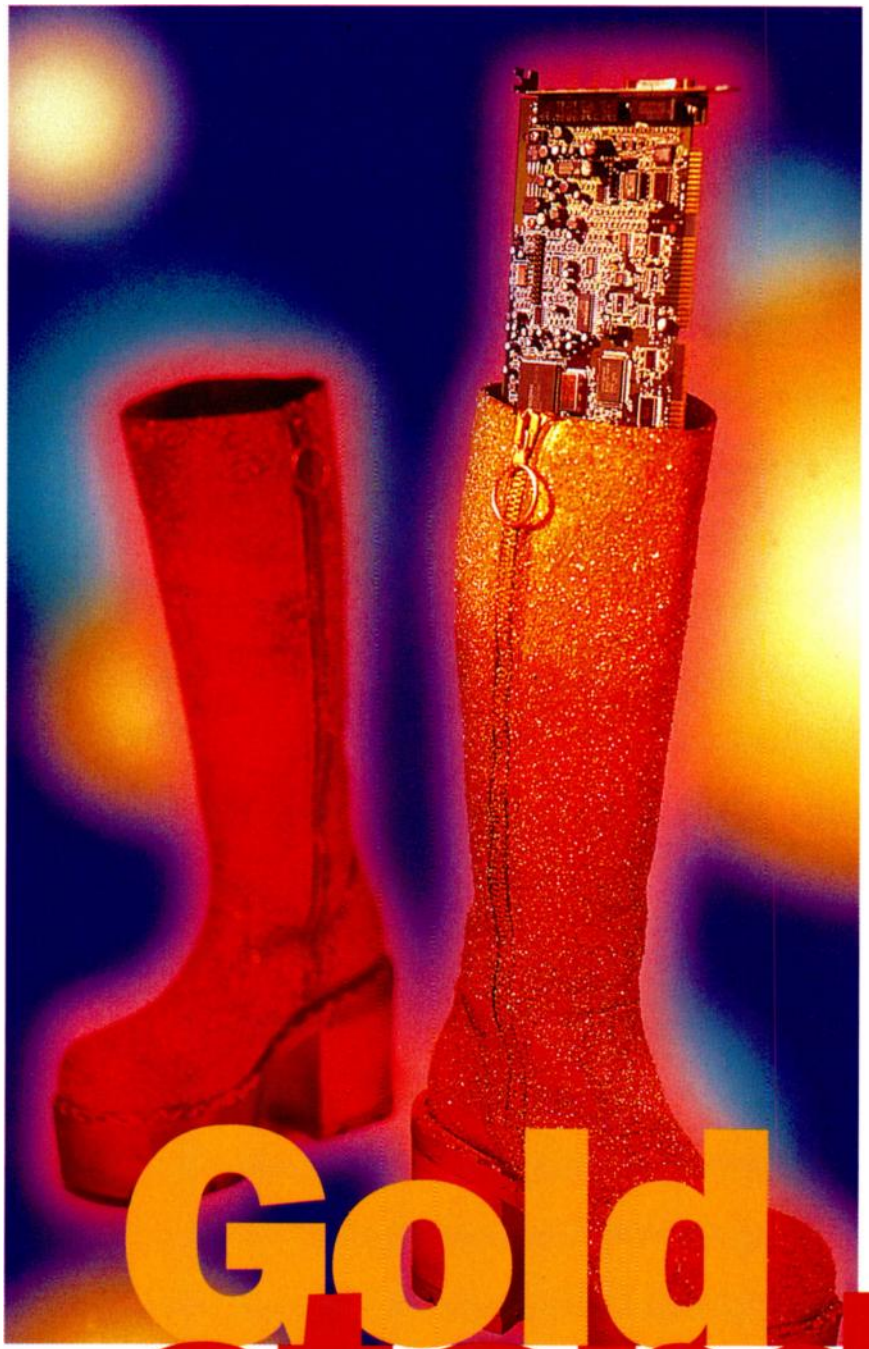
Dawsons specialises in Pro-Audio packages. We can supply desks, outboard, amplification and cabling (we even sell MACs and PCs). The more items you buy, the greater the discount. We believe our buying power allows you to get the best deal, all from one shop. Call us now on 01925 245422 and find out how you can benefit.

DAWSONS

www.dawsonsmusic.demon.co.uk

55 Sankey Street, Warrington, WA1 1SU
Fax 01925 417812
E-Mail: proaudio@dawsons.co.uk
Written quotations available upon request

Access · MasterCard · American Express · Switch



Gold standard

CREATIVE LABS AWE64 GOLD SOUNDCARD

How much more can Creative cram onto a single PC soundcard? PAUL WHITE finds out.

Reviewing soundcards is never straightforward, because what seems at first sight to be a simple sub-£200 budget bundle is often a very complex synergy of hardware, bundled software and potential co-operation with third-party software. Creative Labs' AWE64 Gold (named after its gold-plated connectors) has evolved from the original Soundblaster, but it's been upgraded in several areas in order to make it appeal to those interested in making desktop music. To maintain Soundblaster compatibility for the benefit of the games market, some design choices have been made that don't initially seem to make complete sense — but, once you understand what this card offers, its potential soon becomes apparent. Intriguingly, the card also includes the ability to apply physical modelling to some of its General MIDI sounds in order to make them more lifelike, although, on the other side of the coin, it also retains the ability to provide you with the extremely nasty FM synth characteristic of earlier Blaster cards.

Like most soundcards, the AWE64 Gold is a multi-functional device which can be broadly described as a GM/GS S+S synth; a GM FM synth; a multitimbral sampler based on Creative Lab's own SoundFont technology; a stereo in, stereo out audio card with additional S/PDIF output and multitrack audio support; and a MIDI interface (via the joystick port, using the cable that's included). It comes with a whole bundle of support software, including a full version of Steinberg's *Cubasis Audio*. There's also a proprietary 3D sound processor built in but, as far as I can see, this is really only applicable to the games soundtracks that support it; the card's overall performance is quieter if you leave this switched off.

Connections are provided to handle the audio from a CD-ROM drive, and various jukebox- and karaoke-style software modules are included to support this. Naturally, some of the support software is of the kind that most musicians would rather leave in the box (anything to do with karaoke, for example), but along with *Cubasis* there are several soundbanks ready to load onto the card, comprehensive sample-editing and sample-creation software, and enough drivers to start a road haulage company. Because the board covers so many functions, it's best to look at them one at a time, starting with the physical board itself, though please forgive me if I leave out the karaoke and singing word-processor functions!

ON THE CARDS

The AWE64 Gold is a shorter-than-average ISA card conforming to Windows 95 Plug and Play standards, though it can be used with Windows 3.1. There's no room on its rear panel for the S/PDIF out phono connector, however, so this is provided on a second panel and is attached by a flying lead. Fitting it is no problem providing that you will have at least one free rear-panel slot location after fitting the card. This is obviously less than ideal, as is the

fact that there's no S/PDIF in, but if you don't need the S/PDIF out, you don't have to fit it. The stereo analogue line ins and the mic input are on stereo mini jacks, though the audio outputs are on phonos. A cheap and cheerful mic comes as part of the package, but, surprisingly, this sounds quite good, especially if you use it with a pop shield.

One feature lost in the AWE64's evolution process is support for a daughterboard. The only expansion socket is for a memory card, with which the on-board 4Mb of RAM can be upgraded to 8 or 12Mb, depending on which expansion board you decide to fit. These are Creative Labs' own RAM expansion packs, not SIMMs, though the prices are reasonable. A complete 8Mb RAM board costs around £60, and comes with a disk containing additional sounds, including an 8Mb GM set. The bundled software comes on CD-ROM, with *Cubase* on a separate CD-ROM.

Like the original AWE32 card, the AWE64 Gold has a 1Mb GM synth sound set in ROM, but there's the option to load a bigger and better sample set into RAM. GM sets of 2Mb and 4Mb come with the basic card, and the 8Mb set comes with the memory expansion kit. As the name implies, the card offers a total polyphony of 64 notes, though this is something of a conjuring trick, as 32 voices come from the on-board Emu 8000 wavetable chip and the remaining 32, including the physically modelled voices, are created in software and require a genuine Intel (not a clone) Pentium processor to run. Creative call this software synth the WaveSynth. Whether you address the 'soft' or hardware voices is an option in the MIDI Mapper, so you don't have to use a full GM bank of one or the other — you can mix and match if you like.

Though no hardware full-duplex operation is available for the digital audio side of the package, a software duplex driver is provided with the card. On the review sample, which came with a pre-release version of the software, the playback quality was limited in overdub mode, and both the Instrument Mapper and the WaveSynth voices had to be turned off during recording. It was also necessary, in *Cubasis*, to enter an audio delay compensation while overdubbing, to keep all the tracks in time. By early summer, a better full-duplex driver will be included, which should circumvent these problems and allow full-fidelity monitoring while overdubbing.

The card is built on a multi-layer circuit board, the intention being to improve screening and reduce background noise, and production cards are specified with a signal-to-noise ratio of better than 90dB. Unlike previous Soundblaster cards, the AWE64 has shipping software that will allow digital audio and the on-card synthesizers to be mixed internally and piped to the S/PDIF output port. Thoughtfully, *Cubasis* offers the option of recording even mono tracks as stereo files so that they can be played out over the S/PDIF output.

pros & cons

CREATIVE LABS AWE64 GOLD £199

pros

- Combines a GM synth, a MIDI interface, a sampler and an audio interface for less than the cost of most sample CD-ROMs.
- Excellent selection of bundled software, including Steinberg's *Cubasis*.
- Interesting waveguide physical modelling possible on some GM sounds.

cons

- Audio path could still be a little cleaner.
- Some of the support software could be better integrated.
- The provision of on-line help as an alternative to paper manuals isn't always conducive to unimpeded progress.

summary

Where else could you buy a sampler, a GM synth, a MIDI interface, an audio interface (with S/PDIF out), a Steinberg sequencer, support software and a selection of CD-ROM samples for under £200?

SOUND ON SOUND

Software drivers are provided for the external MIDI port, AWE Synth, WaveSynth/WG, Creative Music Synth (FM), and the AWE Instrument Mapper. How many channels of audio you can play back at one time depends on the power and speed of your computer as well as on the speed of your hard drive — my Pentium 90 came up with six mono tracks, or eight if they were used as stereo pairs according to the *Cubasis* diagnostic routine included.

GM SYNTH

Anyone who's heard an AWE32 will know what sounds to expect from the 1Mb GM synth, except that in the case of the AWE64 Gold the sound quality is cleaner and brighter due to a better output stage. This is strictly line-level — the ability to feed passive speakers from nasty on-board amplifiers has gone. The sounds are, however, exactly the same, and can most fairly be described as perfunctory for any semi-serious musical application. The same is true of the software-based sounds, though I have to say that they weren't at all as bad as I'd expected. The GM synths fare rather better if you load the 2Mb or 4Mb versions (stored on your hard drive during installation) or, if you have the memory expansion, the full 8Mb version: these show a marked improvement in artistic quality, especially the pianos and sustained string sounds, although audio fidelity remains about the same.

Any GM set may be changed or replaced using the AWE32 Synth Control software; if they're addressed via the Instrument Mapper ▶

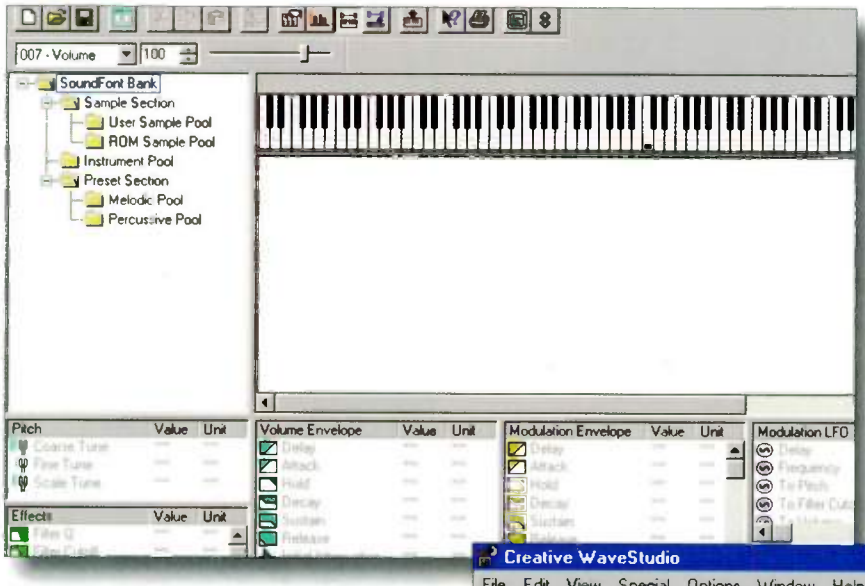
driver, up to 15 of the GM sounds can be replaced by physical modelling versions, and banks of mixed hardware- and software-generated sounds can be constructed. Physical modelling is quite a novelty in a low-cost soundcard: the AWE64 uses a system developed by Sondius, though this is a very simple implementation of their modelling software and doesn't allow any user interaction; rather, the harmonic content of the note changes automatically as the note evolves. For example, the timbre of the overdrive guitar changes as the note develops and eventually mutates into a rather nice feedback sound, rich in second harmonic.

There's no straightforward means of editing the GM synth sounds, as there is with, for instance, Yamaha's DB60XG synth card, but if you want something a little bit different, there's always the SoundFont section (see the 'Font City' box) to explore, as well as GS and MT32 emulations.

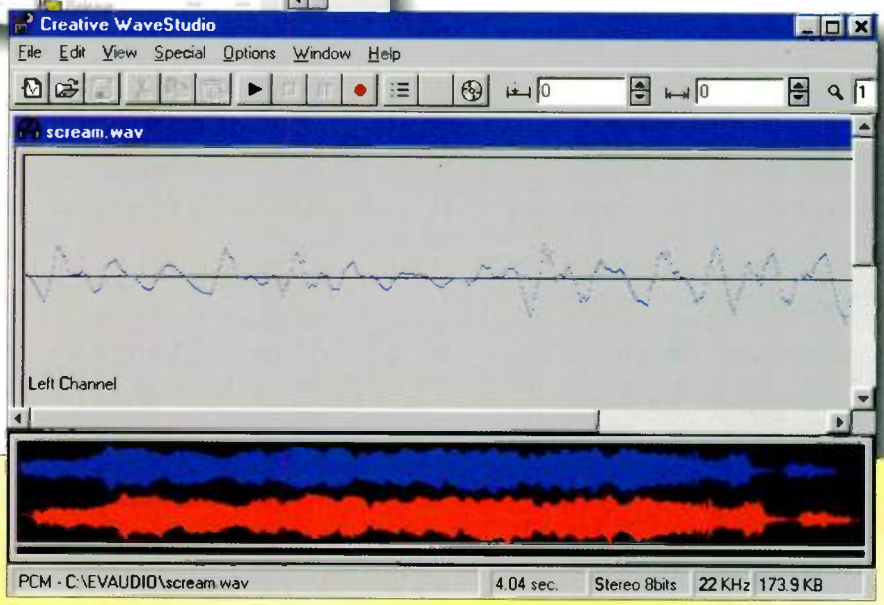
CREATIVE USE

I tested the MIDI side of the card using *Cubase*, *Cubasis*, *Logic*, and a couple of different Evolution sequencing packages; once the Creative software was properly installed, there was no problem. Apparently, the number of physical modelling voices you can use at once is limited by the type of PC processor you have, but my Pentium 90 didn't throw any obvious tantrums with normally busy music. The GM sounds are actually quite good, although some are better than others; a few seem to have a noticeable amount of noise mixed in with the sample, especially some of the string pads. Considering the high technical spec of this card, I also found a slightly unnerving level of background hiss — make sure you mix your sounds at as high a level as possible, with the maximum velocities up near the 127 mark.

Each SoundFont bank is loaded into its own MIDI patch bank, though you may find several versions of the sample set accessed via MIDI



Vienna.



Wavestudio.

FONT CITY

SoundFont banks are Creative Labs' equivalent of sample programs, comprising sets of keymapped multisamples with envelope settings, loop points and so on. A fair selection of SoundFonts is provided with the card, though anyone with Net access can download countless new ones from Creative's web site. The more altruistic can also create their own and leave them on-line for others to use.

The *Vienna* software that's included with the card provides a means to record and edit your own samples, either by recording audio directly into the card, or by importing WAV files from suitable sample CDs (for example, Time & Space's Creative Essentials series, which considerately includes all the samples as separate WAV files). *Vienna* is a largely graphical module and works in conjunction with a wave-editing module, *WaveStudio*, shown above, in which individual samples can be truncated, looped and otherwise processed. The only disappointment here is that you can only loop the left and right tracks of a stereo sample individually, so it's almost inevitable that the two channels of a looped stereo sample will start to drift out of phase with each other after a while. In practice, most instrumental samples are best used in mono, whereas loops are best used as one-shots and triggered from the sampler every bar, so the stereo looping limitation should rarely cause problems. However, if you're going to include stereo wave editing, not allowing stereo wave looping is pretty inexcusable.

***Vienna*'s virtual keyboard can be used to set keysplits and to test notes; a huge selection of tools allows levels, tunings, envelopes and modulation facilities to be adjusted. Even the envelope adjustment is graphic, which is great to see on a piece of software that's virtually a giveaway. I won't pretend that everything about the program is as intuitive as it could be, but the on-line help (which is virtually the only instructive help you get with the system), is pretty good, and most tasks can be sorted out without too much grief.**

[For more information, see the article about SoundFonts in June's SOS.]

Natural audio

If

you are buying professional **audio equipment**, start as **you** mean to **go on**...

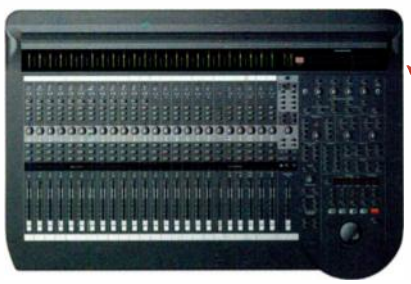
Best Apple deals and expert advice on integrated Digidesign based systems and third party plug-ins.
(pictured: The new Waves Renaissance Compressor)

Digidesign Preferred Dealer
Call for Pro Tools ver. 4.0 demo.

Full range of samplers including best RAM prices.

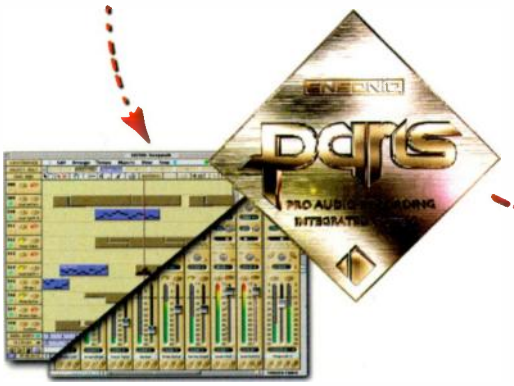
Buying a **digital audio** system or a **complete studio** package is not just about getting the **right advice**. With the experience we have, providing a solution is **easy**. Where we really **work hard** for **you** is in ensuring that you'll never regret buying from us. And if you're worried about **price**, then don't;

Natural Audio is part of one of the **largest groups** of pro audio companies in the UK. So if you're **simply** adding to your set-up or **investing** in a complete system, call **Natural Audio**



Call to reserve your Mackie Digital 8•Bus. The amazing new, true 48 channel digital mixing console.

Suppliers of all professional sequencers, signal processors, synthesizers and the latest hard disk recording systems.



Complete integrated recording solution for Windows 95/NT and Macintosh OS at an amazing price.

...and end up with the right pro-audio dealer.

Natural Audio Ltd.
Suite 6
Kinetic Business Centre
Theobald Street
Borehamwood
WD6 4PJ

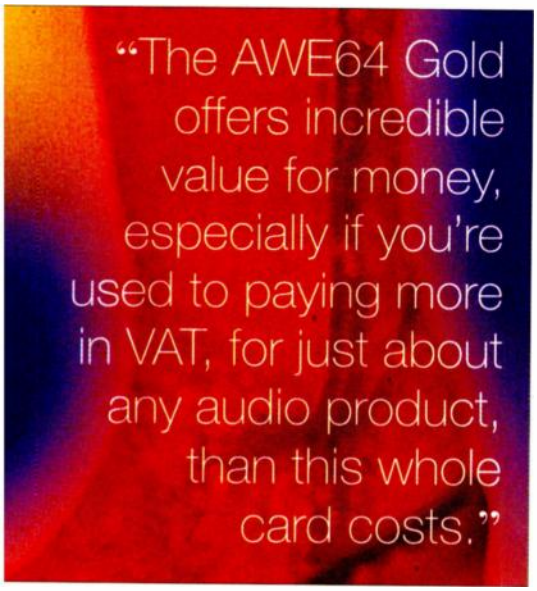
Natural audio

Tel: 0181 207 1717
Fax: 0181 207 2727
email: naturalaudio@compuserve.com

▶ Program Changes in the usual way. Once you increase the MIDI Program Change number past the point where there are no more SoundFont programs, the GM sounds corresponding to those patch numbers are played instead. Banks are switched using Controller 0, and the number of banks you can use at once is limited only by the amount of memory you have available. Included with my review sample were acoustic guitar, hammer dulcimer, and synth and drum samples, as well as a number of groove construction sets with drum loops, bass loops, vocals and so on, mapped to different keys. The quality of some of these is really very good, especially the looping. If you create your own SoundFont banks, these are saved onto your hard drive.

DIGITAL AUDIO

Creative Labs claim to have worked very hard to coax a decent signal-to-noise ratio out of this card, though the final figure will be influenced by the type of PC you have, the quality of the power supply, and which cards are slotted in next to the AWE64 Gold. In a typical PC, the quality isn't equal to that of a high-end audio card or a system with separate outboard converters, but, used with care, it's fine for serious demo work, provided you keep an eye on your recording levels and make the best use of available headroom.



When I visited Creative Labs to pick up the review package, I took the opportunity to try the *Cubasis* version using their faster PC. Because of the early version of the duplex driver, though, whenever I tried overdubbing, the original audio tracks played back around 100ms late. You can be sort this out by visiting the Advanced Audio Hardware window and inserting a negative delay to compensate, but you have to go back and switch this off after recording, before you can assess your work. Though this is tedious, it does make the job possible, and the monitoring quality of the existing audio during overdubbing is much better than Creative Labs led me to expect. Also, as stated earlier, you have to disable both WaveSynth and Instrument Mapper before you can do any audio recording — though you can turn them back on again when you've done. Once the updated support software is available, it should be possible to record, overdub and play back at 16-bit resolution with no delay problems, but as I didn't have this at the time of the review, it's something that you'll need to confirm for yourself.

SUMMARY

Though any consumer soundcard is effectively a shoebox full of compromises, cut corners and pinched pennies, all squashed flat and given an edge connector, the AWE64 Gold offers incredible value for money, especially from the perspective of anyone who's used to paying more in VAT, for just about any audio product, than this whole card costs. Creative Labs have quite obviously compromised some aspects of the card's performance in order to achieve a rock-bottom price: in the games market, low price is important. For example, it's great to see an S/PDIF output on such a cheap card, but the lack of an S/PDIF input pretty much eliminates it from the running as a serious engine for stereo digital editing.

The GM synths are perfectly useable, especially the larger RAM-based versions, and the physical modelling adds a new element of realism to certain sounds, especially the lead guitar patches. Even so, I found that even the 8Mb GM set wasn't as clean-sounding as the Yamaha DB60XG synth card I have fitted in the same PC.

The bundled software is generally good, and my main criticism in this area is that the software comes in so many different parts, and that you seem to have to make so many trips to remotely located drivers or accessory programs to get things running properly. For the newcomer to PCs, the lack of paper support may also be a problem, because, although there is a comprehensive on-line help system, it often doesn't seem to categorise its information in the terms you're likely to use.

The SoundFont capability is potentially very powerful, as it enables the card to be used as a quite serious on-board sampler, and the *Vienna* editing software that comes along with it is no slouch either. If you have the patience to transfer WAV files from sample CD-ROMs, it's possible to build up a library of excellent sounds very cheaply, all of which can be stored on your hard drive.

To address audio performance for a moment, the sound quality available from this card is surprisingly good considering the market sector at which it's aimed, and even the bundled mic sounds pretty reasonable. The early version of the drivers makes working within audio sequencers a bit of a pain, but the imminent revised versions should make things a lot easier in this respect. Oddly, I couldn't get *Logic Audio* to recognise the card, though the product specialist at Creative Labs has experienced no problems with his own *Logic Audio* system. This is just another 'one of those things' that makes living with PCs so interesting — in the 'May you die in an interesting manner', meaning of the word! However you look at it, though, this card does a hell of a lot for a minimal outlay and provides virtually a complete home studio in a box for the Pentium owner on a budget. SOS

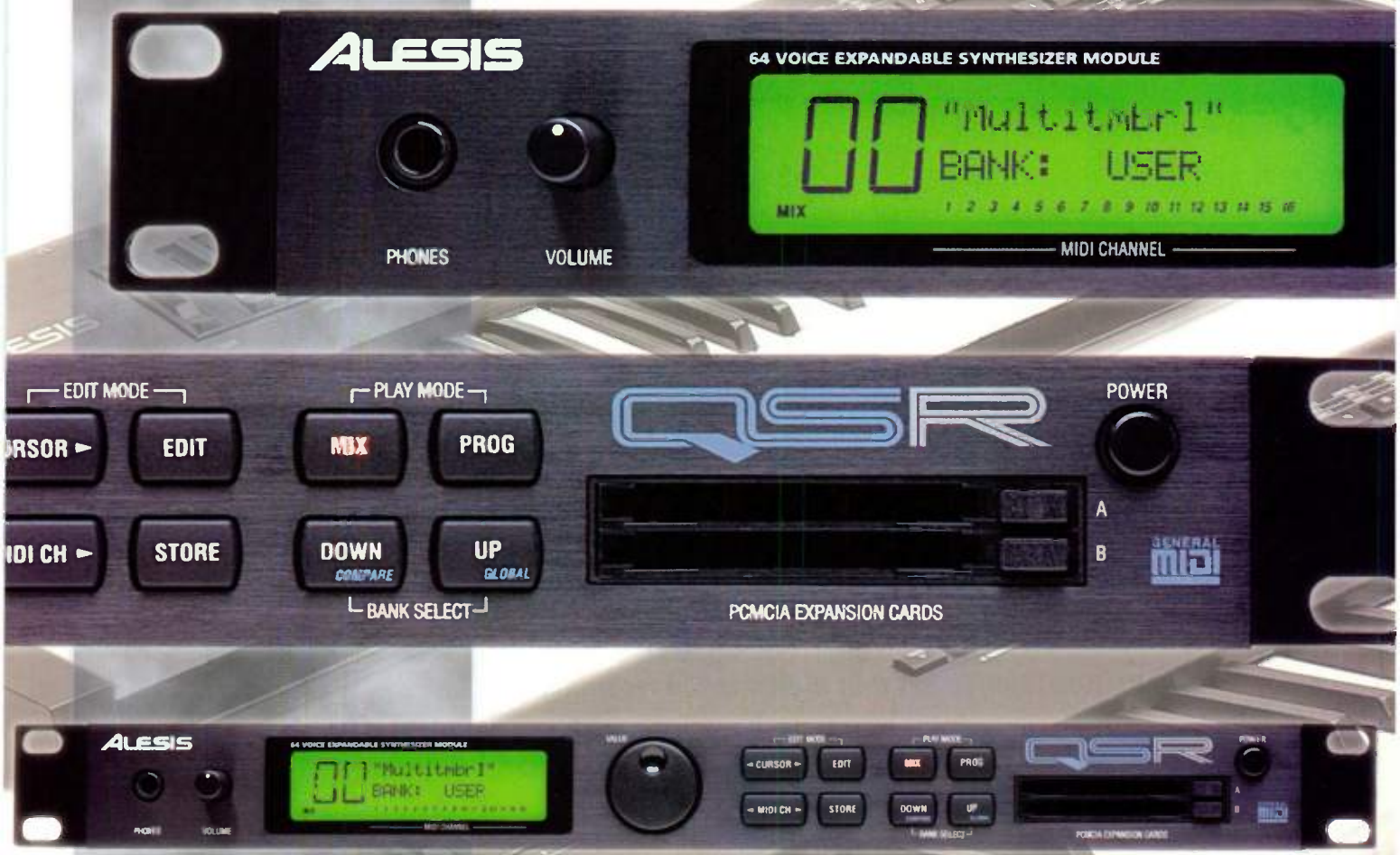
info

E £199 including VAT.
A Creative Labs, Unit 2, The Pavilions, Ruscombe Business Park, Ruscombe RG10 9NN.
T 01245 265265.
F 01734 828270.
W http://www.creativelabs.com

QSSERIES

QSR™

64 VOICE EXPANDABLE SYNTHESIZER MODULE



QCARD

Hip Hop - EuroDance
Rap Techno Dance
Classical - Latin - Sanctuary
Vintage Synthesizers
Vintage Keyboards

The new Alesis QSR is a QS8 synthesizer in a rack. The QSR features 640 programs, 500 mixes and includes Alesis' acclaimed Stereo Grand Piano program.

Alesis QSR: 16Mb ROM - 640 programs - 500 mixes - 64 voice polyphony -
2 PCMCIA Expansion slots - Four bus Alesis Multieffects - Serial data port - ADAT Optical Interface -
FREE CDROM with SoundBridge, Editor/Librarian, Samples and Sounds

Sound Technology plc, Letchworth Point, Letchworth, Hertfordshire. SG6 1ND
Tel: 01462 480000 Fax: 01462 480800 http://www.soundtech.co.uk

The Power of 12

KORG SOUNDLINK DRS 1212
MULTI-CHANNEL PCI AUDIO I/O CARD

Although it also forms part of the all-encompassing digital SoundLink system, Korg's 1212 PCI card offers a stand-alone, cost-effective option for getting multitrack digital audio in and out of your Mac. PAUL WHITE discovers that digital audio recording relies on going through the proper channels...

This is undoubtedly the year of the multi-channel audio I/O card, and with so many low-cost variants coming onto the market, computer-based audio without the restriction of a single stereo input and output seems certain to win over a lot of users. Multiple inputs and outputs are standard requirements for serious users — multiple inputs to allow the concurrent recording of multi-instrument sessions, and multiple outputs to interface with an external mixer. Exactly how those inputs and outputs are presented accounts for the main differences between competing products. Korg have built their card to form part of the SoundLink DRS system, and you may recall that we reviewed the SoundLink 168RC digital recording console in the December '96 issue of *SOS*, but while the 1212 I/O PCI card is designed to integrate fully with this mixer, it may also be used as a stand-alone breakout box for a MIDI + Audio sequencer, or a tapeless multitrack recorder.

12 TIMES ABLE?

Built on a full-length PCI card, the 1212 I/O PCI can handle 12 simultaneous inputs and outputs, but unlike most other systems, the main interface is the ADAT standard optical port. Two further inputs and outputs are provided on conventional S/PDIF ports, and there's also an analogue stereo pair of connectors accessible via stereo quarter-inch jack sockets on the rear of the card. Moveable jumpers on the card allow the analogue audio level to be set to either -10dBv or +4dBu. The audio converters are very much state-of-the-art, and are allegedly the same as those used in the new Alesis ADAT Meridian (see the interview with Marcus Ryle in the last issue of *SOS*). The input is 20-bit enhanced dual-bit delta-sigma, while the output is 18-bit linear. Because the converters reside within the computer, the noise performance is somewhat at the mercy of adjacent circuitry and the quality of the computer's power supply, but a weighted figure of 90dB is quoted. This is typical of the better soundcards, although the digital I/O shouldn't suffer because of being on a PCI card.

Adding up the eight ADAT channels, the two S/PDIF channels and the two analogue channels makes up the 12 in the board's title, but for professional use, there's also word clock in and out connections (see the 'Word clock' box elsewhere in this article for more on this), and an ADAT 9-pin Sync socket, allowing the host software application to run in tight sync with an ADAT.

Does this mean that the 1212 I/O PCI is only of any use to ADAT owners? Not at all — the ADAT optical interface is now a widely adopted standard, and looks set to become even more so. Even Korg's Trinity has an ADAT output option, and of course, Korg's 168RC recording console uses the ADAT interface. Yamaha's new digital consoles all have optional ADAT interfacing, and the same is true of other affordable digital consoles, such as Mackie's digital 8-buss. However, I'll concede that in an otherwise all-analogue environment, the 1212 is of limited use unless you have an ADAT to link it to, or unless you buy the optional outboard converters, which will set you back more than the price of the card.

pros & cons

KORG 1212 £599

pros

- Inexpensive.
- ADAT interfaces as standard.
- Ready for PC use once software support is forthcoming.

cons

- Costly to add the analogue converters for use with analogue mixers.
- As with most cards, usefulness is limited by the software.

summary

An inexpensive way to get into multitrack digital audio for those with digital mixers or ADAT-compatible hardware.

SOUND ON SOUND

SOFTWARE SUPPORT

A multi-channel audio card is only as good as the software that supports it, and by the time this card is first on sale, it will probably only be supported by Macromedia's *Deck II* (version 2.6 of this is being bundled with the 1212 by Korg, but only for the first few months the card is on sale), and *Cubase VST* v3.5 for Power Macintosh (apparently due in the summer). There's also a piece of utility software (see Figure 1) included which enables the 1212 to be used as a digital router, allowing any input to be piped to any output. A DSP chip on the card handles the routing, and also allows the various gains to be changed, but there's no mixing facility.

Emagic are reputedly including the card in their future support plans for some time towards the end of the year (apparently it's different enough in concept from Audiowerk8, also reviewed in this issue, not to cause a conflict of interests), and most of the American big players have been approached, though it's too early to say who's signed up, other than BIAS for *Peak*. At the time of writing, there's no PC software support for the card, though future PC integration seems likely.

I checked out the card in an Apus Power Mac clone, and though Korg had apparently tried the board in a number of Macs and clones with no problems, I found the fit so tight that I had to remove the securing nuts from the two jack sockets on the rear panel before the card would fit. After a little shoving and swearing, I managed to coax the card into place (while heeding the usual anti-static warnings, of course). Bundled with the card was a CD-ROM containing Macromedia's *Deck* software, the necessary 1212 I/O PCI support files, the 1212 software on floppy disk, and two breakout cables, one for the S/PDIF phonos and one for the ADAT sync and word clock connectors. These cables are an inescapable fact of life due to the tiny amount of rear-panel space available for a typical card, though the ADAT and analogue I/O is fitted directly to the rear panel. The software installation is straightforward, after which the machine must be re-started to allow the 1212 system extension to load.

Though the card will run in pretty much any PCI Power Macintosh or clone, the way that the applications are increasing in power means that anything slower than a 166MHz machine is likely to find its way to a car boot sale in well under two years. Indeed, the word from the industry is that what we currently consider to be state-of-the art will be entry-level by the year end, and that anything running below 200MHz is a poor investment. You just have to look at *Cubase VST* to see where the power goes — once you start running a few bits of plug-in software at the same time, you're pushing the limits of even the fastest current machines. Korg were able to show me a beta version of *Cubase VST v3.5* which supports all 12 inputs and outputs of the 1212 I/O PCI card, and I'd love to tell you about the other features (such as the proper internal bussing system), but this will have to wait until the full *SOS* review of *Cubase VST v3.5*, when we'll let you know how the software interfaces with other PCI I/O cards like the 1212. However, I *can* tell you that the beta version runs OK with the card, and I was allowed to take a screen dump to show you what the interface looks like (see Figure 2).

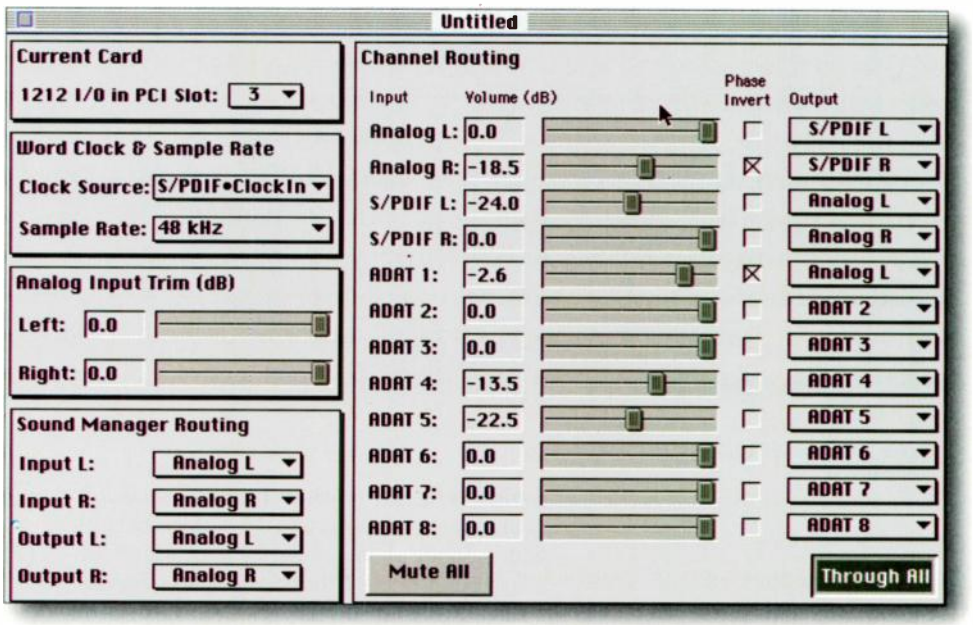


Figure 1: The 1212's router utility.

APPLICATIONS

The problem with reviewing any card like this one is that its capabilities are limited mainly by the software that supports it. For example, you might ask me how many tracks of audio you can run ▶

ALL HANDS ON... MACROMEDIA *DECK II*

Since its original manufacturers OSC were taken over by Macromedia in 1995, *Deck* has evolved to incorporate a lot of the functionality that was previously only available as add-ons, and the universally disliked limited-install disk protection system has been dropped. *Deck II* v2.6 is basically a multitrack recording package capable of handling up to 32 tracks on a 604 Power Macintosh, and fewer tracks on less powerful machines, as well as supporting Apple's internal AV hardware. Note that no matter how powerful your Mac, multiple drives will be needed to get anything like 32-track playback, and a more realistic figure is around 12 tracks per single hard drive.

Although *Deck II* is a multitrack recording package and not a MIDI sequencer, it is possible to import MIDI files for playback along with the audio, and there are facilities for MIDI and SMPTE sync as well as for mapping *Deck II*'s level and pan sliders to MIDI control. The software is also compatible with Digidesign hardware, including Audiomedia cards, Sound Tools II or the original Pro Tools 422 4-channel systems. Version 2.6 of *Deck II* also has full support for the 1212 I/O card.

Screen redraws have been accelerated, there's a scrolling cursor (on Power Mac only) and the handling of imported stereo regions has been improved. Extensive non-destructive editing is also available, along with crossfading between regions, and digital mixing. As an existing Pro Tools user, I perceive *Deck II* as providing a similar working environment, but with a largely simplified facility set. This similarity extends to the support of plug-in effects and processors from the likes of Waves, though these are in Adobe *Premiere* format rather than Digidesign TDM. These plug-ins process audio destructively insofar as a new file of the processed data is created, but if sufficient disk space is available, the original files may be maintained intact.

with this card, but to be honest, that isn't the card's concern. The card can give you up to 12 simultaneous outputs, but these could come from submixes of more than 12 tracks. On the other hand, your system might only be capable of 6-track playback, in which case you shouldn't spend your time looking into the other six outputs and waiting for something to appear as if by magic! Furthermore, if the host application has on-board mixing and routing options, you might want to use some of your I/O to service aux sends and returns for outboard effects. The number of tracks the host application can provide depends to a large extent on the model of computer and the speed of data transfer to and from the hard drive. Some systems enable you to employ multiple hard drives to get more tracks of playback, and although this is not currently supported, there are plans to allow multiple 1212 I/O PCI cards to work together in the near future.

Even without a host software application you can use the 1212 I/O utility to route digital audio between S/PDIF and ADAT. The manual explains how to route data from a DAT machine or similar source to any pair of ADAT tracks, or vice versa, and it's also possible to take the output from an ADAT, process it via an S/PDIF device, such as a Lexicon reverb, then route it back onto two other ADAT tracks. The sync source for the card can be set to word clock, ADAT or internal. The common sample rates may also be selected, and transfer methods are described for ADAT systems both with and without an Alesis BRC. Using the included *Deck* multitrack software, audio may be transferred from ADAT, edited, and then returned to the ADAT with very precise synchronisation between the two systems. To use the 1212 I/O PCI with *Cubase VST*, in a situation where the system needs to be sync'ed to MIDI Time Code (MTC), a synchroniser box that can convert MTC into word clock is required (Korg recommend MOTU's Digital Time Piece).

As part of the test, I loaded the card into a Mac that already had an Emagic Audiowerk8 card fitted, and found no conflict problems, even when both pieces of software were booted up. The 1212 I/O PCI also runs happily alongside a Digidesign Audiomedia III card, though there seems to be no way to use them simultaneously.

Figure 2: Cubase VST v3.5 (beta version).

"Given its surprisingly low cost, the 1212 is rather special."

SUMMARY

This PCI card is perhaps best suited to the ADAT user and/or digital mixer user, but because the ADAT protocol is so widely supported, the possible applications are far greater than this. What's more, the ADAT link can handle up to 20-bit audio, so there's a certain amount of 'future-proofing' built in to allow for higher resolution digital recording. Korg have their own stand-alone external

WORD CLOCK

Word clock is a valuable addition for professional applications, including any application that requires continuous audio resync, as without a word clock to sync to, it's possible that long audio tracks within a sequence containing MIDI and audio data could drift out of time with the MIDI sequence. Whenever two digital audio devices are connected, there needs to be some way of keeping the sample rates of the two machines synchronised. If data arrives slightly too early, or slightly too late, it is lost or corrupted. The rate of data transfer is synchronised using word clock, a clock that 'ticks' once for every bit of data transferred, and when data is being transferred between two machines, one machine (usually the sending machine), must provide the word clock for both — or both must be slaved to the same external word clock generator.

In simple digital applications, such as transferring data from one DAT machine to another, the word clock is sent along with the data, so a single co-axial cable is all that's needed. However, more sophisticated systems send the word clock separately, the Alesis BRC being one example. This means that when S/PDIF signals are being routed to ADAT via the 1212 I/O PCI, the BRC must be fed a separate word clock to keep the signals synchronised. When transferring data from ADAT via the 1212 I/O PCI, the card should be set so that the ADAT is the clock source. When editing ADAT audio data alongside MIDI sequencer tracks, it is advisable to leave the sync source set to ADAT, even when the ADAT is not running. Failure to do this can result in the timing of the ADAT audio and the audio files played back via the 1212 I/O PCI drifting slightly.

SOUND MANAGER

To make full use of the 1212 I/O PCI's facilities, the host digital audio application has to be specifically written to support the card, but limited functionality can be accessed by any application that supports Apple's *Sound Manager*. *Sound Manager* controls the computer's sound input and output facilities, from warning beeps to multimedia sound, but most computers' audio facilities are far inferior to those found on a dedicated professional audio card such as the 1212. Via *Sound Manager*, the 1212 can be used instead of the computer's own audio facilities, but with the limitation that Sound Manager supports only two inputs and two outputs. These may be either analogue or digital, but ADAT sync can't be accessed from *Sound Manager*. The 1212 I/O utility is then used to decide which audio inputs and outputs will be used.

However, configuring *Sound Manager* to use the 1212 I/O card doesn't automatically shut off *Sound Manager*'s own signal routing, which means that you could route the same signal to the same destination twice — once via *Sound Manager*, and once via the 1212. Because of slight delays, this usually results in a metallic or flange-like sound, so to avoid this the host software should be used to turn off the audio patch-through feature for *Sound Manager*. Alternatively, you could turn down the volumes of any channels assigned to *Sound Manager*, or even mute the 1212's channel routing. If you think this sounds like an unnecessary fiddle, I agree entirely, but it seems inevitable in a situation where you're effectively running two routing systems at the same time!

converters for anyone wanting to go the analogue mixer route, but to be quite honest there are probably more cost-effective solutions for people wanting to work in this way.

As with any computer audio card, though, the main limiting factor is not what it can do, but how well it is supported. For the immediate future only, the card will be bundled with *Deck II* v2.6, but other than that, the choice is limited to *Cubase VST* v3.5, and later on, *Logic Audio* and BIAS *Peak*. Success in the States hinges on the acceptance of the card by such products as Opcode's *Studio Vision*, MOTU's *Digital Performer* and Cakewalk Music Software's *Cakewalk* embracing the concept.

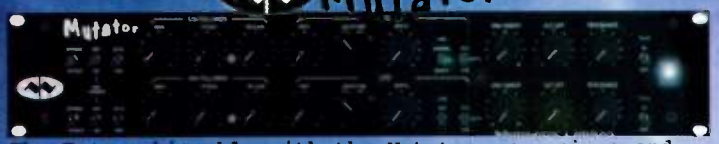
Given its surprisingly low cost, the 1212 I/O PCI is rather special. Not only does it have 12 outputs, it also has 12 inputs that can be used simultaneously, and the ADAT sync facilities look impressively tight. From my viewpoint, the main attraction of the system is that you can patch into a digital mixer using simple optical cables to create a very flexible desktop studio that has the ability to interface with other digital components, such as ADATs, DAT machines and effects units with S/PDIF connections. If you're staying analogue, this may not be the best card for you, but if you want to build your studio around a digital mixer, then, for the money, there's nothing to touch the Korg 1212. SOS

info

£ Korg 1212 £599; *Deck II* (available temporarily from Korg) £249; 880A/D rackmount A/D converter £599; 880A/D rackmount D/A converter £499.
A Korg UK, 9 Newmarket Court, Kingston, Milton Keynes MK10 0AU.
T 01908 857100.
F 01908 857199.

Blue Systems Professional Audio

Mutator



The Fx's achievable with the Mutator are unique and quite simply defy description. - Available with MIDI Once you've tried one there's no letting go. £582 Inc

THE NEW ALL YELLOW TEEBEE

The TeeBee looks & sounds like the original Roland TB303.
- All original sound knobs,(Tuning,Cutoff,Resonace,Filter & Decay.
- Can be controlled via MIDI or sent as MIDI controllers. Incorporating the KORG ring modulator.
- TeeBee's slide can be turned on or off via MIDI.- TeeBee is pitch wheel & Velocity sensitive.
- Analog input for filtering & controlled via MIDI. - Roland Sync24, 4 CV/Gate MIDI contvertors.
- NOW INCLUDES MIDI Merger
- Internal 16 channel simple sequencer. All this and still only £450 Ex VAT £528.75 inc VAT

New from JOMOX.
XBase09

Drum 'n' Bass just got better..

Forget the rest. This is 'the' ultimate analogue drum module with full MIDI control, authentic wooden side cheeks, & loads of flashing lights!

...and with 909's at £xxxx,

Be the first to own one. £699 inc VAT

Planet Phatt - Intended for use in hip-hop, acid jazz, and trip-hop, Planet Phatt features 640 Presets and 100 drum loops, combined with a high level of editability. Carnaval - Latin sound module, which joins the family currently populated by the Orbit & Planet Phatt.

F o c u s r i t e

Mixing with the Best

Yamaha O2R

Yamaha s fully automated digital mixing desk.

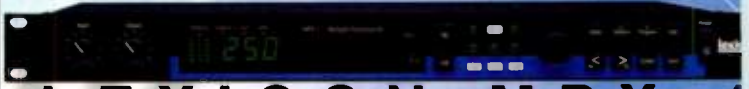
NEW!
Yamaha O3D

Blue Systems Professional Audio

The NEW range of samplers from EMU

- 8 Outputs.
- SCSI HD
- FX built in.
- Digital I/O

Expanable to:128MB, 128 Voices
32 MIDI Channels, 16 Outputs



LEXICON MPX-1

An amazing new processor from Lexicon.
True 'big' Lexicon sound. Extensive control & modulation facilities. The NEW Lexicon MPX1. £1199 inc VAT

T W O G R E A T DIGITAL MULTITRACKS
FOSTEX D90 - FOSTEX D160

This year's Frankfurt Musik Messe sees the Fostex harddisk recording family extended in the form of two new exciting stand alone multitrack recorders, The D90 8 track and D160 16 track.

D90 - New features are over & above the D80. Varipitch, ADAT Lightpipe interface, mulitiple machine control. Fast SCSI II backup and restore and balanced I/O connectors. The last two features being provided by optional connectors. **Blue DEAL £1599 Inc VAT including Extra 850MB drive.**

D160 - This has all the features of the D90 but of course allows up to 16 tracks of direct to disk. D160 - £2995 inc VAT.

audio-technica.
The Complete Microphone Solution

FREE MIC!

AudioTechnica ATM4033 vocal mic only £499 inc VAT.
Audiotechnica Studio 7 Pack mics £799
Audiotechnica Live on Stage 7 pack mics £799

BLUE SYSTEMS SERVICE DEPT.

We have our own in-house service department for DAT, cassette, CD's & Outboard Repairs. We are service agents for SONY, Tascam, Denon, Yamaha, Akai. Also all major IT companies. Dealing with Harddisks & Storage.

Mixing with the Best

SoundTracs Mackie

A must for anyone thinking of a Project Studio.
Automation ready.
24:8 inc Meterbridge £2349 inc VAT
32:8 inc Meterbridge £2899 inc VAT

Mackie 24:8
Mackie 32:8
Mackie 1202 VLZ
Mackie 1402 VLZ
Mackie 1604 VLZ

Professional Audio

Soundscape Version 2.0

PRO TOOLS

U M A X

Mac OS computers.
10% faster & 10% cheaper than Apple.

AUDIOMEDIA III
PCI PROTOOLS 3
PCI PROTOOLS PROJECT

BLUE SYSTEMS

VIDEO DIRECT TO DISK

Broadcast quality video capture & Editing system.
The Radius Video Vision PCI. FULL SCREEN, FULL MOTION VIDEO.

Radius brings proven Non-Linear video technology to the Macintosh PCI Platform. This is QuickTime compatible Full-Motion,Full-Screen, Video capture & playback. It features realtime, High quality video input & output, synchronized 16bit CD quality stereo audio (is now compatible with Protools Project)to 48KHz and 24Bit colour. Includes Radius Edit 2.0 and Adobe After Effects to previde a complete video production solution.
....for PCI Mac's an editing system for just £3999+VAT.

NEW MONITORS

DYNAUDIO BM6, BM10, BM15'S
+ NEW ACTIVE BM6'S
SPENDOR 200A & 300A ACTIVE MONITORS
GENELEC 1029A'S ACTIVE MONIOTRS
TANNOY AMS8 ACTIVE MONIOTRS

New! TL Audio Valve Indigo range
Compressors, Limiters, EQ's, Voice Processors, Mic Pre-amaps.
All 1U. Limited offer on TLAudio EQ1's.

RODE Classic Valve Microphone £999
Blue Systems for all Microphones,
Valve Microphones and Headphones.

Soundscape Version 2.0 BLUE SYSTEMS

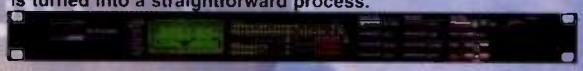
- IBM PC or compatible
- Full 'Chase lock sync' to time code
- 8 track expandable to 128 track
- 64 virtual tracks per unit
- Edit on the fly while chasing video
- Pitch/Time stretch/compression
- Sample rate conversion
- EDL file support with auto conform
- Automated Punch in/out.
- Multi track glitchless Audio Scrubbing
- Realtime fades with 18bit Dynamic range
- Sample accurate placement of audio clips
- 999 nameable markers
- Noise gate for perfect dialogue editing
- Full digital parametric EQ
- Removable harddrives
- Loop recording ideal for foley
- Cut/copy/move/reverse/repeat.

Soundscape Plus - 12Tracks, Expansion port allows up to a 512 channel Audio bus. Audio/Video in sync, CD-R Plug-in, EDL processing & Auto conform. Emagic Logic Audio extension.

Reverb, Time Stretch/compress, 8 band EQ. Soundscape from £2000 inc VAT.

T.C Electronic - Wizard\Finalizer

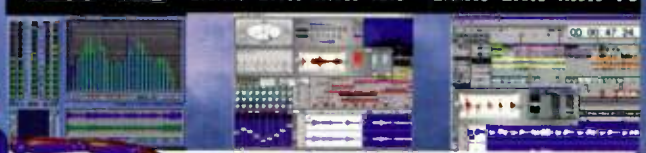
Art+Science=Magic
Essentially a complete mastering studio in a box. And with the aid of the unique Wizard interface, the 'Black Art' of mastering is turned into a straightforward process.



T.C Electronic - Wizard\M2000

Art+Sclence=Magic
A signal processor will enable you to create Magical Sound. Uncompromising effects processed by the TC DARC chip offer clarity, density,feel beyond anythlng you have ever experienced before.

PLUG INS EMAGIC LOGIC AUDIO MAC EMAGIC LOGIC AUDIO PC



SPL's new range of Valve Technology.

Tube Vitalizer - A valve version of the Classic Vitalizer with extras.
Charisma - An 8channel Valve enhancer, give digital a touch of warmth.
De-esser - Need we say more, this unit really takes the hiss.

All prices include VAT@17.5%. E&OE.
Visitors by appointment only.
Next Day or Worldwide Deilvery.

Blue Systems for all your professional needs.

BLUE

Blue Systems
Tel: 01799 584095
Fax: 01799 584094
Email: sales@bluesystems.com
http://www.bluesystems.com
The Old School House
Church End, Ashdon
Saffron Walden,
Essex CB10 2HG

4 Score!

DIGIDESIGN PRO TOOLS 4.0 SOFTWARE

With impressive improvements in power, speed and flexibility, Digidesign's software upgrade for their flagship digital audio production system keeps them ahead of the pack. PAUL D LEHRMAN wonders where the catch is...

Pro Tools 4 is a software-only upgrade for Digidesign's industry-leading studio-in-a-Mac, and its myriad new features, enhancements, and general fixes are for the most part successful and welcome. Always known as a brilliant editing platform, Pro Tools' new version brings the quality of its mixing, automation, signal routing and processing functions up to the same exalted level.

The new features would fill a book — several, in fact: the manual (just for the software — the hardware gets its own documentation) runs to over 400 pages. We covered a lot of these features in our preview (*SOS* December 1996), so what I'll do in this review is to hit the highlights, and also point out some of the places where things aren't quite what they could be.

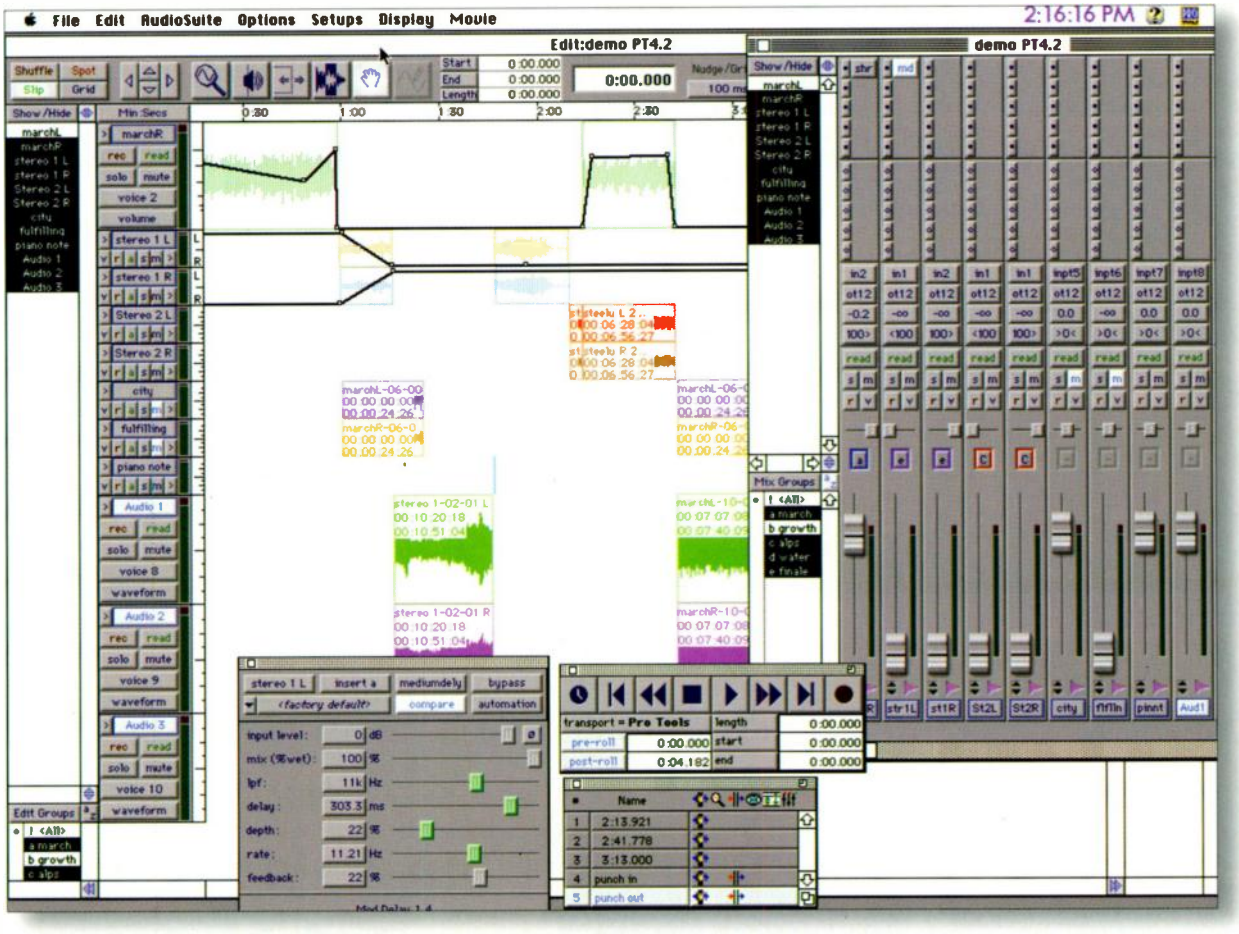
HARDWARE & INSTALLATION

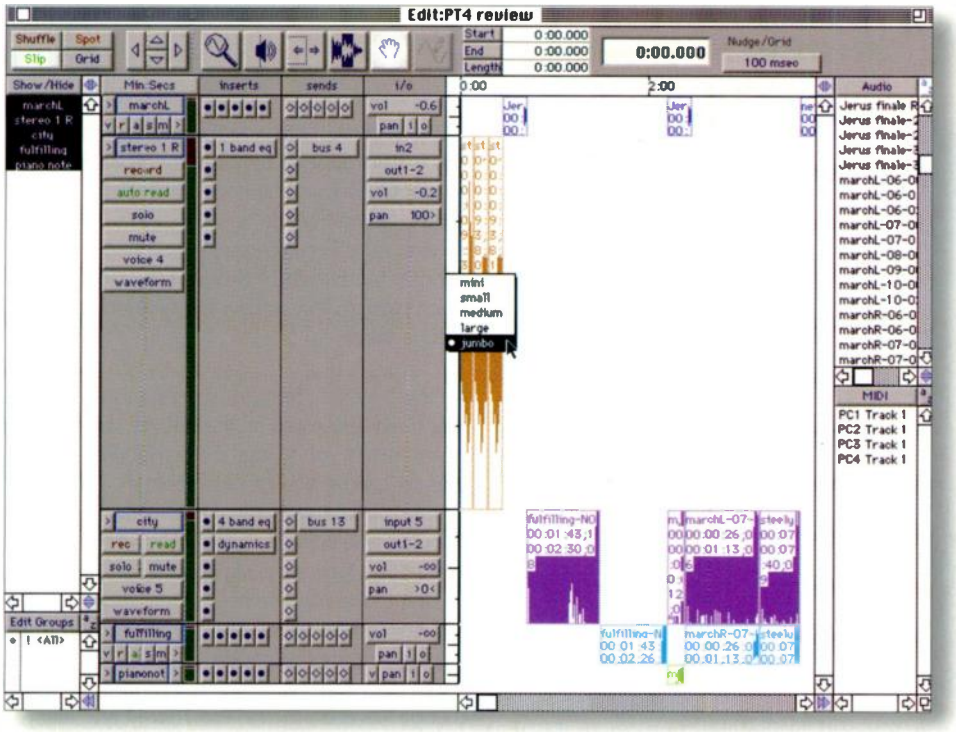
While Pro Tools 4 is Digidesign's flagship product, it's now available over a wide range of price points. The cheapest way in is to use it without any additional hardware, in 'PowerMix' mode. For this you need a PowerMac with at least 32Mb of RAM, taking advantage of the computer's internal 16-bit, 44.1kHz sound engine (see 'Hardware Options' box). To get all the features in the new software, however, you have to have a full-fledged Pro Tools III system, which consists of a Disk I/O card, a DSP Farm card, and an audio interface. You also need an external disk drive, dedicated to audio, which is hooked up to the Disk I/O card. Digidesign say that you must have Apple's System 7.5.3 or later to run the 4.0 software, but I had no trouble at all running it with System 7.5 on a 100MHz 601-based clone. The new software will *not* run on older Pro Tools '442' systems, nor on Audiomedia II cards

Installing the software upgrade is easy, since it now comes on a CD-ROM (floppy disks are available on request). The process, however, takes a little longer than you might expect, and seems to stall at one point. The reason is that some rather brutal housekeeping is being done on your hard disk: in order to guarantee that the installation is successful, the procedure 'idiot-proofs' your system disk by removing all traces of older versions of Pro Tools — and not only the software: all Digidesign INITs and Sound Drivers, as well as Opcode's OMS MIDI management system and Apple's QuickTime, both of which are now required, are replaced with new versions. The old files are not just put in a disabled Extensions folder — they are *erased*. Fortunately, you get a warning that tells you that if you want to save any of them (which you will, if you're using other software, such as BIAS' *Peak*, that doesn't like these versions) you'll have to move them not to a separate folder, but onto another *disk*.

DISPLAYS

The first thing you notice after launching the software is that the edit screen, where tracks are viewed in a linear fashion, has become quite a





In the Edit screen, you can now view inserts and sends. Each track can have its own height, from mini to jumbo, and track layouts can be saved in memory locations.

bit more complicated. It's now possible to re-size tracks individually (there are five size options), so you can shrink the ones you're not working on and blow up the important ones to *Sound Designer* size, or even choose not to show particular tracks at all. Sends and inserts can be included in the edit screen, which means that it's quite possible to do a session without ever opening the Mix window.

You also notice that the increased screen complexity hasn't affected performance — on the contrary. On a Power Mac, at least, the program feels a lot faster and more fluid than previous versions. Most of the code has been made Power PC-native, which provides a tremendous boost to screen redraws (the SMPTE window — now available in a 'big counter' version — and the level meters have lost their annoying lurching quality) and mouse response. The screen now scrolls smoothly as the audio plays, overcoming a limitation of previous versions. I didn't get to test the software on a 680x0 Mac, but I would imagine that the benefits are not nearly as obvious.

On the other hand, the complexity does add greatly, at least when you're first learning the program, to the confusion factor. There are so many Preferences (five pages of them!) and various other kinds of toggles, that a new user could spend a lot of time quite befuddled over why the program is behaving in the way it is.

Once you set up your edit window, you can store its configuration — zoom settings, pre- and post-roll times, track heights, show/hide toggles, and/or group enables — in any of 200 memory locations, along with current time and region start and stop times.

The region list has become much more flexible, allowing you to see source file names and/or disk names in addition to region names. Regions can be sorted by name, start time, stop time, length, date, or disk location. Most of the housekeeping chores dealing with regions have been moved to a sub-menu within the window itself, which makes a lot of sense.

One thing that hasn't changed, unfortunately, is that when you are using plug-ins such as EQ, compression or reverb, you can see the parameters of only one plug-in at a time — so, for example, you can't compare EQ settings on two channels. On the other hand, if you want to make sure that two modules are identical, you can copy (or save) the settings from one and paste (or load) them into the other.

Over at the Mix screen, where the tracks are shown as faders on a console, you now have the option to cut the width of all the faders in half. While the names on the faders are abbreviated when you do this, it lets you see twice as many faders (27 of them on a 17-inch screen) without scrolling, which is a very welcome improvement.

RECORD AND PLAYBACK

There are a number of key record options in this version. ▶

pros & cons

DIGIDESIGN PRO TOOLS 4.0

pros

- Works with or without external hardware.
- Extremely powerful.
- Lots of new tricks.
- Very fast.
- Stable.

cons

- Doesn't work with 442 hardware.
- Ever-more-complex user interface.
- Manual needs to be task-orientated.
- Taking advantage of all features requires large hardware investment.

summary

The most powerful audio production system on any platform; good value if you need all that power. Must-have upgrade for Pro Tools III users.

SOUND ON SOUND

Digidesign Pro Tools 4.0

Faders can be displayed at half-width, allowing twice as many to fit on a screen.

- Loop Record, a familiar feature in MIDI sequencers, lets you automatically repeat a section of a track, laying down a new sound file each time. When you're done, you can retrieve the takes you want from the regions list and assemble a 'comp' track from bits and pieces of each. A new pop-up menu shows you only the track regions that have the same time stamp as the one you're working on, to help you to select the right takes from the list.
- QuickPunch lets you instantaneously record-enable a track during playback, and punch in and out on the fly. Up to 100 punches can be made, on any number of tracks, in one pass.
- Record Safe prevents selected tracks from going into record mode.
- Half-Speed Record does just what you'd think: if you've ever overdubbed a track at 15ips on a 30ips multitrack tape, you'll know how this works. This feature appears only in the Keypad Shortcuts part of the documentation, although it isn't that hard to comprehend.
- Destructive Record erases everything on a track that's 'underneath' a new take, so that you don't keep piling up new files and regions as you do re-takes.

A new playback feature, which was apparently specifically requested by the BBC, is 'shuttle lock', which allows you to use the computer's numeric keys to specify any of nine speeds of playback, forward or backward. I find this a little clumsy, but it could come in handy once you're used to it (and if you don't have an external transport controller).

One of the more annoying features of the old Pro Tools was that whenever you changed anything on the edit screen, playback would stop. That's now history. Not only can you scroll and change views on the fly, Pro Tools 4 also lets you edit audio while in playback, just like a MIDI sequencer. You can change TDM and automation parameters, drop in new regions, switch edit playlists, nudge regions, and even change the tempo map while the audio is playing. (If you have a MIDI metronome playing, however, and you change the tempo map, the metronome doesn't reflect the new map until you stop and start playback again.) You can even — if the 'Active in Background' toggle is on — switch into another application entirely. You'll have to turn 'Active in Background' off, however, to use any program that accesses the audio hardware, such as *Sound Designer* or *Studio Vision*.

There are a few restrictions on what you can do while audio is playing: you can't change the type of plug-in on any channel, or open up any new plug-ins, and when you disable a track's automation, you can't turn it back on again without stopping playback. Also, when you're moving around the screen during playback the cursor doesn't always change when it should on my 100mHz machine — you might find yourself trying to move a window with an I-beam text cursor instead of an arrow. Digidesign say that this is related to the speed of my computer.

AUTOMATION

Some of the most significant changes in the software are in the area of mix automation. Instead of just volume and pan, Pro Tools 4 gives you total snapshot and dynamic control over *all* mix parameters, including EQ, solos, mutes, and send levels, as well as any or all of the parameters of TDM plug-ins (see 'Plug-Ins' box). As with volume and pan, when you're in 'auto record' mode and you change a parameter that's been designated as automatable — either using an on-screen fader or an external controller (see 'External Control' box) — that change becomes part of an automation 'playlist', which is simply a list of instructions with time stamps. The nomenclature is a bit clumsy, because nowhere is there an actual *list* to look at —

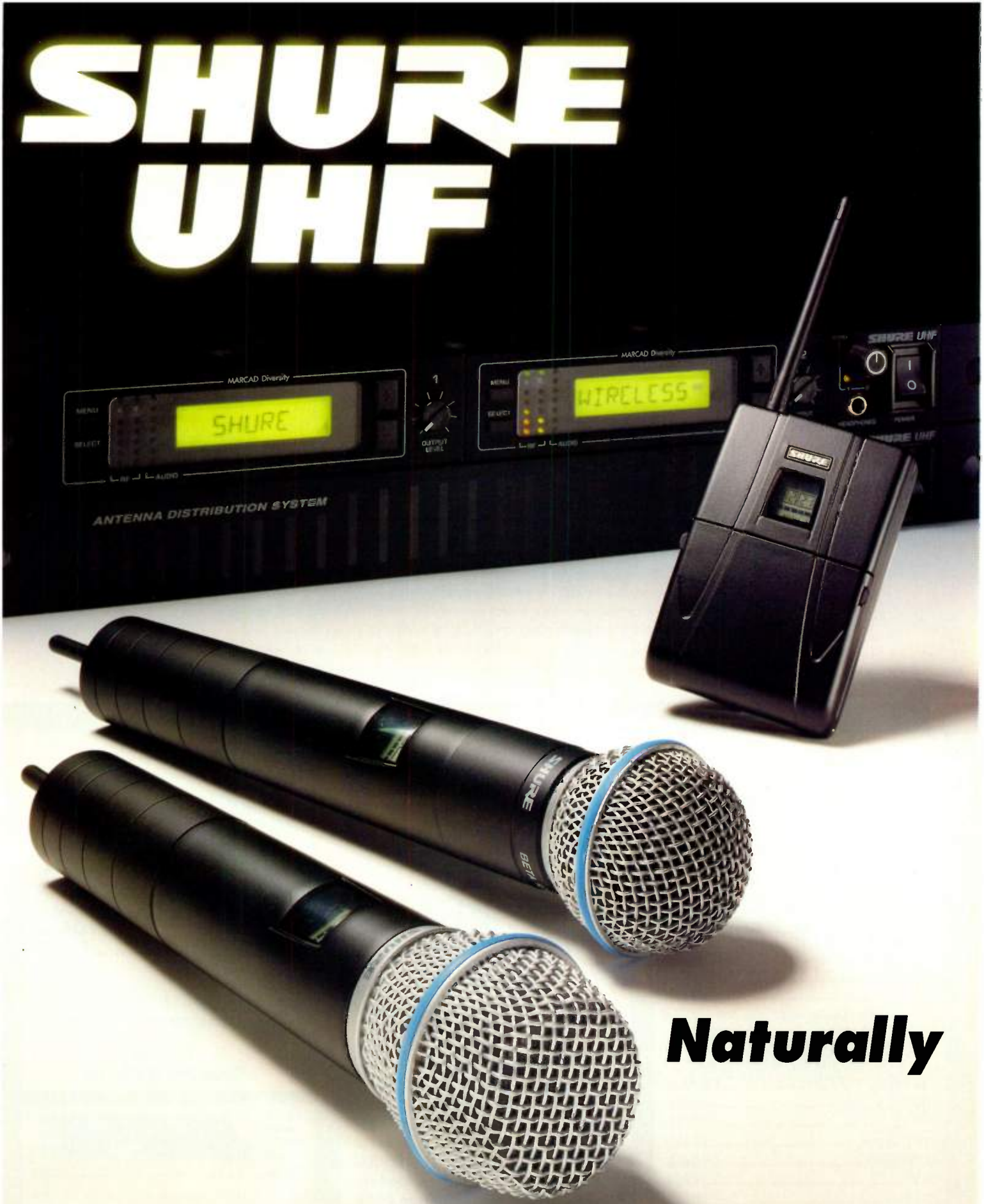
EXTERNAL CONTROL

Knowing that using a mouse to move a bunch of on-screen sliders and buttons is a pretty clumsy way to do a mix, Digidesign have long supported, at least in theory, external hardware controllers that can operate the software over MIDI. In Pro Tools' earliest versions, you could assign *any* MIDI controller command to *any* on-screen control, so that you could use the sliders and wheels on a keyboard, or foot pedals, or a dedicated controller like JL Cooper's FaderMaster, to help with your mixes. There were a few versions of the software in which this feature was not supported, and it was subsequently revived, but now Digidesign have taken a completely different tack: on-screen controls in Pro Tools 4 are hard-wired to *specific* incoming MIDI commands.

The software has command sets, or 'personalities', built in to accommodate three popular hardware controller families: Peavey's PC1600, Penny & Giles's MM16 and DC1 endless-belt controllers, and JL Cooper's CS10 and CS10^2. These devices have eight or 16 faders, plus several buttons, which Pro Tools uses for soloing, muting, track arming and transport control. You tell the software which device(s) you're using in a special Setups window (which allows you to use as many as four devices), and you can mix and match models. Each device can, using onboard 'bank switching', control up to 32 Pro Tools tracks. The MIDI connection is bi-directional: some of these controllers have indicator lights showing transport status, fader position, and so on, and the software will send the proper MIDI commands to the devices to control the indicators.

You can use any other MIDI source (including the old FaderMaster) as long as it can be made to conform to one of these personalities. The most straightforward is apparently the CS10, so the manual gives the complete MIDI command setup for the CS10, which you can then try to emulate. There seems to be no sign of Digidesign's previously announced ProControl, so I suppose that product never made it out of the lab. There's also no mention in the documentation of Mackie's forthcoming HUI (Human User Interface), but it's probably safe to assume that this will be supported as soon as it is available.

SHURE UHF



Naturally

SHURE

The new range of Shure UHF Wireless Microphone Systems is now available. Call or send off the coupon for full details. **HW International**, 167-171 Willoughby Lane, London N17 OSB Tel: 0181-808 2222

Please send me details on Shure UHF Wireless Microphone Systems

Name _____ Address _____

_____ Postcode _____ Tel: _____

SOS 7/97

▶ it's leftover terminology from *Sound Designer*, where you really do see the information in list form.

The automation playlist is separate from the track playlist — the one that determines the order in which the sound files on a track are being played — and can be edited separately, although when you cut and paste a track playlist, the automation goes with it. One of Pro Tools' best features has been that you can have an unlimited number of edit playlists on any track, which allows you to assemble alternate takes into a 'comp' track. However, you are only allowed one *automation* playlist per track, so those alternative takes hadn't better need different levels, or sends, or EQ settings. You can always create new tracks and mute the ones you don't want to hear, but if you're using plug-ins this can eat up your DSP power quickly. Another workaround, suggested by Digidesign, is to create an auxiliary track and buss the comp tracks to it. Perhaps a future version will allow multiple automation playlists, which could be attached to specific edit playlists, or even mixed and matched.

Again, as with volume and pan, all automated parameters can be displayed and edited as line graphs on the edit screen, so if you want to draw in a long, slow change in a delay line's mix level, or put a wah-wah effect on a track by wobbling the center frequency of a band-pass filter, you can do it graphically, as well as in real time. Trim controls can be used to raise or lower the level of a parameter over time, while preserving individual moves, and automation can be copied from any track and pasted to the same parameter in an identical plug-in on any other track. Using a special paste function, you can even clone automation moves to a *different* parameter, or to a parameter in a completely different type of plug-in.

Unfortunately, you can still only view the automation data for one parameter at a time (volume, pan, sends, toggles, or processing) on any particular track. So even though, for example, you can see how an EQ's centre frequency moves or how its gain changes, you can't see both simultaneously. One way around this, if you're automating a linked stereo pair, is to display one parameter on one channel and a different one on the other, but that means temporarily un-linking them so that you can set up the different views.

Automation moves are recorded every 5ms, which can result in a lot of data, and the manual warns that, in particularly dense situations (although I never encountered this), the automation data may clog up and not play at the right time (sounds suspiciously like 'MIDI choke'). A System Load meter is provided, to warn you when this might be the case, and there's a four-level 'Thin Automation'

Roland

XP10 / XP50 / XP80
£New Low Price

JP 8000.....£CALL
MC 303.....LOW
GR30 & GI10 Guitar Midi .....£Call

JV1080 / JV2080.....£CALL
RD600 Piano .....£CALL
PMA5 .....£CALL
VK7 Organ.....£CALL
A90/A90X.....£CALL
A33 .....£349
PC200 .....£CALL
VS880.....£Call
JV1080 Boards.....From £199

YAMAHA

CS1X £LOW

AN1X NEW !!
10 Voice analogue physical modelling synth
£SOON

A3000 Sampler
64 note, Effects, 4 Outs Unbelievable spec
£SOON

SU10.....£CALL
MDF2 .....£LOW
QY700.....£CALL
MU90R.....New Module
DB50/SW60/MU10 .....From £109
P50M Piano Module .....£LOW
VL70M.....From £369

KORG

Prophecy .....£CALL
NS5R .....£CALL
X5DR .....£CALL
X5D .....£LOW

Trinity
Plus Pro & Pro ex

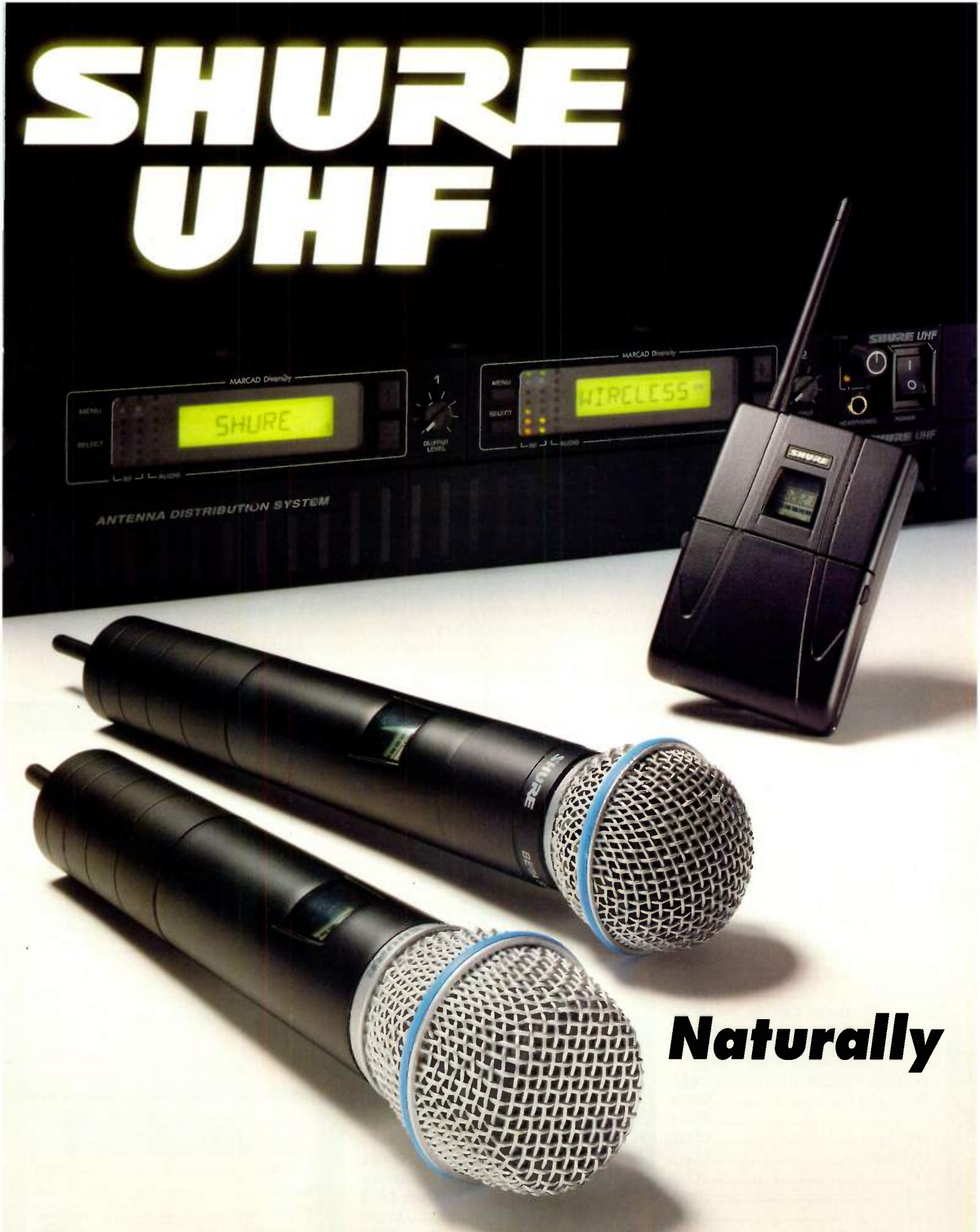
E-MU

ESI32 .....Call
ORBIT .....Call
Planet Phatt .....Call
Carnival.....Call

techmate uk

215 Harwich Rd, Colchester, Essex CO4 3DF
Tel: 01206 793355
Fax: 01206 864994
sales@techmate.demon.co.uk • www.tech-mate.co.uk

SHURE UHF



Naturally

SHURE

The new range of Shure UHF Wireless Microphone Systems is now available. Call or send off the coupon for full details. **HW International**, 167-171 Willoughby Lane, London N17 OSB Tel: 0181-808 2222

Please send me details on Shure UHF Wireless Microphone Systems

Name _____ Address _____

_____ Postcode _____ Tel: _____

SOS 7/97

WRH

it's leftover terminology from *Sound Designer*, where you really do see the information in list form.

The automation playlist is separate from the track playlist — the one that determines the order in which the sound files on a track are being played — and can be edited separately, although when you cut and paste a track playlist, the automation goes with it. One of Pro Tools' best features has been that you can have an unlimited number of edit playlists on any track, which allows you to assemble alternate takes into a 'comp' track. However, you are only allowed one *automation* playlist per track, so those alternative takes hadn't better need different levels, or sends, or EQ settings. You can always create new tracks and mute the ones you don't want to hear, but if you're using plug-ins this can eat up your DSP power quickly. Another workaround, suggested by Digidesign, is to create an auxiliary track and buss the comp tracks to it. Perhaps a future version will allow multiple automation playlists, which could be attached to specific edit playlists, or even mixed and matched.

Again, as with volume and pan, all automated parameters can be displayed and edited as line graphs on the edit screen, so if you want to draw in a long, slow change in a delay line's mix level, or put a wah-wah effect on a track by wobbling the center frequency of a band-pass filter, you can do it graphically, as well as in real time. Trim controls can be used to raise or lower the level of a parameter over time, while preserving individual moves, and automation can be copied from any track and pasted to the same parameter in an identical plug-in on any other track. Using a special paste function, you can even clone automation moves to a *different* parameter, or to a parameter in a completely different type of plug-in.

Unfortunately, you can still only view the automation data for one parameter at a time (volume, pan, sends, toggles, or processing) on any particular track. So even though, for example, you can see how an EQ's centre frequency moves or how its gain changes, you can't see both simultaneously. One way around this, if you're automating a linked stereo pair, is to display one parameter on one channel and a different one on the other, but that means temporarily un-linking them so that you can set up the different views.

Automation moves are recorded every 5ms, which can result in a lot of data, and the manual warns that, in particularly dense situations (although I never encountered this), the automation data may clog up and not play at the right time (sounds suspiciously like 'MIDI choke'). A System Load meter is provided, to warn you when this might be the case, and there's a four-level 'Thin Automation'

Roland

XP10 / XP50 / XP80
£New Low Price

JP 8000.....£CALL
MC 303.....LOW
GR30 & GI10 Guitar Midi .....£Call

JV1080 / JV2080.....£CALL
RD600 Piano .....£CALL
PMA5 .....£CALL
VK7 Organ.....£CALL
A90/A90X.....£CALL
A33 .....£349
PC200 .....£CALL
VS880.....£Call
JV1080 Boards.....From £199

YAMAHA

CS1X £LOW

AN1X NEW !!
10 Voice analogue physical modelling synth
£SOON

A3000 Sampler
64 note, Effects, 4 Outs Unbelievable spec
£SOON

SU10.....£CALL
MDF2 .....£LOW
QY700.....£CALL
MU90R.....New Module
DB50/SW60/MU10 .....From £109
P50M Piano Module .....£LOW
VL70M.....From £369

KORG

Prophecy .....£CALL
NS5R .....£CALL
X5DR .....£CALL
X5D .....£LOW

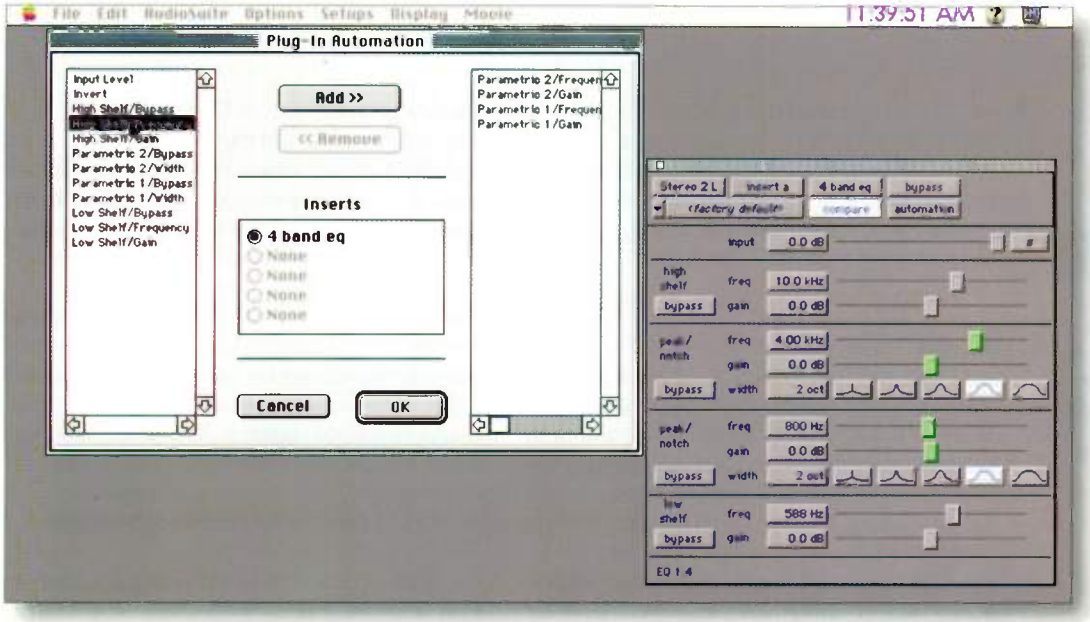
Trinity
Plus Pro & Pro ex

E-MU

ESI32 .....Call
ORBIT .....Call
Planet Phatt .....Call
Carnival.....Call

techmate uk

215 Harwich Rd, Colchester, Essex CO4 3DF
Tel: 01206 793355
Fax: 01206 864994
sales@techmate.demon.co.uk • www.tech-mate.co.uk



You can select any or all parameters in a plug-in to be automated. Automated parameters then appear in the plug-in window in colour.

function, similar to the 'Thin Controllers' feature in many MIDI sequencers, to address the problem. Since the slopes between automation points are maintained (unlike with a MIDI sequencer, which can only record discrete values), smoothness of automation within a thinned track should never be adversely affected.

Solos and mutes now work intelligently, so that soloing a reverb, for example, doesn't shut off all of the inputs to that reverb. As has always been the case with Pro Tools, however, there's a delay that varies inconsistently, from about 1 to 2 seconds, between the time when you un-mute a track and the time when the track actually sounds, whether you do this manually or automate it (again, this may be down to CPU speed). To add to the problem, I was able to get the software to refuse to un-mute a track at all — I had to close ▶

MIDI Keyboards

Studio Logic FATAR

Excellent mother keyboards all with aftertouch!!

SL161 - 61keys.....£199
SL760 - 76 weighted.....£399
SL880 - 88 hammer action.....£549
SL1100 + 2001.....£CALL
CALL FOR DEALS WITH MODULES

Roland

PC 160.....£79
PC 200.....£139
A33.....£349
A90.....£CALL

Commodore

MK 149.....£99

Yamaha P50M.....£269
Kurzweil Micro Piano.....£CALL
Casio GZ50M.....£79
Akai Modules.....£199

Casio

GZ500

Ideal Mother Keyboard
61 Keys, Pitch Bend
88 Note range, 128 Sounds
~~RRP £449~~ **DEAL £169**

CTK 630
100 Sounds, 61 touch sens Keys
Only £159

GZ50M GM Module
Only £79

Boot Sale

Roland SC88.....£499
Roland SC33.....£189
S/H Boss DS330.....£159
Digitech TSR24.....£299
Peavey KB300 Combo...£379
Roland RV70.....£189
Roland MS1 Sampler.....£229
Roland CR80.....£159

Goodies

TG500 / SY85 ETHNIC CARD SET
2X CARDS £49!

W5 / W7 DISKS
ONLY £10 EACH

SY77 DISKS £7 EACH

ULTIMATE

SCOOP!!
Chrome plated limited edition APEX stands. Only 5 in country
only 269!!!

SUPPORT STANDS
Apex.....£199
Deltex.....£115
X Stands from.....£49
3 Tier A Frames from.....£199
Budget X Stands.....from £20
Budget A Frame 3 tier.....£125

CASES
Semi and full flight made to order.
Call for quote

TDM PLUG-INS

Pro Tools' ability to accept third-party processing modules, in the form of TDM plug-ins, has inspired engineers all over the world to design tools for the platform, and today there are dozens of the little buggers out there, including fairly standard utility plug-ins, some brilliant new applications, and some totally insane ways to manipulate audio — not to mention emulations of old hardware designed to allow this advanced digital platform to sound like a 1950s valve studio.

Up to five plug-ins can be used on any track, in any combinations your DSP hardware will allow (which is actually a problem, as the main body of this article explains). Plug-ins now have internal Copy, Save, and Load pop-up menus for dealing with settings, and saved settings have their own folder inside the session folder.

The program ships with several TDM plug-ins built in: 1-band and 4-band parametric EQs; a dynamics module (compressor, limiter, expander, gate); a delay line with adjustable feedback and modulation; a longer delay, called the *Procrastinator;* a dither generator; a 'channel tool', which is basically a simple gate with a phase-reverse switch; and a 'time adjuster', which delays a track by up to 1024 samples, in increments of a single sample, to compensate for processing delays caused by other plug-ins. All of these are automatable.

TDM plug-ins from previous versions of Pro Tools, with some minor exceptions, will work fine with 4.0, although they will not be automatable, and you can't save and load settings. Most third-party developers are working on new versions of their plug-ins that will have automatable parameters.

▶ and re-open the session to hear it. On the positive side, this is the *only* serious bug I found in several weeks of testing. Digidesign are apparently working to fix it in the next update, and suggest another workaround: close the plug-in, open and close another, then return to the original.

TOUCH, LATCH & GROUPS

Besides Read, Write and Off, the software automation provides two special modes for updating moves, similar to those found in megabuck moving-fader consoles. One is called 'Touch', and is an overdub mode: automation is recorded only if the fader is actually being touched, and when you take the mouse away the fader glides back to where it's supposed to be. The glide time is programmable. The other mode, 'Latch', starts recording automation as soon as you move a fader, and only stops when you stop playback, at which time a new automation event is written to bring the fader back to where it was — again, at a programmable speed. A nice touch is on-screen null indicators, to show you the current position of a fader being recorded relative to the previously-recorded position.

Faders can now be grouped, and groups nested within each other or overlapped. Up to 26 groups can be defined, and they can be enabled or disabled, individually or globally, without changing their configuration. Moving any fader in a group moves all of them, and they all move proportionately to each other. Besides automation groups, you can define editing groups, within which slicing and dicing one track affects all of the others. Any group can be designated as an edit group, or an automation group, or both.

EDITING

A significant change in Pro Tools 4.0 is that destructive file editing is now available inside the program itself. In previous versions, in order to do a destructive cut and paste, a gain change, a reverse, or a pitch change, you had to export the file to a separate program, such as *Sound Designer II*, mess about with it there, and then re-import the altered audio back into the session. Pro Tools 4 has included many of *Sound Designer*'s capabilities in a feature set called Audiosuite. Edits can be made even while the file is playing, although the alterations don't occur in real time — you'll hear them next time you play the file. Altered files are conveniently left where they are in the session. You can have the new file overwrite the old one on the disk, or save it under a new name; regardless of which you choose, you always have Undo capability. A terrific convenience is that multiple tracks and regions can be selected and processed by Audiosuite in batch mode.

Since Audiosuite functions don't depend on DSP hardware, they will run with any version of Pro Tools, including PowerMix. This also means that you can perform as many Audiosuite operations as you wish on a session without using up your DSP power — though it may take a while.

Audiosuite, like TDM, can expand its capabilities through the use of plug-in modules. Audiosuite plug-ins, however, are not the same as TDM plug-ins and, unfortunately, older *Sound Designer* plug-ins can't be used with Audiosuite either. On the other hand, many third parties who made *Sound Designer* plug-ins are porting their products over to Audiosuite, as are a number of TDM plug-in manufacturers.

Functions included in the new software are:

- Normalising
- Pitch shift
- Time compression/expansion
- Sample-level pencil-point waveform editing
- DC offset removal
- Reverse
- Phase reverse
- Gain change
- Duplicate

In addition to Audiosuite, there are some major improvements in non-destructive editing ▶

HARDWARE OPTIONS

Pro Tools 4.0 is available in four flavours.

• The PowerMix version (£703.83 — all UK prices quoted here include VAT) uses no external hardware but relies on the Power Mac's internal sound hardware. You can record two tracks and play 16 tracks using the Mac's stereo analogue input and output, although the number of playback tracks will be lower if your CPU speed is less than 120MHz. Obviously you get no TDM capabilities or effects sends, but you do get Audiosuite, and can use its plug-ins, plus you have 2-band EQ on each channel. The QuickPunch and scrub/shuttle functions don't work in this configuration.

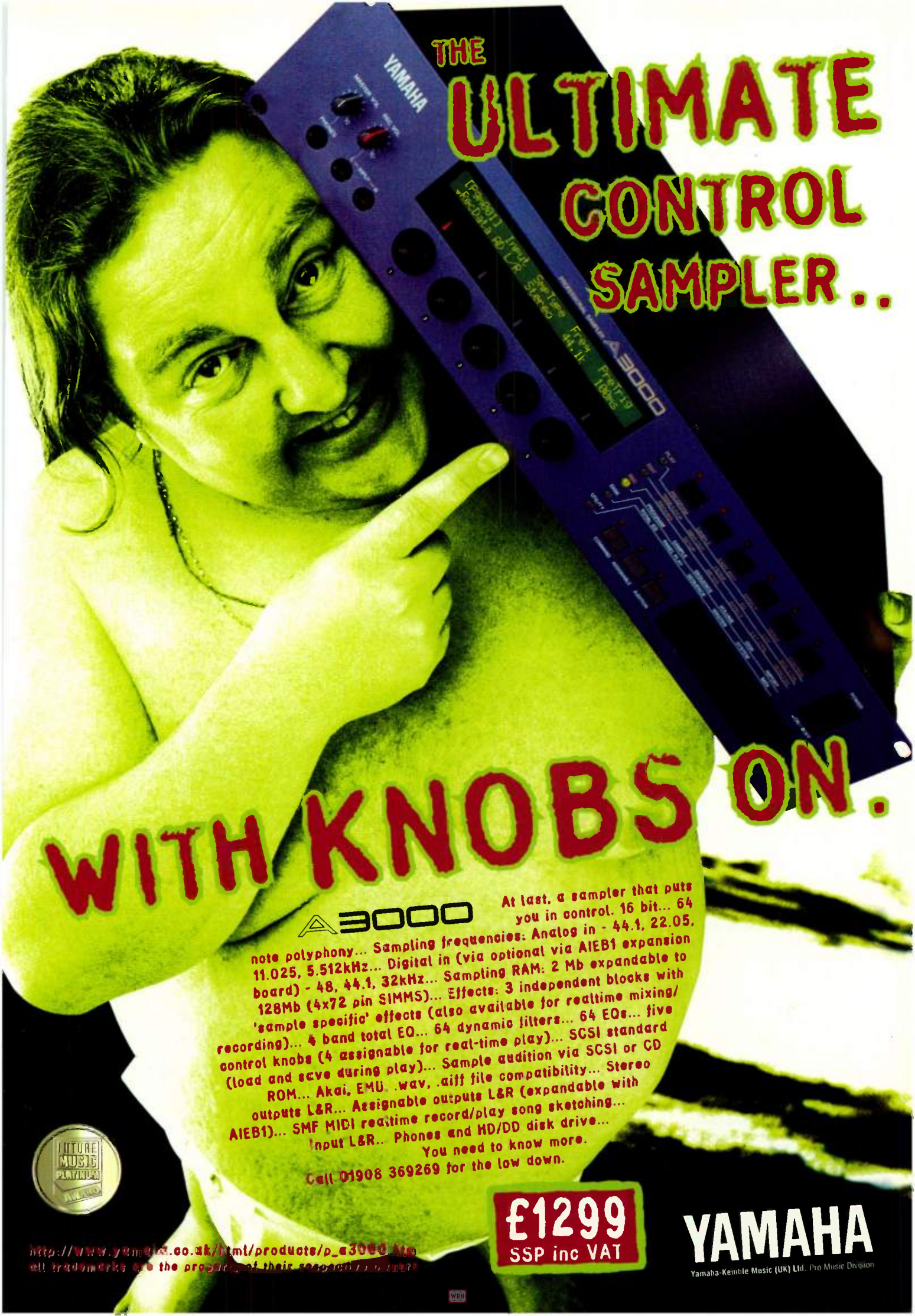
• If you add an Audiomedia III card (PCI Macs only), for £703.83, you get the advantage of lower-noise hardware and RCA jacks on the analogue connectors (as opposed to those hideous stereo mini-jacks Apple use), plus a stereo pair of S/PDIF digital inputs/outputs. You can also scrub and shuttle.

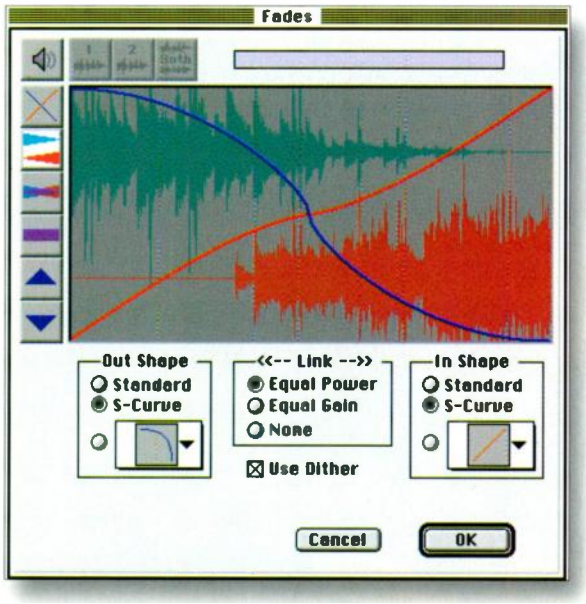
• Then there's the Project version, formerly called Session 8. This is essentially a Pro Tools III system but without any TDM hardware. It uses Digidesign's Disk I/O card, and therefore requires a dedicated hard disk. Available either for PCI or older NuBus Macs, Project costs £2231.33, plus the price of an audio interface, of which there are two to choose from. The 882 (£891.83) provides eight balanced analogue I/Os and a pair of digital I/Os, while the 888 model (£2677.83) provides four pairs of AES/EBU digital I/O. Project lets you record up to eight tracks simultaneously, and perform QuickPunches. It gives you two post-fader effects sends and up to eight returns, but the send levels are not automatable.

• Finally there's the full-blown Pro Tools III system. The NuBus version of this costs £6249.83, while the PCI version costs £7131, again plus interface. This is the only version which supports all the features the new software has to offer, and of course it is the only version which lets you use TDM plug-ins. You can stack Disk I/Os and interfaces — up to seven of them on PCI systems and eight on NuBus systems — for a total of 56 or 64 analogue and digital I/Os. However, you can only simultaneously record on a maximum of 48 tracks (this bothers you, I know).

At £4463.82 (NuBus) or £5356.83 (PCI) per extra eight channels, we're starting to talk real money here. Plus, if you weren't smart enough to buy a 6-slot Mac in the first place, you'll need an expansion chassis if you crave all that connectivity. Digidesign themselves have had one for a while for NuBus Macs, which costs £1959.90, including a card that's required to make the thing Power Mac-compatible. It has 12 slots, but not all of them may be useable with a particular computer.

In their current literature, Digidesign make no mention of the products they used to endorse from Texas-based Second Wave, but the company is still quite healthy (www.2ndwave.com), and offer, along with NuBus expanders, several models that let you use old NuBus hardware in PCI computers, and which, they say, are completely compatible with Digidesign hardware. A four-slot NuBus-to-PCI model is $1195, and there are two 8-slot models: a desktop version for $1895 and a rackmount for $1995. Magma, based in San Diego, California (www.magma.com), make a 7-slot PCI-to-PCI expander for $1500, and a 13-slot chassis for $2500 is due out this summer. Bit 3, in Minneapolis, Minnesota (www.bit3.com), also have a 7-slot PCI expander for $1420.


THE ULTIMATE CONTROL SAMPLER..
WITH KNOBS ON.
A3000
At last, a sampler that puts you in control. 16 bit... 64 note polyphony... Sampling frequencies: Analog in - 44.1, 22.05, 11.025, 5.512kHz... Digital in (via optional via AIEB1 expansion board) - 48, 44.1, 32kHz... Sampling RAM: 2 Mb expandable to 128Mb (4x72 pin SIMMS)... Effects: 3 independent blocks with 'sample specific' effects (also available for realtime mixing/ recording)... 4 band total EQ... 64 dynamic filters... 64 EQs... five control knobs (4 assignable for real-time play)... SCSI standard (load and save during play)... Sample audition via SCSI or CD ROM... Akai, EMU, .wav, .aiff file compatibility... Stereo outputs L&R... Assignable outputs L&R (expandable with AIEB1)... SMF MIDI realtime record/play song sketching... Input L&R.. Phones and HD/DD disk drive...
You need to know more.
Call 01908 369269 for the low down.
FUTURE MUSIC PLATINUM AWARD
£1299 SSP inc VAT
YAMAHA
Yamaha-Kemble Music (UK) Ltd. Pro Music Division
http://www.yamaha.co.uk/html/products/p_a3000.htm
all trademarks are the property of their respective owners
WRH



The Fades window now allows different custom curves for fade-in and fade-out, and displays the two waveforms affected by the fade, either separately or superimposed on each other.

operations. You now have much more control over crossfades: fade-out and fade-in curves are independent of each other, and can be drawn manually. The crossfade can occur before, after, or surrounding the 'splice' point, and you can view what happens to the waveforms as a result of the fades before you execute them. It's also possible to audition a fade, though only through the Mac's audio hardware.

The Strip Silence feature, which decides where silences occur in a track and separates the track into regions accordingly, has likewise been improved, with separate on- and off-threshold settings, minimum silence time, pre- and post-roll (to make sure attacks and decays aren't cut off) and automatic sequential naming of the separated regions. You can select what you consider to be a silent region and, using the 'Identify Silence' command, tell the program to set the Strip parameters to recognise it as such.

MIDI, QUICKTIME & FILE FORMATS

Pro Tools' treatment of MIDI sequences has always been one of its weakest points: regardless of how complex your MIDI system was, it was only possible to choose either the Modem or Printer port to play back a MIDI track, whether it was recorded into Pro Tools directly or imported as a MIDI File from a sequencer. That has finally changed, and now, with OMS fully integrated into the software, a MIDI track can be routed to any instrument in your OMS Studio Setup. You can specify a MIDI channel or let the track play back on whatever channel it was recorded on originally.

If you've been jealous of MIDI + Audio sequencers that can play QuickTime movies along with music, or you lusted after Digi's old *PostView* software, which let you scrub picture with the audio, you'll be pleased that Pro Tools 4 lets you import a QuickTime movie and play it on the screen while locked to the audio, either in real time or scrubbed. You can't adjust the window size, but you can set the SMPTE offset of the movie. An extremely neat feature is that an imported movie shows up on its own track as a series of 'picons' (picture icons), which makes lining up audio events to video frames an actual joy. If the movie already has an audio track, you can import that too, either with the video or by itself. The software does not, however, recognise when a movie has a MIDI track.

Borrowing one of the best features of Digi's low-end *Session* software, Pro Tools 4 also lets you *export* everything you've done — stereo audio and video — to a QuickTime movie, a process usually called 'flattening', but here referred to as 'Bounce to Movie'.

Besides QuickTime, a lot of other file formats are now supported, including WAV and SND, and you can work with files in a wide range of sampling rates and word lengths. Format conversion is automatic when you import a file. When exporting, you can down-sample the session to 8-bit resolution, using a proprietary 'Squeezer' algorithm that sounds pretty good. You can also change the sample rate, and there's a choice of five levels of conversion quality, from 'Low' to 'Tweak Head'. I experimented with all of the different settings and, oddly enough, found that the 'Low' setting provided the best-sounding results — the others had lots of low-frequency grunge in spots that were supposed to be silent.

ARE WE HAVING FUN?

If I told you that learning Pro Tools 4 was a breeze, and anybody could be up and running in no time, I'd be lying. This is a complex, sometimes daunting program that will cause a lot of beginners to lose a lot of hair. Most of the problem is simply that over the years Pro Tools has become more and more things to more and more people, and has achieved a level of complexity probably unsurpassed in the music and audio software world. There are programs out there that are far simpler to use — *Audiovision*, from Digidesign's parent company Avid, comes to mind — but they don't do anywhere near as much as Pro Tools now does. If you want this much power, you'll have to learn how to use it. Fortunately, with patience the software can be mastered, and seasoned users, once they get over the initial shock, will make sense out of it in a not-unreasonable amount of time.

A big help is a whole set of new Macintosh key combinations that get you around quickly. The Option, Shift, Command and Control keys are all used liberally, singly and in combinations. For instance, if you're in Select mode the Control key turns the cursor into a scrubber, while the Control and Option keys together turn it into a very fast scrubber. Moving a fader while holding the Command key increases the resolution of the fader so you can adjust it in 0.1dB increments. Moving a fader that's in a group, while holding the Control key, temporarily releases it from the group so that you can trim an individual channel without disabling the group entirely. Playing with the key combinations for a while gives you the feeling that you're developing an intuitive understanding of

DISK DRIVES

Pro Tools III systems let you daisy-chain up to five hard drives onto the Disk I/O card's SCSI2 connector, which means you can have a humongous amount of storage, backups, redundant arrays, or whatever.

Apple's current System software, however, won't recognise a volume that's larger than 4Gb, so if you have a larger drive (and you can now get a 9Gb drive for what I paid for a 20 *Meg* drive only 10 years ago) you'll have to partition it. A neat new feature called disk allocation lets you specify which tracks go to which drives, and you can choose to automatically assign each new track to a different drive or partition, 'round-robin' style.

Iomega's removable 1Gb Jaz drives are a natural for Pro Tools, because you can give each project its own cartridge, and when it's done you don't have to archive or back it up, you simply put the cartridge on the shelf. In previous versions of the software, however, these drives were shunned: Digidesign said that they were unreliable. The software that controlled the Disk I/O card refused to recognise Iomega's formatting, so if you wanted to use one for your audio files, you had to pretend it was a different kind of disk by reformatting each cartridge using software other than Iomega's. Thankfully, in 4.0, Digidesign have changed their mind, and Jaz drives are now supported without so much as a whimper, although you do have to wake them up every once in a while if you have let the system lie idle for any length of time.

Spectre PC Solutions

104 - 108b Main Street,
Bingley,
West Yorkshire, BD16 2JH
TEL: 01274 568843/564389
FAX: 01274 511540

18 Byram Street
Huddersfield,
West Yorkshire, HD1 1DR
TEL: 01484 513949
FAX: 01484 430180

CALL BINGLEY BRANCH FOR MAIL ORDER

If a PC is next on your shopping list, then you really need to talk to us. We supply systems configured to your specific needs, simply let our resident PC Specialist know which software package you intend to purchase and why this is your choice. Then he will give you all the options on soundcards, midi interfaces and audio cards available. Helping you to make the right decision and not a huge mistake. All the software, soundcards, CD writers, interfaces etc will be installed and pre-configured. So what you take delivery of is an up and running system ready to use. our systems all carry Free 1 year On Site Maintenance.Call Nick Freemantle @ Bingly for PC Solutions. Best advise in the business.

PROFESSIONAL HARD DISC RECORDING AT AFFORDABLE PRICES

SPECTRE SPECIAL
Studio 24 with:-
Fostex D80 incl Looms .....RRP 3450.00 .. Only £2499.00
Call for more details on D90 & D160 packages.

SPECTRE DANCE PC
P166MMX/4 Gig Hard Drive/16 Meg EDO Ram/14" Monitor
Incl Logic Audio, Yamaha CS1x, Midiman DMAN Audio Card
SPECIAL SPECTRE DEAL ONLY £1999.00

KORG

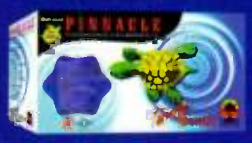
Trinity Deal Incl All Options, Flight Case & Keyboard Stand £2699.00

Solo Option.....(Prophecy Sounds)	Was £475.00 Now £299.00
SCSI Option .....(scsi interface)	Was £399.00 Now £249.00
PBS Sample Option .....(Sample Playback)	Was £625.00 Now £429.00
Digital I/F Option ...(Digital Interface & Word Clock)	Was £255.00 Now £99.00
HDR Option .....(4 Track Hard Disc Recording)	Was £599.00 Now £399.00

Korg N364.. Was £1299.00 Now Only £899.00!! In Stock
Korg N264 .. Was £1499.00 Now Only £1079.00
Call for more prices on Korg Products

SOUND CARDS

Fiji...£349



Turtle Beach Pinnacle...£439

Yamaha DB50XG
£99.95

Yamaha SW60XG
£129.95

Yamaha MU10XG
£189.95

AN1X £899.00
CS1X .....£539.00 INCL Cubase Lite FOC
QY 700 .....In Stock .....Call for best price

YAMAHA

Roland

Roland JP8000
Guaranteed UK's Best Deal
NEW .....JV2080 £1399.00 MC303 ..... £539.00 incl Free Delivery
NEW .....SC88Pro .....CALL

NEW XP Deals
XP10 .....Was £499.00 ..... Now Only £369.00
XP50 ..... Was £1299.00 ..... Now Only £939.00
XP80 ..... Was £1799.00 ..... Now Only £1339.00

SOFTWARE

Logic Audio £349
Logic Discovery..£249

Steinberg Cubase 3.0 Audio
£...CALL

4-TRACK RECORDING

Tascam 564 RRP £1099.00.....£ CALL
Yamaha MD4 RRP£899.00 .....£699.00

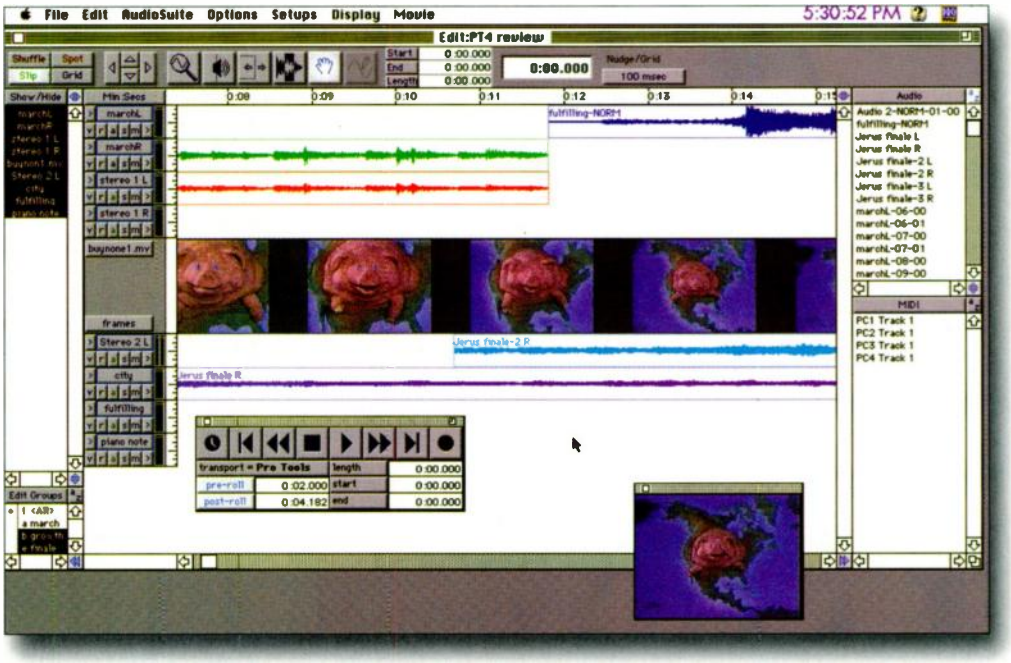
Tascam
424 .....£ CALL
414 .....£329.00
Porta 03 .....£149.00

Fostex
X14 .....£149.00
XR3.....£229.00
XR5 .....£369.00
XR7 .....£449.00

SAMPLING

We are a fully authorised Akai dealer please call for the best deals on all Akai product including Free CD ROM Library.

CALL 01274 568843/564389/561044



When you import a QuickTime movie, it can be shown in its own window, and also displayed as 'picons' on its own track.

▶ the logic behind them, and you'll be able to stop constantly referring to the Quick Reference Card.

The screen does get very cluttered, however, and sometimes it resembles those old astigmatism tests where you were told to distinguish finer and finer lines on a grid. While I welcome the ability to set different track heights, when you mix up tracks in that way you can go cross-eyed just trying to figure out what you're looking at. I would not recommend using the software on anything smaller than a 19-inch screen, and if you can get a second monitor on line, even a small one just to deal with the mixer window, you'll be even better off.

One thing to note is that it's very easy to run out of DSP power in a single-DSP Farm system. While it's true that buying processing tools in the form of software is cheaper than buying all the same tools as discrete pieces of gear (not to mention the fact that it keeps your studio cooler), there's a serious trade-off: when you've got a rack full of individual boxes there's never any question about being able to use as many of them as you want simultaneously. In a PCI Pro Tools system, only three of the four DSP chips are actually available for plug-ins (in NuBus systems only *two* are available), so once you've set up some compressors, some EQs and a single reverb, you've used up your DSPs. According to Digidesign, one DSP chip will allow you to load up to 12 compressors and up to 24 bands of EQ.

The solution is to buy extra DSP Farms, but they ain't cheap, and you need the computer slots to put them in. So, unless you have unlimited funds and expansion slots, you'll have to learn Digidesign's complex formulae for what you can use in conjunction with what else. The supplied *Allocator* software at least helps you to keep track of what's going on, but it doesn't change the fact that if you want to do a lot of processing you have to be prepared for a constant juggling act: setting up auxiliary buses, bouncing processed tracks, and doing off-line processing with Audiosuite. If you have assigned a plug-in to a track and then de-assign it, the DSP it was using is not automatically freed up — you have to close and re-open the session to do that.

I suppose I shouldn't complain — it still beats dealing with £100,000 worth of analogue gear — but it's important to realise that if you want to take advantage of all of the cool features Pro Tools offers (especially those mouth-watering plug-ins), you're going to have to put together a pretty large system.

DOCUMENTATION

Not helping things as much as it could, unfortunately, is the documentation. I'm very sympathetic to the folks who wrote it — they had a gargantuan task on their hands — and they've produced an exhaustive and well-organised manual, but it still is extremely tough going for the new user, and even a little intimidating to old hands. There is a 'What's New in 4.0' chapter for experienced users, and an excellent

UPGRADES

If you already own Pro Tools, with the current version 3 software, a simple software upgrade to version 4.0 costs £351, although many owners — for example, anyone who purchased Pro Tools Project or Pro Tools III new after June 1st 1996 — will be eligible for a free upgrade.

Conspicuous by its absence in the new software's propaganda or documentation, however, is any mention of the original Pro Tools 442 hardware. This is because that hardware is no longer supported by the software — and neither are the NuBus-based Audiomedia and Audiomedia II cards. So if you have one of these old systems (which Digidesign now call "classic") you'll have to dump it and get new stuff if you want to use the new software; if you don't, you're stuck forever with version 3.2 software.

On the plus side, Digidesign have an extensive upgrade program — they call it 'Exchange' — for taking in old hardware for new. It's quite a complex program; here are one or two examples. Say you have an Audiomedia II and want to trade up to Pro Tools Project. This will cost £1749.58, instead of £2231.33, but you still have to buy an 882 or 888 interface. You might be better off in this case buying an Audiomedia III for £703.83 and a new PCI computer to go with it! If you have more recent hardware, you'll find the Exchange terms are more advantageous: Going from a Pro Tools Project PCI system to Pro Tools III PCI costs £4899.75. Compared with £7131 list for a new PT III system, you save over £2200, which is what you would pay for a new Pro Tools Project — so at least you've protected your original investment.

'Essential Concepts' chapter, which is really required reading for *all* users, regardless of experience. Beyond that, however, the software cries out for a series of tutorials, which at least touch on all of the numerous parts of the program, but there are none. Like too many manuals, the emphasis is squarely on 'What does this do?', when what's really needed is 'How do I do this?' For instance, the concept of a 'comp' track, which seasoned Pro Tools users talk about all the time, is never once mentioned in the manual. If you have the patience to read and understand all the various manuals and Read Me files, you may have no trouble, but if you're the type who likes to dive in and explore a new program (and who isn't?), you're going to be doing a lot of floundering.

If ever a program called out for a spiral-bound manual that could be left open on a flat surface, this is it. Digidesign used to use loose-leaf notebooks, but unfortunately a few years ago they switched over to conventional bindings that require you to sacrifice a hand to keep them open, or else smoosh them down hard enough to break the binding and eventually cause the pages to fall out. And if you need to look up something in one of the *auxiliary* manuals while keeping your place in the main manual, you'll need three hands. (Where's that assistant?)

CONCLUSIONS

Minor complaints aside, Pro Tools 4 is great stuff. It does more than ever, better than ever, and faster than ever. Digidesign's engineers have thought a lot about how to make the new features accessible and logical, and while you may find yourself scratching your head from time to time and asking 'Why did they do that?', a little reflection and practice reveals that in most cases their decisions were good ones. With this release, Digidesign once again pull way ahead of the pack, and confirm Pro Tools' position as the most versatile, most bang-for-the-buck, best-supported digital audio workstation on the Macintosh, or any other platform.

And it's very clean — as I said before, I found only one minor bug in the program, and it literally never crashed. One can only assume that a major part of the five-month period between Pro Tools 4's first announced shipping date and its actual release was spent bullet-proofing.

Of course, this much power comes at a price, and it will take a while to get used to all the new tricks, take advantage of all the features, and fully assimilate what's under the bonnet, especially with all those Preferences to set. It's unfortunate that the documentation doesn't offer much in the way of hand-holding, but at least (almost) all the information is there to be found.

There's another price, which I suppose could be called 'DSP lust'. With all the amazing third-party add-ons available, and more being announced almost daily, the prospect of putting together a super-duper system that does everything you could ever want is highly tempting. But if you go for all the plug-ins without also making a hefty investment in extra DSP Farms, you'll feel like a carpenter with a box full of fancy tools but only one hand.

Even at the lowly PowerMix level, however, Pro Tools 4 is one heck of an audio production program, and the more you add to it, the better it gets. If you can afford to indulge your lust, it can become a studio on your desktop with powers and abilities far beyond what anyone could have imagined would be found in a whole roomful of gear just a few years ago. SOS

info

£ See 'Hardware Options' and 'Upgrades' boxes.
A Digidesign UK, Avid Technology Ltd, Westside Complex, Pinewood Studios, Iver Heath, Pinewood, Bucks SL0 0NH.
T 01753 653322.
F 01753 654999.

"outstanding performers"
SOS May 1997
Xpression!

8" woofer!

XPRESSION! DPM1

From Harbeth, the people who build the *BBC's* own speakers:

"effortless to listen to and inspiring to work with" JH-C *SOS* May 1997

"I was very impressed by the uncoloured sound . . . the stereo imaging seemed exceptional, with a very clear mid-range"
AB *TM* June 1997

In stock & on demo at all good dealers!

INVEST IN YOUR EARS!

Xpression!™
Made in England

WORLDWIDE DISTRIBUTORS WANTED

For information please contact
Harbeth Acoustics Limited, Unit 1, Bridge Road, Haywards Heath RH16 1UA, UK
Tel: 01444 440955. Fax: 01444 440688. E-mail: www.harbeth.com

FREEPHONE - 0800-525260

WE ALWAYS HAVE A 'GREAT DEAL' ON OFFER... & THE CALL WON'T EVEN COST YOU A PENNY!

"HOW TO ORDER"

MAIL ORDER FROM SOUND CONTROL COULDN'T BE EASIER. WITH PLEASANT, KNOWLEDGEABLE STAFF ON HAND 6 DAYS A WEEK TO TAKE ALL YOUR ORDERS IN OUR TOTALLY DEDICATED MAIL ORDER DEPARTMENT.
CALL OUR MAIL ORDER LINE - NOW...

FREEPHONE...

CALL US FREE OF CHARGE TO PLACE YOUR ORDERS...
WE ACCEPT MOST MAJOR CREDIT & DEBIT CARDS INCLUDING SWITCH...

0800-52-52-60

MAIL ADDRESS...

WRITE TO US AT OUR HEAD OFFICE ADDRESS AND YOUR ORDER WILL BE PROCESSED AS QUICKLY AS POSSIBLE. WE CAN ACCEPT CASH, CHEQUES, POSTAL ORDERS, DRAFTS, SWITCH & CREDIT OR DEBIT CARDS... PLEASE INCLUDE YOUR FULL NAME & ADDRESS & PHONE NUMBER IN ORDER FOR US TO PROCESS THE ORDER EFFICIENTLY...

- SOUND CONTROL
- THE ELGIN WORKS
- DUNFERMLINE
- FIFE. KY12 7SD

FACSIMILE...

FAX US WITH YOUR ORDERS AND CREDIT CARD DETAILS 24 HOURS A DAY!! - BUT DON'T FORGET TO INCLUDE YOUR FULL NAME AND ADDRESS & A PHONE NUMBER IN THE EVENT OF A QUERY WITH YOUR ORDER...

01383-725733

EMAIL ADDRESS...

YOU CAN CONTACT US BY EMAIL AT ANY TIME. WE ALSO HAVE A NUMBER OF NEW WORLD WIDE-WEB PAGES CURRENTLY UNDERGOING CONSTRUCTION. HOPEFULLY. FURTHER DETAILS WILL BE RELEASED SOON...

jmt@soundcontrol.co.uk

DELIVERY...

WE OFFER A FREE NEXT DAY DELIVERY SERVICE THROUGHOUT MAINLAND UK (WHERE POSSIBLE). OPTIONAL A.M & SATURDAY DELIVERIES ARE AVAILABLE SUBJECT TO A SURCHARGE ETC...

INTERNATIONAL...

WE OFFER A FULL EUROPE AND WORLDWIDE DELIVERY SERVICE FOR ANY OF THE ITEMS WE HAVE IN STOCK. YOU CAN EMAIL US, FAX US, OR CALL US ON OUR DEDICATED INTERNATIONAL DIRECT NUMBER BELOW...

+44-1383-620480

SERVICE...

CUSTOMER CARE IS OUR ABSOLUTE PRIORITY. WE WANT YOU TO BE HAPPY WITH YOUR PURCHASE FROM SOUND CONTROL. IF, FOR ANY REASON YOU ARE NOT SATISFIED, PLEASE CALL US AS SOON AS POSSIBLE, & GIVE US THE OPPORTUNITY TO SORT ANY PROBLEMS OUT AS SOON AS WE CAN.

JV1080 / JV2080

£899 JV1080

THE MOST EXPANDABLE SYNTH MODULES EVER!
GET YOURS AT SOUND CONTROL MAIL ORDER... SAVE £££'S NOW... WE HAVE THEM IN STOCK FOR 'FREE' DELIVERY DOOR-TO-DOOR - NO FUSS.

ROLAND MC303

£499

IN STOCK - NOW
AND AT A STUNNING NEW PRICE
CALL US TO RESERVE YOURS AT THE BEST PRICE AROUND RIGHT NOW - INC. FREE DELIVERY!!

ROLAND JP-8000

THE FATTEST, FUNKIEST SYNTH ANYONE HAS EVER MADE. AND IT HAD TO COME FROM ROLAND...

YOU CANNOT FAIL TO HAVE SEEN ALL THE HYPE ON THIS SYNTH - RESERVE YOURS AT SOUND CONTROL NOW!

£WOW!

ABSOLUTELY STUNNING DEAL - DO NOT MISS!

ROLAND SCD10 PACK

WOW - A FULL BLOWN ROLAND 'SOUND CANVAS' IN A SINGLE-WAVETABLE UPGRADE BOARD FOR MOST PC SOUND CARDS!!

- 128 GM INSTRUMENTS • 199 RHYTHM SOUNDS
- 28 VOICE ROM • 16 PART MULTITIMBRAL
- REVERB/CHORUS • FREE SOFTWARE
- WORKS WITH MOST PC SOUND CARDS
- 100 FREE MIDI FILES

£50!!
SAVE £114 OFF RRP - NOW!

YAMAHA SYNTHS

CHECK OUT THE NEW YAMAHA AN1X CONTROL SYNTHESISER USING A NOVEL MODELLING SYNTHESIS. THIS MIGHTY MACHINES SOUNDS THE FATTEST SOUNDS YOU'LL EVER HEAR... GET YOURS AT SOUND CONTROL NOW

RRP
£899

STUNNING NEW DEALS ON YAMAHA CS1X - CALL

PC/MAC SOFTWARE

WE HAVE ALL THE LEADING SOFTWARE FOR BOTH MAC AND PC - CALL US NOW!

MEGA

1202/1204

STUNNING QUALITY BUDGET EFFEX THAT WILL COMPLIMENT ANY HOME RECORDING SETUP...
OUR PRICES ARE TOO GOOD TO PRINT - CALL US NOW!

CALL US NOW

FULL AKAI RANGE

SAVE £70!! ON AKAI SOUND MODULES...

SG01V - VINTAGE
SG01P - PIANO
SG01K - GM

£299

INC. FREE DELIVERY

FULL RANGE OF SAMPLERS IN STOCK...
S2000 • S3000XL • S3200XL
CD3000XL • MPC2000 • MPC3000
TALK TO THE EXPERTS IN SAMPLING FOR THE BEST ADVICE AT THE RIGHT PRICE - CALL US 'FREE' NOW!

CALL

PC160/PC200

WE TRY TO KEEP STOCKS OF THESE EXCELLENT CONTROLLER KEYBOARDS AT ALL TIMES. CALL NOW!

£BEST

JBL CONTROL-1'S

£99

NEARFIELD MONITORING NEED NOT BE EXPENSIVE WITH THESE MEGA LITTLE MONITORS FROM JBL. AT HOME IN THE STUDIO OR ON THE HIFI!! - CALL US!

SOUNDCRAFT ABSOLUTE

ABSOLUTE-2
ABSOLUTE-ZERO

MEGA

THE PICK OF THE BUNCH WHEN IT COMES TO NEARFIELD MONITORS... CALL US 'FREE' TO ORDER, NOW!

RACK & FLITE CASES

NEED SOMEWHERE TO PUT IT ALL?
WHY NOT INVEST IN SOME SKB CASES!

IN STOCK

OUR MUSIC STORES

AS THE UK'S LEADING MUSICAL INSTRUMENT SUPPLIER, WE NOT ONLY OFFER THE BEST MAIL ORDER SERVICE AVAILABLE, WE ALSO HAVE A NUMBER OF EXCELLENT MODERN MUSIC STORES AND PIANO/KEYBOARD CENTRES SITUATED THROUGHOUT THE COUNTRY. CALL IN AT YOUR NEAREST STORE RIGHT NOW AND SEE JUST EXACTLY WHAT WE HAVE ON OFFER THIS SEASON. IT MIGHT JUST CHANGE THE WAY YOU THINK ABOUT MUSIC STORES...

MANCHESTER MUSIC STORE	NEWCASTLE MUSIC STORE	GLASGOW MUSIC STORE	EDINBURGH MUSIC STORE	DUNFERMLINE MUSIC STORE	DUNDEE MUSIC STORE	KIRKCALDY MUSIC STORE
ADDRESS RED ROSE CENTRE REGENT ROAD SALFORD. M5 3GR	ADDRESS MOSLEY STREET NEWCASTLE NE1 1DF	ADDRESS JAMAICA STREET GLASGOW G1 4AN	ADDRESS ST. MARY'S STREET EDINBURGH EH1 1TA	ADDRESS ELGIN STREET DUNFERMLINE KY12 7SD	ADDRESS CASTLE STREET DUNDEE DD1 3AD	ADDRESS DUNNIKIER ROAD KIRKCALDY KY1 2RL
TELEPHONE 0161-877-6262	TELEPHONE 0191-232-4175	TELEPHONE 0141-204-0392	TELEPHONE 0131-557-3986	TELEPHONE 01383-733353	TELEPHONE 01382-225619	TELEPHONE 01592-260293
FAX 0161-877-6363	FAX 0191-222-1837	FAX 0141-204-0614	FAX 0131-557-3686	FAX 01383-725733	FAX 01382-201486	FAX 01592-642251

WRH

SOUND CONTROL MAIL ORDER

ROLAND VS880

UPGRADED £MEGA

SIMPLY STUNNING DEALS ON THIS SUPERB 8-TRK DIGITAL MIXER/RECORDER/FX UNIT!!

- ROLAND VS880 V-XPANDED VERSION
- 850 MEG INTERNAL HARD DRIVE (UNDER-CUTTING ANYONE!)
- VSBF-1 PRO DIGITAL EFFEX BOARD FITTED
- FREE NEXT DAY DOOR-TO-DOOR DELIVERY

AS ABOVE, COMPLETE WITH TASCAM DA20 DAT FOR BACKUP & MASTERING.....

V-XPANDED £SPECIAL

488 MK-2 8 TRACK

LTD STOCK - LAST CAME £699

BELIEVE YOUR EYES!!

THE PRICE IS £699, BRAND NEW, NO CATCH, AND INCLUDING FREE DELIVERY. RESERVE YOURS NOW! SAVE A MASSIVE £600 OFF RRP RIGHT NOW. DON'T WASTE TIME - YOU CAN'T BUY CHEAPER!!

414/424 MK-2

£LOW

AS IF YOU HAVEN'T GUESSED BY NOW... SOUND CONTROL ARE THE TOP SUPPLIER FOR TASCAM!! CHECK OUT THE NEW TASCAM 414 MULTITRACK...

OUR RECOMMENDED MULTITRACKER FOR 1997!

PORTA-03 MKII

£149

FREE CLEANING KIT!

THE BEST BUDGET 4 TRACK EVER MADE, AND AT THE BEST DEAL EVER. - INCLUDING FREE DELIVERY! CALL US NOW...

YAMAHA MT50

£UNREAL

SAVE £££'S - NOW!!

THE BEST PRICE EVER ON THIS EXCELLENT 4 TRACK FROM YAMAHA - FEATURING SIMULTANEOUS HIGH SPEED RECORDING ON ALL 4 TRACKS AT ONCE FOR SUPERIOR FLEXIBILITY.. AND FREE DELIVERY TOO!!! - CALL US NOW!!

4 TRAKPAK

SAVE OVER £150!!

£25

GET THIS PAIR OF CD QUALITY HEADPHONES, THIS EXCELLENT MIC & CABLE & CLEANING KIT FOR ONLY £25 WHEN YOU BUY ANY 4/8TRACK FROM S.C. MAIL ORDER!!

DIGITAL MEDIA

MEGA

WE HAVE HUGE STOCKS OF DAT TAPES, DCC TAPES, MINIDISKS, ADAT TAPES, DA38/DA88 TAPES ETC... IN STOCK FOR A SPEEDY DELIVERY ORDER YOURS - NOW!

FOSTEX XR3

£LOW

AS THE UK'S TOP STOCKIST FOR ALL MAKES OF FOUR TRACK AND EIGHT TRACK, WE HAVE HUGE STOCKS ON OFFER TO YOU AT THE BEST PRICES AROUND. DO NOT BUY A FOUR TRACK BEFORE GIVING US A CALL FIRST - I GUARANTEE YOU WILL NOT BE DISAPPOINTED... ESPECIALLY IF YOU HEAR OUR DEALS ON FOSTEX - WOW!

FOSTEX XR5

£LOW

FOSTEX XR7

£LOW

V377/W416

£69/£99

THE BEST BUDGET MASTERING CASSETTE DECKS AVAILABLE - AND FROM TEAC! AND ONLY £60 OR £90 WHEN PURCHASED WITH ANY 4/8 TRACK HERE!! OR IF YOU PREFER A MORE PROFESSIONAL MODEL, WE HAVE A FULL RANGE OF DENON CASSETTES, TWIN DECKS, C-D'S AND AMPS ETC...

DCC951

£199

WANT DAT QUALITY MASTERING, BUT HAVE A LIMITED BUDGET? NO PROBLEM. GET THIS NOW! INCLUDING A FREE DCC TAPE!!

AKG MICROPHONES

MICROPHONES

FREEPHONE - 0800-525260 FACSIMILE - 01383-725733 EMAIL - JMT@SOUNDCONTROL.CO.UK

WRH

YAMAHA MIXERS

WHENEVER WE MENTION THE WORD 'YAMAHA', WE AUTOMATICALLY THINK OF QUALITY.

WHENEVER WE MENTION THE WORD 'QUALITY' WE AUTOMATICALLY THINK 'EXPENSIVE'... WELL THINK AGAIN...

SOUND CONTROL HAVE TEAMED UP WITH YAMAHA TO OFFER SOMETHING OUT OF THIS WORLD FOR 1997...

WE HAVE OVER HALF A MILLION POUNDS WORTH OF YAMAHA MIXERS SELLING AT SIMPLY £100'S OFF RRP!!

MX200

12 CHANNEL £375

- AVAILABLE IN 12, 16, 24 CHANNELS
- 3 BAND EQ ON EVERY CHANNEL
- MASTER STEREO OUTPUT ON XLR
- ADDITIONAL MONO OUTPUT ON XLR
- 4 AUX SENDS (2 PRE & 2 POST)
- 4 AUX RETURNS FOR FX OR EXTRA INS
- PFL & ON SWITCH ON ALL CHANNELS
- DUAL FUNCTION LED LEVEL METERS
- HIGH PASS FILTER ON ALL CHANNELS

CALL US RIGHT NOW FOR FREE NEXT DAY DELIVERY ON ALL OUR YAMAHA MIXERS ADVERTISED HERE!

16 CHANNEL £449 24 CHANNEL £599

MX400

8 CHANNEL £399 12 CHANNEL £499

16 CHANNEL £699 24 CHANNEL £899

- 8, 12, 16, 24 MONO CHANNELS
- 4 BAND EQ (SWEEPABLE MID)
- MASTER STEREO OUTPUT ON XLR
- 4 BUS OUTPUTS ON JACKS
- ADDITIONAL MONITOR OUTPUT
- 4 EXTRA STEREO INPUTS WITH EQ
- 5 AUX SENDS (2 PRE/1 POST/2 SWITCHED)
- PFL & ON SWITCH ON ALL CHANNELS
- SUPERB QUALITY 100MM FADERS
- HIGH PASS FILTER ON ALL CHANNELS
- INSERTS ON ALL CHANNELS AND GROUPS
- DIRECT OUTPUTS ON ALL CHANNELS
- GROUP SUB INPUTS & STEREO SUB INPUTS

UP TO 60% OFF RRP'S!!

MX400 PACKAGES

- MX400/8 *
- ZOOM 1209
- JBL CONTROL-1'S
- DENON PMA250SE
- TEAC V377
- AKG C1000S
- ALL CABLES
- FREE DELIVERY

RECORDING PACKAGE £999

* AS ABOVE.....

THIS IS JUST ONE OF A NUMBER OF COMPLETE RECORDING PACKAGES AVAILABLE FROM SOUND CONTROL MAIL ORDER. CALL US NOW FOR DETAILS.

SOME ANSWERS TO THE QUESTIONS YOU MIGHT HAVE ABOUT OUR NEW YAMAHA EXCLUSIVE DEAL...

Q.1... "SO JUST WHY ARE THEY SO CHEAP?"

WELL, WE HAVE IN EXCESS OF HALF A MILLION POUNDS WORTH OF YAMAHA DESKS IN STOCK & BECAUSE OF OUR PUBLIC BUYING POWER, AS THE U.K'S LARGEST MUSIC RETAILER, WE HAVE NEGOTIATED SUBSTANTIAL DISCOUNTS IN ORDER TO OFFER THESE PRODUCTS AT THE SUPERB DEALS SHOWN HERE. QUITE SIMPLY, NO OTHER MUSIC RETAILER IN THE COUNTRY HAS SOUND CONTROL'S BUYING POWER!

Q.2... "JUST WHY SHOULD I BUY A YAMAHA MIXER?"

TWO WORDS DESCRIBE YAMAHA MIXERS - 'QUALITY' & 'RELIABILITY'. JUST LOOK AT THE YAMAHA PROMIX-01 - WOW! NOW THAT WE HAVE ADDED 'AFFORDABILITY', THERE IS NO REASON NOT TO CONSIDER A YAMAHA MIXER FOR YOUR NEEDS. HOWEVER, IT IS CONCEIVABLE THAT WE DO NOT HAVE A MODEL HERE THAT WILL EXACTLY SUIT YOUR REQUIREMENTS - *DON'T PANIC!* WE ARE STILL OFFERING ALL OUR USUAL STOCK OF MIXERS AT THE BEST PRICES POSSIBLE. WE WANT TO MAKE SURE YOU BUY THE RIGHT MIXER FOR THE JOB, WHETHER THAT IS A YAMAHA OR NOT!!

Q.3... "WHAT ABOUT AVAILABILITY?"

WE HAVE BRAND NEW, BOXED STOCK IN ALL OUR STORES - NOW!

Q.4... "IS THERE ANY CHARGE FOR DELIVERY?"

NO, WE WILL SHIP NEXT DAY TO MOST PLACES IN THE UK, BUT REMOTE AREAS MAY TAKE TWO DAYS. PLEASE ASK FOR DETAILS.

Q.5... "WHAT ABOUT A GUARANTEE?"

YOU HAVE A FULL 12 MONTHS WARRANTY AS STANDARD, NO FUSS. AS THE U.K'S BIGGEST YAMAHA DEALER, WE ARE WELL PLACED TO RECTIFY ANY PROBLEMS THAT MIGHT ARISE, AND WE PAY FOR ANY CARRIAGE CHARGES SHOULD YOUR DESK HAVE TO BE RETURNED TO YAMAHA FOR REPAIR.

Q.6... "WHAT IF I CAN'T AFFORD ONE NOW, WILL YOU RUN OUT?"

WHILE WE DO HAVE A VERY LARGE STOCK AT PRESENT, WE ARE SELLING ALL THE MODELS SHOWN HERE THROUGHOUT OUR STORES AND BY MAIL ORDER, AND CONSEQUENTLY OUR STOCKS WON'T LAST FOREVER. HOWEVER, IF YOU LEAVE US A 10% DEPOSIT, WE WILL HOLD YOUR ORDER SAFE IN OUR WAREHOUSE READY FOR IMMEDIATE DISPATCH UPON BALANCE OF PAYMENT. PLEASE ASK FOR DETAILS.

Werk of Art?

EMAGIC AUDIOWERK8 PCI I/O CARD

Digital audio recording on computers has been possible for several years now, but without expensive multi-channel I/O units, the inputs and outputs from computer-based systems have been limited to simple stereo jacks. Now, several inexpensive multi-output PCI I/O cards are coming onto the market. PAUL WHITE looks at Emagic's solution, and decides he knows what he likes...

I get the impression that a lot of people would like to move into hard disk recording, but are put off by the fact that multiple-output systems tend to be very expensive (with the exception of C-Lab Falcon-based setups), while more affordable systems usually rely on a cheap stereo in/out soundcard or use the built-in audio capabilities of a Power Macintosh or similar computer. This year's NAMM show promised some improvement in this situation, with several companies showing more reasonably priced I/O hardware. One system that attracted a lot of interest was Emagic's Audiowerk8 PCI card, offering eight audio outputs and two audio inputs plus S/PDIF I/O. The card comes bundled with its own 8-track software, called *VMR*, short for Virtual Multitrack Recorder, and this is a pretty good description of what you get — an on-screen virtual representation of a tape machine with a smattering of hard disk-type copy and paste edit functions. Fun though *VMR* is, of greater importance is the fact that Audiowerk8 also runs with *Logic Audio* (version 2.61 upwards), providing an incredibly powerful MIDI + Audio desktop studio at a very accessible price. Prior to Audiowerk8, the only satisfactory way to get multiple audio outputs from *Logic Audio* was to use Digidesign's Pro Tools hardware, and while this is actually very powerful and well supported by third-party DSP plug-ins, it is priced well beyond the reach of the majority of recording musicians. Though *Logic Audio* doesn't currently provide on-board effects in the same way as *Cubase VST* does, version 3.0 (due this summer), promises to redress the balance, making the Audiowerk8/*Logic Audio*-based studio potentially more self-contained.

Two Audiowerk8 cards may be used at the same time to provide 16-track operation, but when used with *Logic Audio*, a single Audiowerk8 card can support up to 24 tracks of audio, computer and hard drive permitting. Optional daughterboards are planned for later in the year which will provide three more S/PDIF digital I/O ports or an ADAT optical interface.

pros & cons

EMAGIC AUDIOWERK8

£499

pros

- Inexpensive way of getting multiple outputs from a computer-based recording system.
- Easy to install.
- Includes digital S/PDIF I/O for DAT transfers and so on.

cons

- Still limited to two simultaneous inputs.
- Noise performance isn't as good as from a system using external converters.

summary

Audiowerk8 is an inexpensive card that delivers the flexibility users have been asking for, to allow them to use an external mixer. Only time will tell which other applications come to support the card, but the more the better.

SOUND ON SOUND

The question all non-*Logic Audio* users are asking concerns the compatibility or otherwise of Audiowerk8 with other leading audio sequencers. At their press conference in January, Emagic were a little non-committal on the subject, but said that they were engaged in dialogue with other manufacturers, so I guess we'll just have to wait and see. However, according to the CD-ROM that comes with the package, the card is compatible with the Apple *Sound Manager*, and therefore will work within any third-party programs that can use *Sound Manager*. The catch is that the current version of *Sound Manager* only supports 2-in, 2-out operation, which rather defeats the object of having an 8-output card!

Audiowerk8, complete with its bundled software costs under £500, and because of its PCI format, it will run on any of the newer Apple, Mac clone or Pentium PC machines that support PCI expansion slots. The 18-bit oversampling audio converters and S/PDIF I/O phono sockets are all located on the circuit card, but because of the lack of panel space, the analogue ins and outs come as a short bunch of cables terminating in phono sockets. At the card end, these connect via a single 'D' connector with securing screws. A weighty ferrite block is clamped around the cable bundle, presumably as a means of reducing the amount of RF (radio-frequency interference) getting into and out of the card. Each of the phono circuits is identified by a small, printed fabric flag.

As the Mac version of the software was ready first, I installed the card into a modestly specified (603e/166MHz) Apus Power Mac clone rather than into my Pentium PC (which still isn't right in the head since the last time I installed new hardware!), and the installation went without hitch. Providing you remember to ground yourself to the computer chassis before installing the card (to avoid static problems), the process is a doddle — just plug in the card, then click on the Install icon for *VMR* on the supplied CD-ROM. Moments later, *VMR* is installed, and after restarting the computer you're ready to roll.

VMR

Using *VMR*, Audiowerk8 provides the virtual equivalent of an 8-track tape machine, including transport buttons, input meters with record select,

solo and mute buttons for each track (see Figure 1 and its key for an indication of where each of the buttons is to be found in the software). The file format is *SDII* (mono) for Mac users and WAV for PC users. There's also a 20-point Location memory and an auto punch-in/out system based on the left and right locators, though you can also punch in and out on the fly, as you can with a traditional hardware recorder. The system uses the familiar tape analogy, so before you start work, you have to click the button with the tape icon to set up your virtual tape. Another good point about creating a virtual tape to store your songs is that a separate folder is created for each tape, enabling you to keep track of your audio files.

Though the tape recorder model has been adhered to pretty rigidly in the way *VMR* is presented, the track waveform display rather gives ▶

Figure 1.

KEY

1. Tape Indicator. This tells you how much 'virtual tape' (ie. hard disk space) you have left to record on.
2. Waveform Display.
3. Level Meters.
4. Track Solo, Mute, and Record buttons.
5. Stereo Link buttons.
6. Tape Button. You click on this to set up your 'virtual tape'; ie. the folder in which the audio files you record with *VMR* will be stored.
7. Analogue/digital input toggle selector.
8. Pitch control (acts like varispeed on a tape-based multitrack); range -9.99% to +9.99%.
9. Autolocate position displays (only six of the available 24 shown).
10. Left and right locator displays, with the Cycle (loop) mode button between them.
11. The two Set Locator buttons (at either end of this row of controls), with the Autodrop (centre left) and Edit buttons (centre right).
12. Main time display.
13. Transport controls.

Matt Bell

> "Audiowerk 8 is just what the recording musician has been asking for."

▶ the game away. Furthermore, there are many editing functions that would be impossible on a normal tape-based machine. For example, you can remove a track to free it up for re-use, but the audio data doesn't have to be deleted — the file still exists, so it may be brought back in later if needed. Track data may also be copied, so that if you're doing a lot of risky editing or punching in, you can still go back to the original if there's a disaster. It's also possible to normalise track data to get the peak signal level up to maximum.

Most digital recorders come with a manual the size of the Yellow Pages (the *really* big ones have manuals the size of *SOS*!), but Emagic's proud boast is that most of what you need to know is printed on the back of the box. While this is both laudable and impressive, it isn't exactly convenient to have a squashed cardboard box on your manuals shelf, but to be fair, once you've read it, you probably won't need to refer to it again. Such information as you can't glean from the box comes in a small supplementary manual of less than 20 pages.

Above the transport controls is the main time readout (the largest time display in the *VMR* window). The two smaller time displays above the main readout are the left and right locators, upon which all the main editing functions rely. The values of these locators can be changed from the keyboard, or via the mouse, either by clicking on the Set Locator buttons (see Figure 1) or, even more simply, by clicking on values in the main time display and dragging them onto the relevant locator display. The reverse is also true; you jump to the stored locator values by dragging the value from the relevant locator onto the main time display. The left and right locators are useful when using the Autodrop function (Emagic's term for auto punch-in) in combination with Cycle (loop) mode to record a number of alternative takes of a part — the left and right locators then mark the ends of the part you want to keep recording. After recording various takes in Cycle mode, you can then audition them all and select the best one. The Autodrop function includes a pre-roll time, and Cycle may also be used simply to loop around a section for rehearsal.

Above the left and right locators are the Position Displays (see Figure 1 and key), which show the ▶

inspired TASCAM

The digital portastudio® 564

In 1979 Tascam introduced the world's first Portastudio®, revolutionizing the world of recording.

Now, almost twenty years later, **Tascam** has invented a unique 4x faster **MiniDisc Drive** – the only drive powerful enough for the world's first **Digital Portastudio®.**

The **Tascam 564** has all the simplicity and ease of use of a traditional cassette Portastudio but with digital sound quality and unique new features like **sequencer-style editing** and **"non-destructive" track bouncing**. The Tascam 564 uses **MD Data Disc** – a new removable digital recording format – to give **37 minutes** of digital 4-track recording on a single disc.

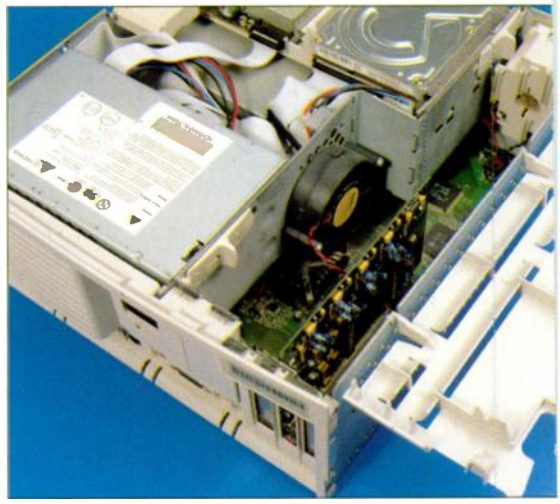
The 564 **Mixer Section** is equipped with all the superior features you'd expect to find on a top Tascam Portastudio: **balanced XLR and jack mic/line connectors; 3-band sweepable mid EQ; 4 additional stereo inputs** and **2 effects sends** on each channel; flexible monitoring; individual track outs, 2 stereo outs and a stereo **S/PDIF digital out.**

A **Looping and "Best Take" Function continuously loops any section of a song** and records and stores up to **five different takes** of a solo or drop-in before you Select and Save the best one! **Powerful Digital Editing** functions allow you to cut and paste recordings **like a sequencer**; moving, erasing and copying different song parts and programming them to repeat and play-back in any order you choose. And up to **five levels** of **full 4-track bounce** can be achieved before any tracks are erased.

The Tascam 564 also features advanced synchronization capabilities, with both **MIDI Time Code and MIDI Clock** output, as well as all the usual varispeed, auto punch-in/out and rehearse mode features.

564

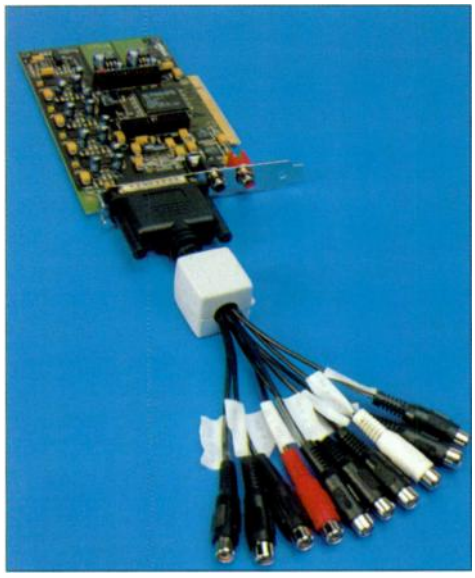
TASCAM 5 Marlin House, The Croxley Centre, Watford, Herts, WD1 8YA. Call Gill Walker on the **Brochure Hotline 01923 819630**



Plugging into PCI — how the Audiowerk8 fits into the back of a Power Mac.

▶ stored autolocate points. You can store up to 24 of these, but you can only see six of them at any one time, as there are only six displays in the *VMR* window. Again, autolocator points may be stored by dragging values from the main time display, or the left or right locators, and you jump to the autolocate points by dragging the values from the position display to the main time readout. For those who don't like mousing around, a comprehensive set of key commands is also provided to enable users to access the left/right locators and position memories very quickly.

During editing, source tracks are selected using Solo buttons, and the destination track with Record. Sections may then be copied, moved, exchanged, or replaced with silence. A similar process allows multiple sources to be selected (between the same time locations, of course), and bounced to a new destination. The Edit button (the one marked with the diagonal arrow above the main time display) is instrumental in all editing activities; after selecting your source and destination tracks and times, pressing this button brings up a simple on-screen dialogue box that allows you to select the precise function you want (for example, Copy, Move, Exchange, Silence and so on, as described above). Audiowerk8 supports both mono and stereo file recording using the stereo link button between the track pairs, located under the level meters. If stereo files are bounced, they must be sent to a stereo destination. It's also possible to bounce all eight tracks down into stereo, via an external mixer, onto two of the original tracks, without losing the original audio data. This means that you can create submixes using external effects and EQ, as with a conventional tape machine, except that you don't have to leave two tracks free to do it.



The Audiowerk8 card, with the attached eight analogue outputs. The S/PDIF connectors can be seen on the card itself.

IN USE

Using *VMR* isn't unlike using one of the new stand-alone 'personal' digital multitrackers, such as Fostex's D80 or Roland's VS880, in that the tape analogy is combined with the basic essentials of digital editing, but without any frills. However, *VMR* doesn't have any sync facilities, as it's assumed that if you're working with MIDI or as part of a more professional system, you'll be using *Logic Audio* with the card.

VMR's user interface has a reassuringly simple, robust 3D feel to it, with large, familiar buttons and clear displays of both 'tape' position and recording level. A large button marked with an 'A' and a 'D' toggles between digital and analogue inputs, and tracks are armed for recording exactly as with a hardware machine. There's also a useful varispeed-style function in the form of the Pitch button. You can name tracks, either by choosing a preset name from a pull-down menu, or by entering up to 12 characters of your own, and as the track is recorded, its waveform is displayed in the track waveform window. Track data may also be moved from one track to another. Despite all of *VMR*'s useful features, I can't help thinking of Fisher Price whenever I look at the screen (if they don't currently produce a 'My First Digital Multitrack Recorder', it's only a matter of time!).

When used from within *Logic Audio*, Audiowerk8 comes up as one of the available audio device options in the Audio Object parameter box, and, once selected, it works in pretty much the same way as any other audio interface device. Track 1 and 2 Audio Objects have faders, panning and stereo linking, as well as record buttons, mutes and solos, but there's no EQ, as there is if you use Pro Tools hardware. The remaining Audio Objects are outputs only, as Audiowerk8 can only record on up to two tracks at any one time.

Recording is at 16-bit, and though some background hum and interference is evident when you turn the monitoring up, at moderate volume settings with replay stopped you'd have to put your ear to the monitor to notice anything. While a more expensive system with external converters is undoubtedly better in this respect, Audiowerk8 can produce excellent results if you're careful with your record levels. For stereo editing, the S/PDIF I/O provides a much cleaner path, and anyone who has a good DAT machine with an S/PDIF output might want to consider using it as a front end (ie, just using the converters) while recording, to ensure the quietest results.

AUDIOWERK8 SPECIFICATIONS

Card type	32-bit PCI Busmaster
Digital audio format	16-bit linear
Nominal sample rate	44.1 kHz
Sample rate	Range 40-50kHz, resolution 1Hz
I/O	Two analogue inputs (-10dBV, unbalanced RCA connections), eight analogue outputs (-10dBV, unbalanced RCA connections), stereo digital input and output (S/PDIF)
Oversampling	128 x
D/A converters	18-bit continuous calibration
A/D converters	1-bit bitstream, 18-bit equivalent
Total Harmonic Distortion	Less than 0.006% @ 1kHz, 0dB signal level
Dynamic range	Greater than 90dB, input-to-output, A-weighted
Frequency response	20Hz to 20kHz, 0.5dB, Input-to-Output, 44.1kHz
Maximum audio tracks	8 tracks with *VMR*, 12 with *Logic Audio Discovery v1.1*, 16 tracks with *Logic Audio v2.6.5*, 24 tracks with *Logic Audio v3.0*

At the time of writing, the current version of *Logic Audio* throws up a couple of problems when working with Audiowerk8 (older versions don't recognise it at all), although this problem should have been fixed in the version available by the time you read this. The problems I found related to the input meters not registering until one attempt at recording had been made, and, more seriously, tracks being recorded couldn't be monitored during recording. Check that you have the appropriate version of *Logic Audio* to avoid disappointment.

SUMMARY

Like all systems with on-card converters, Audiowerk8 is vulnerable to a certain amount of hum and noise pickup from other parts of the computer, or from adjacent cards, but Emagic have done their best to keep this to a creditable minimum. Installation is straightforward, the bundled software is very friendly for non-MIDI sessions, and having multiple outputs finally means that the user on a budget can exploit the full capabilities of an external mixer and effects units. All you need is a small mixer, plus some form of monitoring system, and you can make very sophisticated recordings.

For serious applications, where sync'ing and mix automation are required, Audiowerk8 teams with *Logic Audio* to produce a very powerful desktop music production system. It'll be interesting to see which, if any, of the other sequencer platforms Emagic decide to support with Audiowerk8, as there are several multi-output audio systems poised to hit the market over the next few months (and one is featured in this very issue — see the Korg 1212 card review starting on page 156), most of which have multi-platform support. Audiowerk8 is the most cost-effective solution to the multiple output problem to date, but those demanding the best possible sound quality may either have to wait for the digital daughterboard (expanding the system to four stereo S/PDIFs plus ADAT digital I/O), or look at one of the more costly systems based on external converters.

Ultimately, Audiowerk8 is just what the recording musician has been asking for, and though you can get better performance from a professional system, you still have to pay quite a lot more to get it. SOS

info

£ £499 including VAT.
A Sound Technology plc, Letchworth Point, Letchworth, Hertfordshire SG6 1ND
T 01462 480000.
F 01462 480800.

HARDWARE REQUIREMENTS

Audiowerk8 requires a computer with a free PCI slot, and will work with either MacOS machines or Pentium PCs running Windows 95. Both sets of software will be shipped with production systems, though only the Mac version was available for this review. Windows users may use anything from a Pentium 60 upwards, though a P100 or better is recommended, while Mac users may pick any PCI Power Mac upwards from the 601 processor. A minimum of 16Mb of RAM is required.

***VMR* is able to run with virtually any up-to-date SCSI or IDE drive, and around 5Mb of disk space is needed for each track-minute of recording. Iomega Zip drives apparently allow up to 4-track operation, whereas an Iomega Jaz drive will support eight simultaneous tracks. Emagic have not tested the later Syquest removable drives, but say that their technical specifications indicate that they should work OK.**

Apple Authorised Reseller

MacMusic

Hardware & Software for Computer based Multi-Track Recording Systems

Telephone: 01324 826647
Fax: 01324 821007
E-mail: gandn@post.almac.co.uk

New Apple PowerMacs
PowerMac 9600/233 32/4Gb CD £3199
PowerMac 8600/200 32/2G CD Zip £2449
PowerMac 7300/200 32/2G CD £2099
PowerMac 7300/166 16/2G CD £1799
PowerMac 4400/200 16/1.2G CD £1079
Prices include Keyboard & Mouse but NOT monitor
Previous PM Models
PowerMac 8500/180 16/2G CDx8 ..... £1949
PowerMac 8500/150 16/2G CD £1799
PowerMac 8500/120 16/2G CD £1399
PowerMac 7600/132 16/1.2G CD £1349
PowerMac 8200/120 16/1.2G CD £1169
PowerMac 8100/100 24/1Gb CD £939
PowerMac 7100/80 24/700 CD £819
PowerMac 7200/90 8/500 CD £819
PowerMac 6100/60 24/500 CD L2 ..... £549
Prices include Mouse but NOT Monitor or Keyboard
Monitors, Printers, Modems, etc.
Apple Multiple Scan 20/2 ..... £1299
Apple Multiple Scan 1710 ..... £619
Apple Multiple Scan 1705 ..... £519
Apple Multiple Scan 15 AV £349
Apple Multiple Scan 15 ..... £299
CTX MultiScan 17 ..... £399
CTX MultiScan 15 ..... £279
CTX MultiScan 14 ..... £189
Formac MultiScan 21 Diamondtron £1299
Formac MultiScan 20 Trinitron £1149
Formac MultiScan 17 Trinitron £549
Formac MultiScan 17 FST £429
Apple Geoport Telecom 28.8 ..... £140
Apple Colour StyleWriter 2500 ..... £279
Apple Colour StyleWriter 1500 ..... £199
Epson Stylus Colour 800 ..... £449
Epson Stylus Colour 600 ..... £299
Apple Design Keyboard £69
Apple Desktop Mouse II £29
CD Writers & DATs
Formac Yamaha 400 4xW 6xR £599
Tascam DA 20 Audio DAT £679
Music Software
Arboretum Hyperprism VST £269
Digidesign MasterList CD £399
Digidesign Sound Designer II £399
Emagic Logic Audio £599
Emagic Logic £329
Emagic Logic Audio Discovery £259
Emagic Sound Diver/surfer £179
Emagic Micro Logic £81
Gallery Turbo Morph £269
Gallery Sample Search £229
Gallery CD Studio £119
Waves Native Power Pack VST £499
MOTU Unisyn £219
Steinberg Cubase Audio XT VST £559
Steinberg Cubase Score VST £399
Steinberg Cubase VST £299
Steinberg ReCycle £179
Steinberg Time Bandit £179
Steinberg Cubasis £119
Storage Devices & Media
Formac Iomega Jaz Drive 1Gb £359
Iomega Zip Drive 100Mb £149
Sony SD5200 DAT 4-16 Gb Ext £619
Syquest EZ135 ..... £109
Iomega 1Gb Jaz Cartridge 3 pack £219
Iomega 100MMb Zip Cartridge 6 pack £76
TDK CDR 74 25 pack £139
AV Hard Disks
Micropolis MIC339 1AV 9Gb AV Ext £1249
Micropolis MIC4345AV 4Gb AV Ext £829
Seagate ST19171N 9Gb AV Ext £1399
Seagate ST34371N 4Gb Av Ext £829
Seagate ST32171N 2Gb AV Ext £599
Interface Cards & Sub Systems
Korg 168SRC Digital Mixer £1599
Korg 1212-IO £599
Korg 880A/D £599
Korg 880D/A £499
Digidesign Pro Tools Project + 882 IF ..... £poa
Digidesign Sample Cell (PCI) £969
Digidesign AudioMedia III £579
EMagic AudioWerk 8 ..... £499
Event Elect. Layla Audio Sub System £899
Event Elect. Gina Audio Card £499
Event Elect. Darla Audio Card £329
Midi Interfaces
Midiman Mac Sync Man £159
Midiman MacMan £45
MOTU Midi Time Piece AV £549
MOTU Midi Express XT £349
MOTU Midi Pocket Express £179

MacMusic Audio & Sequencer Packages

Logic Audio Package 1 .....£2449
PowerMac 7600/132 • x8 CD-ROM • 48Mb RAM • 1.2Gb Hard Disk • Logic Audio • MultiScan 14 Monitor • Keyboard • Mouse • MidiMan Interface • In/Out cables

Logic Audio Package 2 .....£3149
PowerMac 7300/166 • x12 CD-ROM • 64Mb RAM • 2Gb Hard Disk • Logic Audio • MultiScan 17 Monitor • Keyboard • Mouse • MidiMan Interface • In/Out Audio cables.

Logic Audio + Audio Werk 8 .....£3629
Emagic Audio Werk 8 Card providing 8 Analog Inputs, 2 Analog Inputs, SPDIF In & Out PowerMac 7300/166 • x12 CD-ROM • 64Mb RAM • 2Gb Hard Disk • Logic Audio • MultiScan 17 Monitor • Keyboard • Mouse • MidiMan Interface • Audio Werk 8 Card.

Emagic Sequencer Package £1249
Performa 5300 with 100MHz PPC • Built-in 15 inch Screen & CD-ROM • 16Mb RAM • 800Mb Hard Disk • Keyboard • Mouse • MidiMan Interface • Emagic Logic Software.

Cubase Sequencer Package £1199
Performa 5300 with 100MHz PPC • Built In 15 inch Screen & CD ROM • 16 Mb RAM • 800Mb Hard Disk • Keyboard • Mouse • MidiMan Interface • Latest Cubase Software.

Cubase VST Package 1 .....£2149
PowerMac 7600/132 • x8 CD-ROM • 48Mb RAM • 1.2Gb Hard Disk • Cubase VST • MultiScan 14 Monitor • Keyboard • Mouse • MidiMan Interface • In/Out cables.

Cubase VST Package 2 .....£2849
PowerMac 7300/166 • x12 CD-ROM • 64Mb RAM • 2Gb Hard Disk • Cubase VST • MultiScan 17 Monitor • Keyboard • Mouse • MidiMan Interface • In/Out Audio cables.

Cubase VST + Korg Digital £3449
First in the UK to test and deliver this amazing system. It's what we've all been waiting for - a complete digital Multi I/O system from start to finish. New Cubase Version 3.5 is astounding. If you already have an ADAT you can use your ADAT as an 8 channel A/D & D/A convertor. If you want to get multiple outputs into your Analog mixer without an ADAT you'll need the Korg 880AD Unit. For completely Digital Thruput you'll need a Digital Mixer such as the Korg 168RC. Unlike other systems the Korg 1212 will work very adequately in a less powerful Mac. See "Previous PM Models" to cut the cost.
PowerMac 7300/166 • x12 CD-ROM • 64Mb RAM • 2Gb Hard Disk • Cubase VST 3.5 • MultiScan 17 Monitor • MidiMan Interface • Korg 1212 I/O Card

Cubase VST Korg System withKorg 880 D/A £3949
Cubase VST Korg System with Korg 168RC Mixer £4999
All Prices Include VAT

G&N Computers / MacMusic. Helenbank House. Herbertshire Street. Denny. Falkirk. FK6 6HF. Telephone 01324 826647 Fax 01324 821007. E-mail gandn@post.almac.co.uk

sale sale sale sale sale

WE ARE SALE-ING, WE ARE SALE-ING,

LA LA LA LAAA, DOO BEE DOOO, DUM DE DUM DUMM, LA LA LA LA...

WE ARE SALE-ING THIS MONTH WITH A WHOLE SEA OF PRODUCTS THAT HAVE BEEN HIT BY A PRICE TIDAL WAVE. WARNING - SOME OF OUR PRICES ARE SO LOW YOU MAY NEED A SUBMARINE!

X-MUSIC - THE FAST X-PANDING HI-TECH SPECIALISTS WITH THE BACKING OF RICHER SOUNDS, BRITAIN'S BIGGEST HI-FI RETAILER.

CUSTOMER COMMENT - "Well splice me main brace and shiver me timbers. Ahoy for me, it's X-Music" - Briney Brian.

ALESIS QS-6, QS-7

QS-6 RRP £699 **£649**

QS-7 RRP £849 **£JIB**

4-TRACKS SEA SICKENING PRICES

TASCAM PORTA 03 — SAVE £20 — **£179** RRP £199

TASCAM PORTA 01 — SAVE £?? — **£279** RRP £???

YAMAHA MT-50 — SAVE £90 — **£289** RRP £379

Roland JP-8000

SAVE £200

DIVE DIVE DIVE

ROLANDS REVOLUTIONARY NEW ANALOG MODELLING TECHNOLOGY WILL PRODUCE NEW TIMBRES AND VINTAGE ANALOG SYNTH SOUNDS CONTROLLED REALTIME FROM THE SEXY TOP PANEL.

· NEWLY DEVELOPED DSP OSCILLATOR · PLENTY OF KNOBS, SLIDERS AND BUTTONS · ASSIGNABLE RIBBON CONTROL · MOTION CONTROL (NOT JUST A GOOD STAND) · ADVANCED ARPEGGIATTOR & RPS · 8 VOICE POLYPHONY

£1299 RRP £1499

E-MU ESI-32

SAVE £200

8mb £899 — 2mb **£799** RRP £999

THE PRICE - SHE'S GOING DOWN CAPTAIN

novation BASS STATION

SAVE £100

A THOUSAND FATHOMS BENEATH THE RETAIL

LAST FEW IN THE COUNTRY

£299 RRP £399

BEHRINGER

DUALFEX RRP £149
ULTRAFEX II RRP £249
COMPOSER RRP £299
INTELLIGATE RRP £299
EURORACK MX1602 RRP £669

CALL FOR PRICES THAT WILL MAKE YOU CAPSIZE!

X-CLUSIVE XPRESSION SPEAKERS ON DEMO. IN STOCK IN ALL BRANCHES

ALL STEINBERG SOFTWARE PRICES SMASHED ON THE ROCKS

NEW, SECOND HAND AND X-DEM - NEW, SECOND HAND AND X-DEM - NEW, SECOND HAND AND X-DEM

MAKE & MODEL	X-DEM OR S/H	PRICE	STORE
ROLAND PG-10	S/H	£50	BRIGHTON
ROLAND R8	S/H	£299	BRIGHTON
ROLAND R70	S/H	£299	BRIGHTON
YAMAHA TG33	S/H	£249	BRIGHTON
YAMAHA FB01	S/H	£79	BRIGHTON
ELKA EM44	S/H	£249	BRIGHTON
KORG WAVESTATION	S/H	£649	BRIGHTON
KORG M1 WITH CARDS	S/H	£599	BRIGHTON
CASIO CZ5000	S/H	£199	BRIGHTON
CASIO CZ3000	S/H	£149	BRIGHTON
ENSONIQ ESQ1	S/H	£325	BRIGHTON
YAMAHA QS300	X-DEM	£849	BRIGHTON
AKAI VX90	S/H	£299	BRIGHTON
PHONIC PCL 3200	S/H	£139	BRIGHTON
QUASAMIDI QUASAR	S/H	£549	BRIGHTON
ROLAND TR505	S/H	£120	BRIGHTON
ROLAND SH09	S/H	£220	BRISTOL
YAMAHA KX5	S/H	£180	BRISTOL
ROLAND MV-30	S/H	£390	BRISTOL
CASIO GZ-5	X-DEM	£59	BRISTOL
KAWAI MX16	S/H	£189	BRISTOL
YAMAHA RY30	S/H	£299	BRISTOL
FOSTEX B16	S/H	£1399	BRISTOL
YAMAHA TG100	S/H	£99	BRISTOL
YAMAHA DP100	S/H	£99	BRISTOL
ROLAND PR1	X-DEM	£69	BRISTOL
ALESIS MMT8	S/H	£140	BRISTOL
BEHRINGER COMPOSER	S/H	£139	BRISTOL
YAMAHA RX21	S/H	£69	BRISTOL
ALESIS 1622	S/H	£399	BRISTOL
HOHNER HS2E	S/H	£199	BRISTOL
ROLAND JUNO 6	S/H	£290	BRISTOL
YAMAHA DX27	S/H	£180	BRISTOL
YAMAHA YPP50	S/H	£250	BRISTOL
YAMAHA PF80	S/H	£450	BRISTOL
FATAR STUDIO 610	S/H	£140	BRISTOL
LEXICON JAMMAN	S/H	£350	BRISTOL
SIMMONS SPM 8.2	S/H	£150	BRISTOL
ROLAND M480	S/H	£599	BRISTOL
ROLAND MKS30	S/H	£549	BRISTOL
KORG POLY 800 MK2	S/H	£180	BRISTOL
YAMAHA SY-22	S/H	£349	CHELSEA
YAMAHA V-50	S/H	£449	CHELSEA
QUASAMIDI QUASAR	S/H	£449	CHELSEA
SOUNDTRACS	X-DEM	£???	CHELSEA
STUDIOMASTER DIAMOND PRO 8-3	X-DEM	£???	CHELSEA
ROLAND M-GSF64	X-DEM	£???	CHELSEA
YAMAHA MU-5	X-DEM	£???	CHELSEA
CARLSBORO KEYBOARD AMP (COMBO)	X-DEM	£???	CHELSEA
YAMAHA DX7	S/H	£200	DUBLIN
ROLAND D50	S/H	£399	DUBLIN
YAMAHA TX812	S/H	£175	DUBLIN
ROLAND SH101	S/H	£150	DUBLIN
ROLAND JV1080	S/H	£750	DUBLIN

NEW, SECOND HAND AND X-DEM - NEW, SECOND HAND AND X-DEM - NEW, SECOND HAND AND X-DEM

SO YOU WANT TO KNOW MORE..

Call us now and register to our FREE X-Music Club. We will send you an X-File (info packed catalogue) and a £10 voucher! Today!

HOURS OF FUN

MONDAY-SATURDAY 10-6PM
(EXCEPT THURSDAYS 'TIL 7PM)
ALL BANK HOLIDAYS 12-4PM

We buy & sell 2ND

PART EXCHANGE DEALS ORGANISED, PHONE FOR DETAILS

IF YOU EVER SEE THE WORD BUM AGAIN IN OUR ADVERT (ACCIDENTALLY OF COURSE), RING US AND WE'LL SEND YOU SOME HEADPHONES.

Mail Order

We deliver goods as quick as humanly possible. Overnight delivery for stocked products (Quicker than a Boris on a jetski!)

Credit Available

SOME OF OUR BEST STAFF WERE CUSTOMERS

IF YOU'D BE INTERESTED IN AN EXCITING AND REWARDING LONG TERM CAREER WORKING FOR US, GET A KICK OUT OF BEING FRIENDLY AND HAVE A SAD SENSE OF HUMOUR WE'D LOVE TO HEAR FROM YOU. PLEASE DROP A LINE TO THE PERSONNEL DEPARTMENT AT OUR BRISTOL BRANCH.

OUT ON THE P.

We never like to be out on the PRICE - so if you see something cheaper always give us a ring, we'll try our hardest to beat it

NEW E-MAIL NUMBER

e-mail: xmusic @btinternet.com

sale sale sale sale sale

sale sale sale sale sale

Dimension BEAM™

MAKING NEW WAVES

PLEASE RING FOR A FREE BROCHURE

THE MOST INSPIRED PRODUCT SEEN IN THE UK FOR A LONG TIME. HOOK UP TO ANY MIDI SET UP AND PRODUCE THE MOST AMAZING EFFECTS BY DISTURBING A 3D BEAM OF INFRA-RED LIGHT - TRY ONE. CONTROLS: FILTERS, PITCH BEND MODULATION ETC. TRIGGER SAMPLES, PLAY SCALES LIVE ETC. SEE FULL PAGE AD IN SOS.

X-CLUSIVE - ONLY AVAILABLE FROM X-MUSIC

RRP £699 FACTORY DIRECT PRICE

½ PRICE £349

ON DISPLAY IN ALL BRANCHES

NOTRON

WAKE UP TO IT!

NEW

YOU HAVE TO SEE IT TO BELIEVE IT. THIS 'GALACTIC FRISBY', 'CYBER TOILET SEAT' HAS: • 87 TRI COLOUR LIGHTS • 102 BUTTONS • 14 ROTARY CONTROLS • 4 CONTROL WHEELS. IT IS A MIDI COMPOSING AND CONTROLLING INSTRUMENT WITH 4 STEP & REAL TIME ARPPEGGIATOR/ SEQUENCER ELEMENT FOR LIVE OR RECORDING. YOU HAVE TO TRY ONE - IT DOES THINGS WITH MIDI

X-CLUSIVE - ONLY AVAILABLE FROM X-MUSIC

FACTORY DIRECT PRICE

£699

ON DISPLAY IN ALL BRANCHES

CUSTOMER COMMENT - "The sea, the sea, it's wet and windy, the sea the sea, it's deep and blue, the sea, the sea, with it's crest of white and gulls that sing and cover you in....."

X-MUSIC X-CLUSIVES

KORG PROPHECY

CLASSIC GROUND BREAKING MONOPHONIC SYNTH, IF YOU HAVEN'T ALREADY GOT ONE - NOW IS THE TIME.

£679

RRP £999

LIMITED QUANTITY

SPIRIT ABSOLUTE ZERO'S

by Soundcraft

THESE CHOPPY LITTLE MONITORS GO DOWN A STORM IN ANY HOME STUDIO

RRP £199 £179 pair

LIMITED QUANTITY

KORG X5

£399

RRP £1699

LIMITED QUANTITY

KORG N364

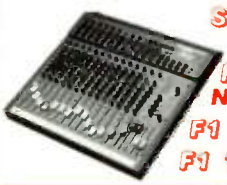
X-PRICE

£???

SPIRIT

by Soundcraft

YO HO HO AND A BOTTLE OF ...



SPIRIT NOTEPAD NOW £149

FOLIO SX NOW £479

F1 14/2 NOW £299

F1 16/2 NOW £349

TASCAM

CALL FOR BEST EVER!

564

£OH BUOY

Roland

£279

£???

VERY NAUTICAL PRICES!!!

£RUDDER £???

YAMAHA CS1X

£???

RRP £599

YAMAHA AN1X

£PLANK

RRP £899

YAMAHA MU90R

£???

RRP £599

dynaudio acoustics

X-MUSIC ARE NOW MAIN DEALERS FOR THIS FANTASTIC RANGE OF QUALITY NEARFIELD REFERENCE MONITORS. INCREDIBLE ACCURACY, FULL FREQUENCY RESPONSE AND HIGH SPL'S AT VERY COMPETITIVE PRICES.

AKAI MPC2000

- 44.1KHZ SAMPLER
- 100,000 NOTE SEQUENCERS
- 10 DRUM PADS
- LARGE USER DISPLAY
- VERY UPGRADEABLE

AKAI'S NEWEST HIGH PRODUCTION CENTRE.

X-PRICE

£???

RRP £1199

AKAI S2000

THE CHOICE OF THE PROFESSIONALS

FULL RANGE OF AKAI AVAILABLE

X-PRICE

£MERMAID

RRP £999

ALESIS

THE ONE AND ONLY HI-TECH MANUFACTURER THAT YOU CAN TURN INTO THE NAME LASSIE!

POINT 7 MONITORS

COME IN AND COMPARE THESE FANTASTIC MONITORS WITH OTHER MAKES AND YOU WILL DEFINITELY GET THE POINT (7'S THAT IS) *SOW *FULLY SHIELDED *SEXY BLUE COLOUR *PORTED (WITH OPTIONAL PLUGS)

X-PRICE £???

SR-16 £189

NANOSERIES

NANOVERB	£???
NANOCOMP	£???
NANOBASS	£???
NANOSYNTH	£???

BRIGHTON

78 LONDON RD,
BRIGHTON,
BN1 4JF.
TEL: 01273 624240
FAX: 01273 680412

BRISTOL

20 COTHAM HILL,
COTHAM,
BRISTOL, BS6 6LF.
TEL: 01179 734 734
FAX: 01179 734 800

CHELSEA

258A FULHAM RD,
CHELSEA,
LONDON, SW10 9EL.
TEL: 0171 349 9444
FAX: 0171 352 4002

DUBLIN

NEW STORE

35 WELLINGTON QUAY,
TEMPLE BAR,
DUBLIN 2
TEL: 01677 9377
FAX: 01671 9816

EDUCATION DIVISION

PLEASE CALL OUR SPECIALIST SALES LINE FOR DETAILS

TEL: 01179 735 566
FAX: 01179 736 649

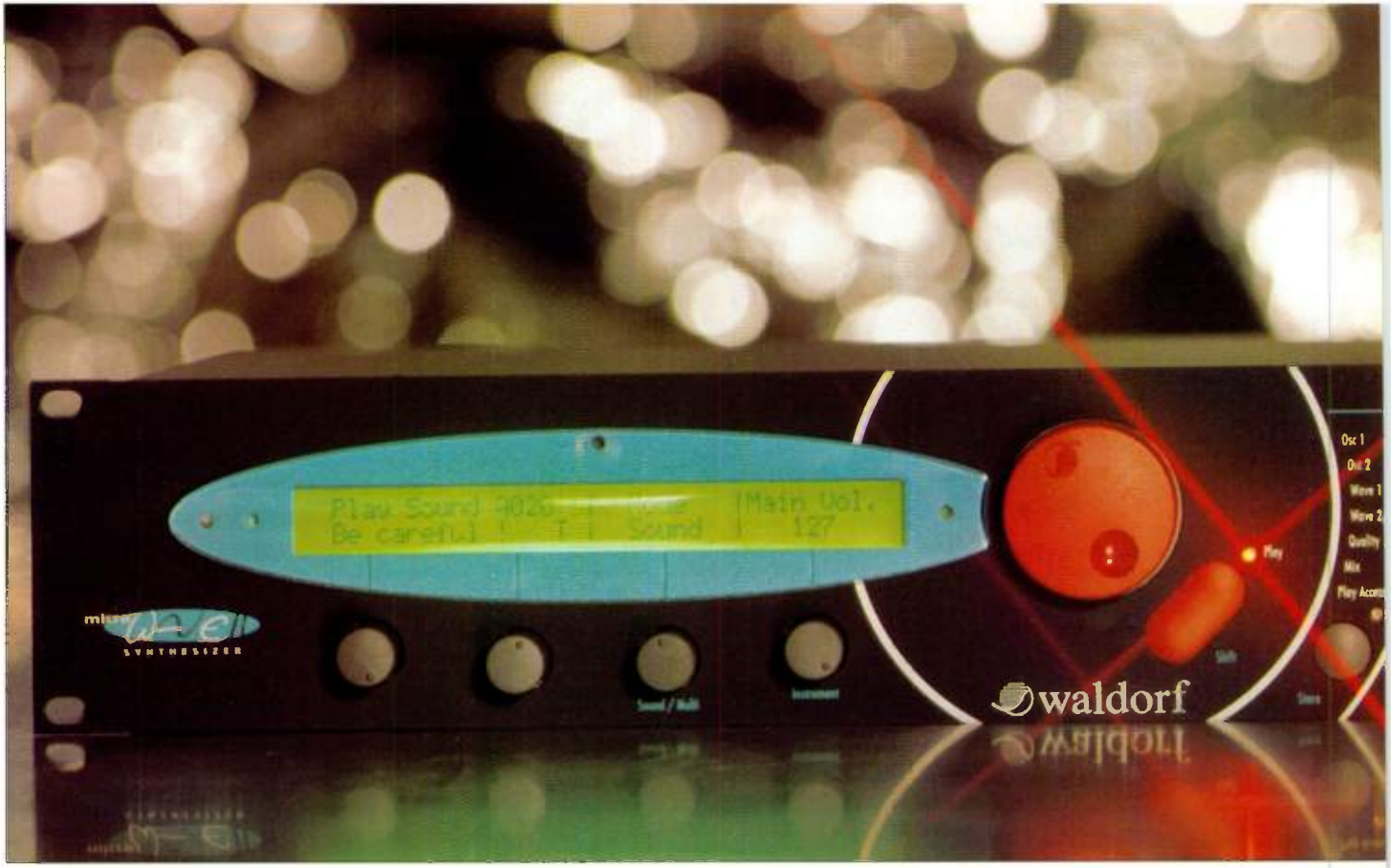
FOR FREE EDUCATIONAL X-FILE

X-FILES

RING FOR ONE

MAGAZINE - FREE: PRODUCT INFO, TECHNO TIPS, CYCLIST OF THE MONTH, POETS CORNER, COMPETITIONS & MORE.

sale sale sale sale sale



New Recipe

WALDORF MICROWAVE II WAVETABLE SYNTHESIZER

Waldorf have been cooking up something special for the son of their acclaimed synth dynamo, the Microwave. PAUL NAGLE gets quite a taste for it...

After the remarkable success of their Pulse monosynth, German company Waldorf have returned to their first love: wavetable-based digital synthesizers. The Microwave II continues in the Microwave tradition, replacing the famed analogue filter with an all-digital counterpart and improving and changing many other features. It's great to play a new instrument not devised out of a desire to jump on a bandwagon or to follow fashion but with the simple aim of perfecting an already classic design.

PHYSICAL THINGS FIRST

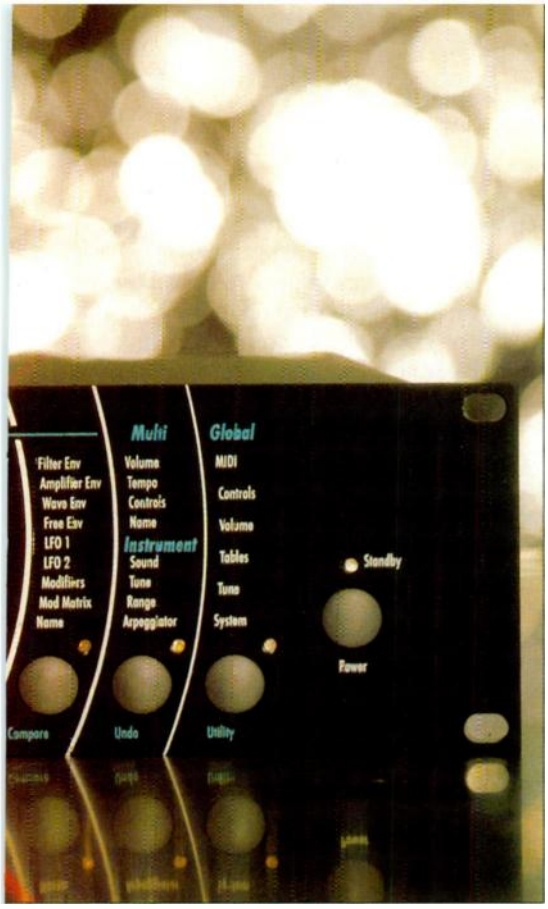
Two rack spaces high and only 220mm deep, the Microwave II is sleek and distinctive.The front panel has five edit-selection switches, a play/shift switch, a power switch, seven bright LEDs, and four continuous knobs which are used to perform all edit operations. It features the familiar large red Microwave knob which, depending on the current mode, is used to select sounds or to scroll through edit pages. The knob is positioned in the centre of an outward spread of ripples used to delineate the programming matrix (does that make sense?). One obvious improvement is in the form of the 2-line x 40-character LCD. This isn't as large as some, but does a great job of showing what you need to know. At the rear of the instrument are the obligatory MIDI In, Out and Thru, plus assignable twin stereo outputs and the external power connector.

IN USE

Power up and you enter Sound mode, from which you can access 256 patches divided into banks A and B. Patch name, mode (Sound or Multi) and the main volume level are shown, and pressing the Play switch brings up the value of four patch-programmable parameters to be tweaked during performance. You might choose Cutoff Frequency, Resonance, Filter Envelope Amount and Wavetable selection in one patch, and parameters relevant to the arpeggiator in another. In this mode, the knobs do not send MIDI control changes, presumably because most of the available controllers are already directly allocated to specific Microwave parameters. Don't worry, though, as MIDI controllers *are* sent during patch edits — almost 80 in total — chosen where direct control would be most useful. The remaining parameters are controlled via SysEx so you can easily record an entire editing session into your sequencer.

TWEAKING

Once you've sniffed through the factory sounds (see 'Sounds' box), it's time to enter the wonderful world of sound creation. Pressing one of the edit



buttons lights its corresponding LED and gives you access to a series of pages. These are helpfully labelled in the top right-hand corner by a 'title' which times out after a user-definable period. Each edit screen has up to four tweakable parameters and when you've altered any, a small 'e' appears after the patch name in the Play screen. You can store your changes, compare them with the untweaked version, or even recall the original without storing — but be careful with this last function: if you recall the patch by mistake, your edits are gone forever. Like the old Microwave, the Mark II has up to eight edit buffers to maintain tweaked versions of your patches.

Waldorf have done a good job with their four continuous knobs, avoiding the sudden leaps that usually happen when knob position doesn't match the parameter value. You scroll through the pages using the Big Red Knob, then use the control knobs directly under the LCD to increment or decrement the displayed value. I am pleased to report that these feel quite heavy but respond positively to a fast turn, taking you to the extremes of any scale; a slow turn is accurate enough for single increments. It's a great pleasure not to have to flick a small cursor around the screen to edit each value.

RIDE THE WAVE

If you look back at the last review of the original Microwave (August 1995's *Sound On Sound*), you'll get an idea of how this unique synthesis engine works. Suffice it to say here that each oscillator draws its waves from one of 128 wavetables; that's 64 factory, 32 user (created by computer software) and 32 currently 'reserved'. The position in a wavetable can either be static or swept by a variety of modulators for some dramatic harmonic effects. At the end of each table are the traditional sawtooth, square and triangle waves — so you can get pretty near to most analogue sounds too. If you wish, wavetable modulation can be restricted to avoid accidental selection of these three waveforms, preventing an unwanted jump from otherwise related waves. A phase parameter for each wave allows you to home in on individual start samples; if you leave it set to 'free', a new random phase value is set for each note.

The two-oscillator design of the Microwave II has many of the classic features beloved by synth programmers. Using oscillator sync, those rich harmonic sweeps and searing leads and basses become a reality. The ring modulator takes the output from both oscillators and produces a signal containing both the sum and the difference of the frequencies — useful for clangorous bells, gongs and so on. There's a noise generator for sea, wind and percussive effects too.

The outputs from oscillators, ring mod and noise are all blended in a mixer stage. Also here is Aliasing, described in the manual thus: "a digital artifact that is audible as soon as a wave has harmonics higher than half the sampling frequency. Usually, aliasing is reduced to a minimum by some magical mathematics, but here you can override this and listen to aliasing distortion just like on [sic] the dawn of the first digital musical instruments like the PPG Wave or the old Microwave". Another new feature, Time Quantisation, allows you to undo some of the clean-up computations done by the instrument, adding extra 'fizziness', especially at the lower end. It overrides the new super-smooth wave interpolation algorithm, adding some traditional Waldorf harshness. Finally, Clipping selects the type of distortion that is applied when the sum on all mixer levels exceeds 128. Options to choose from are 'saturate', which effectively limits the signal to the maximum level and sounds rather like analogue distortion, and 'overflow', which has a harder, more digital effect. The Microwave II's richness is derived from the raw sound-making engine and not from some mega effects unit. In fact, there are no effects as such, apart from a quite respectable 'Juno-style' chorus/ensemble, which is a simple 'on' or 'off' affair.

MODES

You can set each patch to be polyphonic or monophonic and use Assign mode to bring forth gut-wrenching power. Three modes are available: Normal, in which every note played uses one of the Microwave II's 10 voices; Dual, in which each note uses two voices; and Unisono, in which all voices are used, divided by the number of notes played. If you play just one note, you get a massive 10 stacked voices, complete with variable detune between them. Unisono with OTT detune turns just about any patch into a rampaging monster, and I had to resist the temptation to use this trick in everything I created. Other performance modes include glissando and portamento, with linear or exponential response available.

FILTERS

The 'classic' Microwave was a fascinating hybrid combining analogue filtering with a digital wave generator. Its owners, offered another machine,

pros & cons

WALDORF MICROWAVE II £999

pros

- Unique sound.
- Superb programming power.
- Painless upgrades and expandability.
- Great MIDI implementation.
- Continues familiar Microwave tradition.

cons

- No effects.
- External power supply.

summary

From the first monster unison solo to the last swirly string pad, the Microwave II pulses with dark power. Rich resonant sweeps, PPG-like wails, delicate solo voices and strange, shifting digital soundscapes are all here. Potential buyers of a Microwave II won't be looking for a GM logo or realistic piano samples; instead they will be explorers in synthesis determined to uncover sounds that can't be produced by other means.

SOUND ON SOUND

NEW FEATURES AT A GLANCE

- 10-note polyphony
- Oscillator sync
- Ring modulation
- New filter types (the filter is now digital, not analogue)
- No card slot.
- Operating System can be upgraded by SysEx commands
- Arpeggiator
- 256 patches, 128 multis
- Improved envelope speeds
- External PSU
- Improved display and access
- Performance knobs
- MIDI controllers for the majority of parameters
- Ensemble/chorus
- Twin stereo outputs

Sounds from the original Microwave can be converted (although some patches will sound different because of architectural changes).

UPGRADING

Open up most modern synths and you'll meet a computer stuffed full of complex software. If you've ever had to send one back for an upgrade or a fix, you'll know how frustrating that can be. Waldorf's solution (seen previously on devices such as Roland's VS880) is to provide operating system updates in the form of MIDI files. You play the file to the synth, it responds with 'Receiving System Update...' then 'Updating System...' and, hey presto, you're upgraded! Now that's what I call impressive — let's hope everyone else follows suit.

Updates are available at http://www.waldorf-gmbh.de/waldorf/microwave2/system.htm along with notes on what has been added or fixed; if you don't have internet access, the file is available from your dealer.

▶ will always ask first: what's the filter like? Can Waldorf really make an all-digital filter that sounds as good? To my ears, they've largely succeeded. I might have guessed that this was a digital filter by the very slight harshness that sneaks in as you hit maximum resonance — but then again, I might not. It's reassuringly smooth and responsive, but perhaps most impressive is the way it self-oscillates even with no driving signal from the oscillators present.

In fact there are actually now two filters in series, the first being more versatile with (currently) six settings: 24dB Low Pass, 24dB Band Pass, 12dB Low Pass, 12dB Band Pass, 12dB High Pass and SinX>12L — this last being particularly ballsy and a main component of many of the MWII's most powerful bass patches. I asked the Waldorf team for a technical explanation, and they say that it's a signal shaper with a sine function; the input signal is included in a sine function and its output is used for the 12db filter, so it's simply a kind of saturation which produces nice side-effects. Anyway, it's rapidly becoming my favourite filter of the lot. The second filter is much more simple: a 6dB slope and either Low or High Pass mode with no resonance setting. If you wish to disable it, simply set the cutoff to fully open.

Having these new filters to choose from permits more delicate sound sculpting than is typically associated with a Microwave — high- and band-pass sweeps cut through beautifully. Now the entire synth is DSP-based, there's no reason that future developments can't include morphing filters or other, as yet undiscovered, delights.

LFOS

No synth would be complete without some form of cyclic modulation. The Microwave II has two LFOs with all the expected sine, sawtooth, square, and sample & hold waveforms that we hold dear, plus some additional parameters too. Symmetry adjusts the relationship between the rising and falling edge of the waveform; its values can be positive or negative, so you can continuously vary the modulation shape rather as you can on the Korg MS synths; because a little unpredictability is always useful, a Humanise function adds a random variation to LFO speed. I'd like to have seen these as destinations in the modulation matrix so that you could, for example, modify the LFO waveform or its randomness by velocity. The second LFO is identical except for an additional parameter, Phase, which enables its frequency to be locked to the frequency of LFO1. The Phase offset is an amount in degrees. Both LFOs can be sync'ed to MIDI clock and, like other Waldorf synths, the MWII lets you generate a new Sample & Hold value for each incoming note by specifying a rate of 0. If by any chance this isn't enough control for you, more complex modulation sources can be created using one of the envelopes.

ENVELOPES

The Microwave II has four envelopes. Three of these are logically connected to specific destinations, but all of them can be overridden. The filter and amplifier envelopes are of the familiar (and most intuitive) ADSR variety; the Wave envelope has eight different times and levels with programmable key-on and key-off loops. Finally, the Free envelope has three times and levels plus release time and level.

Using the modulation matrix (see box), any envelope can be assigned to any destination. You can do unusual tricks such as modulating the Wave envelope times (or levels, or both) with the Free envelope while simultaneously using another control source to modulate aspects of the Free envelope itself.

ARPEGGIATOR

Arpeggiators are very much back in demand again, and the Microwave's is a great deal of fun. Similar to that of the Pulse, it has 16 factory patterns in addition to the usual up, down, alternate, and random sort modes. Notes may be triggered as played, reversed, in note order or in reverse note order, over a range of up to 10 octaves. In an early draft of this review I wrote "some form of programmable pattern would have been nice" but after I upgraded the operating system, which I did not once but twice during the review period (see 'Upgrading' box), this facility magically appeared! So now you *can* create a user pattern of up to 16 steps and, better still, you can do it in each patch — marvellous. Arpeggio velocity is taken from either the root note or the last note played, this latter being great for emphasising acid blips if you hold a chord and just repeat a single note from it at different strengths.

MULTIPLE (MICRO) ORGASMS

Multi Mode is where you stack, layer, velocity- or key-split up to eight patches on the same, or multiple, channels. You can route individual

MODULATION MAYHEM

Waldorf synthesizers are well known for their impressive modulation matrices, but with the Microwave II Waldorf have really gone to town. Sixteen modulation routings can be set up, four of which require you to have at least '0' level maths to understand them. I've reproduced the matrix here to whet your appetite for the kinds of Micro Meals you can serve up:

• SOURCES

LFO1, LFO2, Filter Envelope, Amp Envelope, Wave Envelope, Free Envelope, Keytrack (MIDI Note number), Keyfollow (as Keytrack but plus pitch-bend and glide), Velocity, Release Velocity, Pressure, Poly Pressure, Pitch Bend, Mod Wheel, Sustain, Foot Controller (CC 4), Breath Control (CC2), Control W, X, Y and Z (4 assignable controllers), Control Delay, Modify 1, 2, 3 and 4 (more about these later), MIDI Clock, Minimum, Maximum (these last two being constant values).

• DESTINATIONS

Pitch, Osc1 Pitch, Osc 2 Pitch, Wave 1 start position, Wave 2 start position, Wave 1 mix level, Wave 2 mix level, Ring Mod level, Noise level, Filter 1 Cutoff Freq, Filter 1 Resonance, Filter 2 Cutoff, Master volume, Pan, Filter Envelope Attack, FE Decay, FE Sustain, FE Release, Amplifier envelope Attack, AE Decay, AE Sustain AE Release, Wave Envelope times, Wave Envelope levels, Free Envelope times, Free Envelope levels, LFO1 rate, LFO1 level, LFO2 rate, LFO2 level, Amount of modulation assignments 1-4.

A note on modifiers: up to four modifier units can be set. These consist of two modulation sources and a mathematical relationship between them. The functions available are: Addition, Subtraction, Multiplication, Division, XOr, Or, And, Sample & Hold, Ramp, Switch, Absolute value, Minimum Value, Maximum Value, Triggered Ramp, Low-pass filter, Differential Function. If this all seems a little heavy, that's because it is!

It's a little beyond the scope of this review to examine each of these in all their glory, but all kinds of interactions between modulation sources can be used creatively, from the simple addition of control signals to the building of a modulation signal governed by the mathematical criteria listed.

SOUNDS

During the obligatory tour, some of the patches that particularly impressed me were: A01 Unisono, a monster lead patch using oscillator sync and unison mode; A25 Deep Spaces, a strange ambient backdrop; A28 Ocean, another magical pad; A48 Mello Choir, an eerie choral interpretation; and A78 Why TB?, which you'd swear was one of those new-fangled computers pretending to be an analogue synth — great use of the mod wheel mapped to filter cutoff. A88 Sub Woof shows off a speaker-shaking bass end (a result of cleaner circuitry and new filters, apparently); A18 Big Balls is, as it implies, powerful; and B15 18dB Acid is a squelchy synth. There's also the usual collection of weirdies, but many serve as starting points for patches of your own, and I suppose it would hardly be a Waldorf synth without some unfathomable noises...

The preliminary manual is a slender tome of 60 or so pages with tantalisingly scant detail on the meat of the programming. A full manual is promised as an incentive for owners filling out their warranty cards.

sounds to the alternate stereo outputs or use panning to create up to four separate polyphonic outputs. It's handy to be able to override a patch's panning at this stage and thus save the trouble of a search through the modulation matrix to see why your solo is hurtling from left to right.

You get 128 Multis, which is a generous number with a variety of uses — not least to create an absolutely mind-blowing arpeggiator. Yes folks, in Multi mode you can have up to eight arpeggiating patches, each with its own clock divisions, patterns, sort orders, directions and ranges. This can become an incredible maelstrom of frantic throbbing rhythms and of course you can sync to MIDI clock too — could be the most fun you can have and still discuss it in mixed company...

CONCLUSION

Lovers of the 'old' Microwave will appreciate the improved user interface, increased polyphony, cleaner sounds, and other new features. Other people, baffled by the original, will probably be equally baffled by the Microwave II, although it's possible that an earful of those huge unison/sync solo patches and that arpeggiator may prove tempting enough to make them take another look.

I'd like to have seen still more enhancements, such as 16-bit wavetables or — better still — the ability to convert user samples to wavetables via an onboard floppy drive. Maybe we'll see these things in the Microwave III? The characteristic grunginess is very cool, but I feel that the raw sound is still quite similar to that of the first machine; and a synth in this price bracket should, I think, have at least some basic effects included, if only to save you taking a reverb unit to gigs. But the Microwave I is obviously cherished by many users and whether existing owners will trade in their machines to get the new one or keep both, only time will tell. Personally, if I could make a case for 'just one more synth', this would be it. It's different enough to sit comfortably between analogue and sample playback machines, powerful enough to stand out in a mix, and distinctive enough to be a true classic. I was delighted by little touches such as the ease of operating system upgrades and, although I don't think I've done much more than scratch the surface in this review, the potential I've attempted to outline will be mouthwatering for some and daunting for others. If you're not into programming sounds, this synth probably isn't for you — but if you want to cast off the shackles of analogue wannabes and explore a gritty, vibrant digital synth, you simply must test-drive the Microwave II. SOS

info

- £ £999 including VAT. Version reviewed 1.30.
- A Arbiter Group PLC, Wilberforce Road, London NW9 6AX.
- T 0181 202 1199.
- F 0181 202 7076.
- W www.demon.co.uk/arbiter

POP ART

FLOOD & HOWIE B — PRODUCING U2's *POP*

U2 have always striven for a new sound on each of the records they make, and during the sessions for their latest album, their aim was once again 'to construct a new sound for U2 whilst still making them sound like U2'. To this end, they brought in production wizard Flood and Scottish dance artist Howie B and set about new methods of recording. PAUL TINGEN investigates the art of Pop...

How many times is it possible for a band or an artist to successfully re-invent themselves? Is there a point beyond which one is doomed to repeat oneself, because another re-invention means losing an established musical identity? Is it necessary to keep re-inventing oneself at all, or is it acceptable to coast along, regurgitating a successful formula, purely for the pleasure of the fans and one's own enjoyment? And by what criteria is a re-invention judged to be a failure, or a success? These questions have been given new relevance and received new answers with the arrival of U2's latest album, *Pop*. Everybody knows that U2 have always believed regular re-invention to be an absolute necessity, and the way they have maintained their adventurous musical spirit, whilst still sounding undeniably like U2, has contributed greatly to their continuing critical and commercial popularity. This is quite an amazing achievement, given that it's now 20 years since the quartet first met in Dublin, and 17 years since they burst onto the international stage.

Other bands and artists with long careers have found different answers to the tensions between commercial demand and artistic renewal. The Rolling Stones will sound forever like, well, The Rolling Stones; and David Bowie has changed his style so many times that he's alienated and bewildered many of his fans. U2 have trodden carefully between these two extremes, first changing direction from their early, raw sound with the more intimate and colourful *The Unforgettable Fire* (1984), produced by Brian Eno; then with *The Joshua Tree* (1987), which featured a more rootsy sound, and was produced by Eno and Daniel Lanois. The next big re-invention happened with *Achtung Baby* (1991), a grungy, desperate, distorted affair that was produced by Lanois, with help from Eno. *Zooropa* (1993), produced by The Edge, Eno and Flood, was their most recent album under the group name until this year. Recorded in short, spontaneous outbursts during their Zooropa tour, the album was an experimental but rather disjointed record that might have been better as a 4-track EP (which was how it was originally planned — Engineer Robbie Adams described the recording process for both *Zooropa* and *Achtung Baby* in *SOS* March '94). And now, there's *Pop*. The hit single 'Discothèque' that preceded the release of the latest album immediately made clear that this *was* U2 — but not as we know them. The record completely lacked 'classic' U2 trademarks (such as Larry Mullen's big drum sound, Edge's sustained guitar-playing and Bono's falsetto vocals) — and the prominent dance influences also surprised many people. When the news of the new album's title was released, some were eager to jump to the conclusion that U2 had bowed to the pressures of commerce and fashion. Was this a re-invention too far?

In fact, large parts of *Pop* are excellent. There are a number of truly great songs, such as 'If God Will Send His Angels', 'Staring At The Sun', and

Flood.

U2 at Hanover, Dublin, August 1996: (l-r) Adam Clayton (bass), Bono (vocals, guitar), Larry Mullen (drums), and Edge (guitar, keyboards).

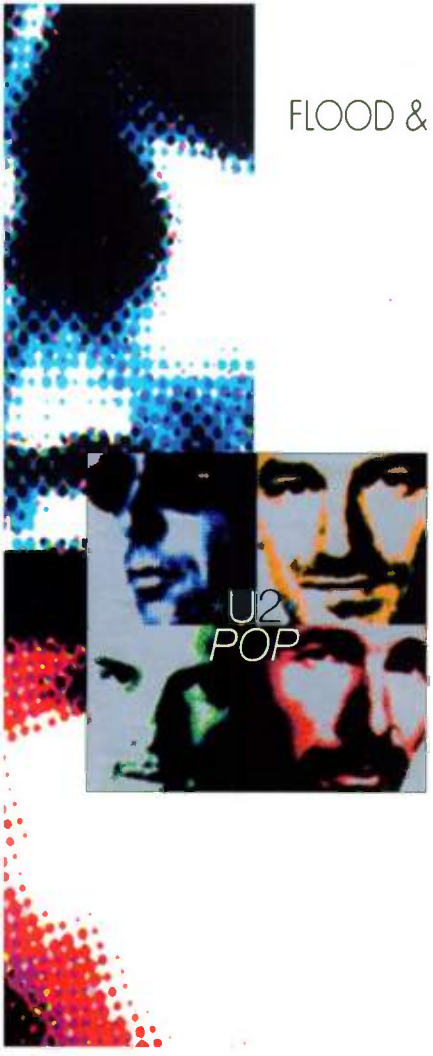
'Please', and much of the album is executed in new and fresh ways, with many innovative, dry-sounding multi-rhythmic drum patterns, highly unusual guitar textures, and a relaxed and mostly understated Bono. And yet, somehow, it still sounds like U2. So, how did they manage to successfully reinvent themselves again? The answer can in part be found in changes in the personnel with which U2 surrounded themselves for the making of this album. *Pop* is the first U2 album since *Rattle & Hum* (1989) which does not feature either Lanois or Eno. Instead the album was produced mainly by long-standing U2 engineer, mixer and *Zooropa* co-producer Flood, with lots of help from Scottish DJ and dance artist Howie B. They also had some help from Steve Osborne (known for his work as one half of the remix/production team he formed with DJ-turned producer Paul Oakenfold), as well as dance producer Nellee Hooper (who produced Björk's *Post* and Massive Attack's *Protection*). Howie B's account of his work on *Pop* can be found elsewhere in this article, but to find out about the making of *Pop* from the man who is credited as main or sole producer on seven of *Pop*'s 12 songs, and co-producer on the other five tracks, I travelled to North-West London, to meet Flood in his own studio.

THE GREAT FLOOD

Flood is a busy man, and this was reflected in the state of his studio, which was full of flightcases and cardboard boxes (see the panel on the studio elsewhere in this article). He started the interview by explaining the idea behind the large *Pop* production team: "Part of U2's working method is bouncing off each other's and other people's ideas. With the exception of *Rattle & Hum*, they've always had two or three people on the production side; if they have only one producer, they're likely to veer towards one particular style, and that's not what they want. So on *Pop*, they asked Howie B to be there because he comes from a dance music background, and I was there because I come from ▶

HOWIE B ON U2

"What I admire about U2 is this hunger, which they still have, for making a challenging record. They really do want to push the barriers back. The way they involved dance culture on this record was really good. It's not as if the album they've made is a club record, but there are definite influences from the club scene in there. It's very brave of them to take this stance."



▶ a radically different background. Basically, the idea is to throw everybody into the studio at the same time, and see how they rub off each other."

Flood's background is not easily defined, but it is definitely not in dance music and related music styles. His list of production, engineering and mixing credits is so eclectic that it almost defies definition, including '80s synth pop (Soft Cell, Depeche Mode and Erasure), experimental industrial (Nine Inch Nails, Nitzer Ebb and Renegade Soundwave), experimental and straightforward rock (PJ Harvey and Nick Cave as well as The Charlatans), trip-hop (a remix of the Massive Attack single 'Protection'), and even Tom Jones (the single 'A Girl Like You'). Eclectic indeed: the only common aspect is that it's almost all experimental in nature. Flood started this leftfield career in 1978 when he was taken on as runner at Battery Studios in London, and was named Flood within weeks because of the floods of tea that he made one particular late-night session! He continued his engineering apprenticeship at Marcus and then at Trident Studios, going fully freelance as an engineer/producer in 1985. His involvement with U2 goes as far back as The Joshua Tree in 1987, which he engineered. Flood picks up the story: "After *The Joshua Tree*, I worked on *Achtung Baby*, which I engineered and mixed, and on which I also had creative input. And then *Zooropa* was very much Eno, Edge and myself working on songs individually and then taking what we'd done to the other and seeing what they did with it. It was an experimental record: we weren't very precious about what we were doing." On *Pop*, Flood graduated to the role of sole producer on most of the tracks, keeping his hands free to leave almost all engineering to Mark 'Spike' Stent (known for his work with Massive Attack) and Howie B. The youthful-looking Flood (he's 36, but could easily go for 26), explained the division of labour on *Pop* in more detail: "On *Pop* I was what you could call the creative coordinator. There were some tracks where I didn't necessarily have a major involvement, hence the four co-production credits with Howie, and the one with Steve Osborne, but ultimately the buck stopped with me. I had the role of the creative supervisor who judged what worked and didn't work."

Steve Osborne also worked on some of the tracks on *Pop* which were considered as potential singles, like 'Do You Feel Loved', 'Staring At The Sun' and 'Gone'. As Flood explains, Steve was brought in when these tracks were two-thirds finished, "as someone from the outside who could give an objective opinion, and be ruthless about what they were doing"; a role that U2 had in the past given to the producer of their early albums, Steve Lillywhite. The other name producer who was involved in the

PRO AUDIO

ALLEN & HEATH
Mixers
WX2 16:2. Superb design.
16 in, 2 stereo returns, 4 band EQ
with 2 mid sweeps Only £769

MACKIE
1202 VLZ .....From £295
1402 VLZ .....From £349
1604 VLZ .....From £799

YAMAHA
MX 12 : 4 with FX.....Only £379

Studiomaster
Diamond Club 8:2 .....£189
Soundtracs Topaz .....From 199

Ex Demo Topaz Mini.....£249
Ross 16:2.....£229

MASSIVE PA DEPARTMENT
CALL IN

FX
Yamaha REV 100.....£LOW
Yamaha REV 500.....£369
ART FX1 .....Only £99
LA Audio GCX2.....£179
Digitech Studio Twin & Quad .....£CALL
Ex-Demo Lexicon LXP5 .....£299!

Power Amps
C Audio GB 202 - 200 x 2.....£399
C Audio GB 402 - 400 x 2.....£499
C Audio GB 602 - 600 x 2.....£549
Studiomaster 700D.....£399
Studiomaster 1200 D.....£559
Mackie M1400.....Only £549
Mass 75, 250, 500.....From £149

Mics
AKG C1000's.....From £189
AKG C3000 .....£269
D112.....£195
New Emotions High Output
Low Feedback.....From £79!!
Shure SM58 .....£99
Shure SM57 .....£95
Beyer Dynamic .....£CALL
Audio Technica.....£CALL
Sennheiser .....£CALL

Monitors
Event 20 20
Superb Monitors
Now Only £299
JBL
Control 1's.....£99
4208's.....Only £289
Call for deals with amps

techmate uk
215 Harwich Rd, Colchester, Essex CO4 3DF
Tel: 01206 793355
Fax: 01206 864994
sales@techmate.demon.co.uk • www.tech-mate.co.uk

FLOOD ON ANALOGUE

When I asked Flood whether the last-minute edits he did on the *Pop* track 'Mofo' during mastering were performed with a digital editor, he reacted immediately: "You must be joking! I did it on half-inch tape". He also quickly added that he's a "bit of a diehard analogue fan." Apparently U2 and Howie B also have a love affair with analogue — the reason why the band's studio has two Otari tape multitracks, the MTR90 and the MTR100. However, Flood loves analogue for reasons which are slightly different from those of the increasingly widespread back-to-analogue movement. For starters, he didn't argue for a moment that analogue actually sounds more accurate than digital, like many others: "Rock 'n roll isn't *about* accuracy, rock 'n roll is about feel. Analogue isn't accurate, but it is musical. I love the sound of it, especially at 15 inches per second, because I love what it does to the bottom end at that speed. And with Dolby SR, noise is not an issue. Analogue also has wonderful tape compression that's inherent to rock 'n roll. When you are aware of the fact that analogue isn't accurate, but realise what it can do, you can use the medium as if it's an effect."

Flood continued by saying "it's very dangerous to be negative about change, but it's also dangerous to assume that everything from the past is wrong. I think that a marriage of analogue and digital will give you something very powerful." He professed his love of digital effects, especially the Eventide H3000 and H4000, and stated that he liked hard disk recording and editing for the writing process. But with his argument that analogue isn't accurate but musical, he clearly didn't mean to imply that digital therefore sounds more accurate: "There are harmonics above 20KHz [the limit of human hearing] that influence the way we perceive music, even if we can't hear them as such. Digital can't even reproduce those. And all sounds produced by, or recorded on, digital have inherently the same quality: there's an element of blandness.

"There's not just a sonic, but also a psychological reason why I prefer recording on analogue. Particularly when working with a band like U2, when you're dealing with continuously changing options and approaches to each song, you want a point of focus. Digital recording is a bit like MIDI, it's way too fluid. You can all too easily chop and change things, and you have potential options all the time. Whereas when working with analogue tape, you commit yourself to some degree when you record something. You'll work harder at getting a part to fit into a piece of music, and that brings out the musicianship in people and the interaction between musicians. Even during an overdub, a musician is reacting to other musicians, and he or she will create a sound that pushes the song on in a different way. But when you're working digitally, things are so fluid that you often tend to not bother getting it right, and say: 'let's just play this little bit, and we'll chop and change it around later on.' To me, that's denying the ability of the musician."

making of *Pop*. Nellee Hooper, played a large role in the germination of the album. Flood: "U2 started off work on *Pop* in the summer of 1995, when they did sessions with Nellee in London, France and Ireland. During the autumn, Howie and I came in, and we all worked together for quite a while. I think the idea was to combine the influences of Nellee, Howie and me. What also really affected U2's way of working, and therefore the way the record turned out, was the fact that Larry had a bad back problem and couldn't play very much. He had major surgery on his back over Christmas '95, so during January '96 we didn't work on the album. Normally, U2 work their ideas out in the studio with the four of them actually playing together. But when Larry couldn't play, we had to find new ways of working."

LARRY'S BACK

Although it was tough on poor Larry Mullen, his back problems did prove to be a musical blessing in disguise, as they forced U2 out of their usual methods of working. This in turn opened the doors to new influences, which is where Howie B came in. Awarded the loose and potentially confusing ▶

PC MARKET

Turtle Beach
MAUI
Now Only £65
Perfect for sampling on your PC
Upgradable to 8 Mb
Contains 128 Wavetable Sounds

MIDI Interface Centre
Mark of the Unicorn
Fastlane (MAC) 1in / 3 out £59
PC Flyer (PC!) 2in / 2 out £99
Pocket Express - 2 in 4 out
SMPTE (PC or MAC) £189
Micro Express - 4 in 6 out
SMPTE (PC or MAC) £279
Midi Express / Timepiece .....£CALL

OPCODE/ MUSICQUEST
Translator II - 1 in 3 out (MAC) £59
Translator Pro - 2 in 6 out (MAC) £109
Translator PC - 2 in 2 out (PC!) £99
MQX32M 2in/ 2out SMPTE (PC) ...£179
STUDIO 64X 4 in 6 out
SMPTE (PC or MAC) £279

MAC interfaces .....from £39
PC interfaces .....from £24

Software - Loads of Stock
Cakewalk
Express £39
Song Station £69
Home Studio £99
Pro £189
Pro Audio .....From £289
New Version 6 with Built-In Effects

Cubase
Cubasis AV £129
Cubase 3/VST £289
Cubase Score £379

Soundforge
The Ultimate PC Effects .....Call

Wavelab
Deal £329
Musictime .....£CALL
Encore .....£CALL
Finale .....£CALL

Soundcards
Fiji .....From £299
Pinnacle .....£CALL
Event Darla £299
D-Man £199

YAMAHA
DB50 XG £109
SW60 XG £139
MU 10 .....£189

Packages
Fiji + Cubase 3 .....£599
Fiji + Cakewalk Pro Audio £689
Pinnacle + Cubase 3 .....£699
Pinnacle + Cakewalk Pro Audio £789
Digital I/O .....Add £99
DB50 .....Add £99
Maui Card .....Add £30

Tell us the products and we'll do a package deal for you.

CREATIVE INSPIRATION

JUST A FEW OF THE WORLD'S BEST QUALITY SAMPLED SOUNDS FROM THE WORLD'S LARGEST DISTRIBUTOR - SEE 100'S MORE CDS IN OUR FREE CATALOGUE.

Best Service (Germany)

ADVANCED ORCHESTRA
Produced by PETER SIEDLACZEK. A complex yet compact and user-friendly sound library setting new standards for symphonic samples. • 5 CD-ROMs or audio CDs • 5455 samples of all instrument groups. Numerous characteristics distinguish this library from others (too many details to mention here - read the full story in our new free catalogue).
Vol 1 - String Ensembles. Vol 2 - Solo Strings.
Vol 3 - Woodwinds. Vol 4 - Brass & Effects. Vol 5 - Percussion & Harp. Each Volume: Audio: £59.95 / ROM: £149.00. Or purchase the whole ROM set for only £599. (Choose AKAI or ROLAND for the CD-ROM version)

Spectrasonics (USA)

LIQUID GROOVES
Grooves that have existed only in your imagination.
Fluid rhythms forged by a synthesis of propelling live drum grooves and unusual, organic percussion loops performed by some of L.A.'s most creative session players. Unique sonic textures! State-of-the-art instruments such as Korg Wavedrum™. The full-blown CD-ROM version (organised to make mixing & matching effortless) includes a wider selection of grooves & killer Wavedrum™ single hits. The liquid concept is two-fold. Sparse "hand-played" grooves that feel great, combined with focus on uncharted sonic territory. Another inspiring & unique library from Eric Persing to reinforce Spectrasonics' reputation as second to none. Audio CD: £59.95. CD-ROM: £119

A.M.G. (England)

BLACK II BLACK KILLER VOCALS VOLUME 3!
AVAILABLE NOW!
Yet another 2-CD package of almost 2000 vocals from McIntosh & Charles - this is the third and final part of this five-star international smash hit series. CD 1 features hooks in a similar vein to volumes 1 and 2. CD2 runs for almost an hour, and features 'Percussion vocals', Vocal Fills, a DJ section, Ragga section, and a section of advanced chords. SO DON'T MISS THE THIRD AND FINAL PART OF THE BIGGEST AND BEST VOCAL COLLECTION EVER RELEASED! Audio CD: £59.95

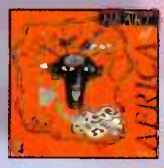
A.M.G. (England)

TERMINALHEAD: UNDERFIRE Vols. 1 & 2 (AMG). The World's first futurefunk sample CDs, eagerly awaited by those who heard the preview on "Promotion" (the AMG demo CD). You won't find any more current & inspiring library for modern dance music. As TerminalHead put it: "There are no rules. There are no BPMs. No keys. Only the need for Pushing the boundaries of people's perception into ways of creating music for tomorrow that fully embraces all technologies and forges solid bonds with all that is known to funk and groove. This material has been borne out of serious experimentation and is totally unique".
Both TerminalHead CDs feature: • Drum Loops & Chops - distorted, filtered and phat. Watch them bass bins flap • Lo-Fi Drum Loops, Chops and drum effects utilising 8 and 4 bit lo-fi cruch technology - sample, fly in and enjoy - they're funky. (Warning - some of these sounds are REALLY hard) • Synth Riffs/Sounds/Sequences created using old analogue boxes • Funky Hard Chops - hard as nails, but smooth as silk - you're certain to find one to suit your track • Dub FX - loads of fresh sexy NEW dub effects • Pascal Benadjaoud gets phased, phreaked and dubbed out and delivers new Percussion grooves for Terminalhead, using bongos, congas, darbuka, tambourines, triangles, shakers and vocals • Trippy Oddness - an assortment of those hard to categorise sounds. • An unusual collection of very usuable processed guitar • Synth FX- many weird, wonderful and wide synthetic FX • A collection of filter sweeps and beautiful organic moments. All samples are specially recorded, filtered and phat.
Two Audio CDs: £59.95 each

Sounds Good (Sweden)

METHODS OF MAYHEM
Brutal & sweet sampling for Industrial/ Intelligent Techno, Goth Techno or anything in need of an Experimental Edge. Uniquely twisted, bizarre and savage stuff. Drum-, Bass-, Synth-, FX-, Vocoder-, Feedback- & Noise-loops. Grinding Guitar Riffs & Feedback. An Analog Heaven with Synth FXs, Sweeps, Zaps, Basses, Drum & Perc Sounds etc. All programmed on vintage equipment and treated without any mercy. Creepy & Cheesy Sound FX, Music FX & Voices. Over 1000 samples. A unique collection. Loops are in set tempos that match other Sounds Good titles.
Audio CD: £59.95

XX-LARGE THE KILLER VOLUME 2
This is the sequel to the triple-5-star-rated XX-LARGE THE KILLER, and it includes over 1000 accurately tuned new drumloops from 120 to 165 BPM and many more hot killer samples.
XX-LARGE THE KILLER has been one of our best sellers and rightly so - now Best Service have pulled out all the stops to bring you a sequel that once again truly deserves the title KILLER. All we can say is: miss it at your peril.
Audio 2-CD Set: only £59.95. Akai, EMU, Roland or SampleCell CD-ROM (500Mb): Only £99.00



HEART OF AFRICA VOLUME 2
Following the success of Heart of Asia, the equally unique sequel is a smash hit.
The library comes in two parts. Volume 2 (shown) features all-new tribal phrases, vocals, performances and effects, mostly recorded at a huge tribal competition in Kenya. This material is very primitive & really enhances the volume 1 samples. "Heart of Africa" is heartily recommended to anyone seeking beautifully recorded authentic ethnic sounds & rhythms, and complements "Heart of Asia" perfectly.
Volume 2 audio CD: £59.95 CD-ROM: £119.
[Volume 1: Audio 2-CD set: £79.95, CD-ROM: £179.00]

X-FX NEW! What is the essence of the dramatic sound design in blockbusting movies like Terminator, X-Files, Star Trek & Jurassic Park? What makes high quality Multimedia applications, computer games or award-winning feature films, animations & commercials sound so cool? X-FX has Over 900 high quality, hard-to-get and exclusively new designed special sound FX like pneumatic and electric doors, explosions & gunshots, big machines, switches, blasts, aggressive metallic screams, hits and impacts & perfectly controllable realistic atmospheres. A big engine sound construction kit has been added for mixing realistic jet-fly and battle scenes. A special subsonic sounds give you absolute control over the deep frequency range to create dramatic ambiences. Created by one of the top European design studios, you can be sure that X-FX is made by professionals for professionals. Audio CD: £69.95. Akai CD-ROM: £119.00

SUPREME BEATS
The most comprehensive library of percussion grooves & instruments ever developed, featuring percussionists from all over the world. This highly acclaimed library is now available on 2 CD-ROMs:
1: AFRICAN/ CONTEMPORARY, &
2: WORLD/DANCE. *"A feast of human feel, energy & emotion... a knockout... Supreme Beats is a winner. 20 stars out of 20"* (Keyboard, USA).
African/Contemporary CD-ROM: £119.00. World/Dance CD-ROM: £119.00. Audio CDs 1 to 4 (boxed set): £199.00. Audio CD 5 (NEW!): £59.95. (CD-ROM versions include all the sounds from VoLs 1-5 audio CDs).

ON A JAZZ TIP
This is Hip Hop In Full Swing! This superb release from Swedish developer Sounds Good features stomping grooves, licks and loops, played in pre-determined keys and tempos to be used inter-actively.
Includes Bass, Guitar, Keys, Horns, Drums and Percussion, Jazz pads, riffs and chords.
Perfect for all HipHop, Rap, Soul, TripHop, Acid Jazz and Funky flavors.
"On a Jazz Tip" is ideal for any music project that needs a sting, swing or that Jazz Thing. Produced and played by musicians who love and respect music. Audio CD: £59.95

Big Fish Audio (USA)

D-DAY
2CDs/145 minutes of all-new construction kits, drum loops and hits, synth & percussion effects and more. This is the second release in the Megaton Bomb series. Styles include: jungle, electro, west coast breaks, trip-hop, hard-hop, gabber- and of course, House & Trance (goa, hard trance, melodic trance, etc). Several of the contributors are internationally recognized and have toured and/or released records all over the world. The quality really shows. Also features drum machines, Junk yard and industrial clanks and scrapes, individual hits, loops and layers, vocoder sounds, west coast breaks, live drummers, Synth loops (TB-303's, MC-202-controlled synths, Nord Lead and lots more). Audio 2-CD set: £69.95

A.M.G. (England)

STEVE WHITE: "ON THE BEATEN TRACK"
NEW FROM AMG! Steve's worked with Difford & Tilbrook, The Style Council, Galliano, James Taylor Quartet, Young Disciples, Working Week, Carleen Anderson, and Paul Weller. His work has been a major influence on the embryonic London Acid Jazz and British R&B and Jazz scenes. Everything about this CD - the grooves, samples, and production - illustrates why Steve White won 'Making Music' magazine's Best Drummer poll and, of the 8 categories available in the prestigious 'Rhythm' magazine's poll for 1997, he won two and came 2nd in two. The release of Paul Weller's latest LP 'Heavy Soul' will ensure Steve retains his position amongst the foremost drummers in the UK. Audio CD: £59.95

DISTORTED REALITY
Cutting Edge Textures, FX and Loops from the labs of top Hollywood sound designers and techno-heads. From 3D atmos transformed via Harmonic Morphing, to incendiary fuzz mutations. Trance-inducing ambiences, loops, enormous modular drones and astonishing timbral contortions - an essential resource for the producer, composer, or sound designer in search of the magic noise. *"If you're making any kind of edge music, this is a library YOU MUST HEAR... gorgeous curtains of sound... will get your listeners' blood pumping... For the progressively minded this disc is a feast. 5 stars out of 5 in every category"* (Keyboard, USA). A spine-tingling sample collection. Audio CD: £59.95. CD-ROM: £119.00

Zero-G (England)

FIELDS OF MOTION
This stunningly innovative CD from ZERO-G (UK) utilises raw and organic sources for the creation of rhythms and soundscapes which will appeal to everyone looking for a creative edge. Loops are accompanied by the individual components allowing infinite variation, plus lots of exciting single hits and ambiences. All material is 100% original, gathered from unlikely sources such as theme parks, factories and industrial sites. Fields of Motion is for the kind of samplist that hungers for inspiration to take their music into the 21st century.
Due for release in June/July 97. Audio CD: £59.95. Akai CD-ROM: £119.00

FREAKY JAZZY FUNKY
From Rich Mendelson, the five-star producer of Phat & Phunky and Dance Industrial, comes the new standard in construction kits. Rich assembled the East Coast's premiere session talent and contributed his own amazing production and programming skills to make this set his best yet. With the included midi-file disk, it's a breeze for the producer to customize the loops and swap sample elements. Exploring the funky side of dance music, Freaky Jazzy Funky is the set to beat for 1997 and with three CDs and a Midi file floppy disk, this collection has to be one of the industry's best value products! Audio CD: £59.95

Zero-G (England)

PASCAL's BONGO MASSIVE
Rhythm of Life Vol. 4 is a 2-CD set from Pascal Benadjaoud, the top percussionist whose credits include Stereo MCs, Bob Marley, Lisa B, Gypsy Kings etc. Also well known on the UK club scene, he's worked with top UK DJs like Paul Oakenfold & Danny Rampling, often adding live percussion to their mixes. Features long(ish) grooves with various mixes accompanied by solo patterns and hits. Lots of tight, inspirational performances to explore. All in all this is another high quality and useful collection from AMG that's sure to become another classic. This CD has received truly FANTASTIC reviews in all the music press. Audio CD: £59.95

CUCKOOLAND VOL.2 'GHOST IN THE MACHINE'
'Ghost in the Machine' is the second title by the Cuckooland team, & delivers everything you'd expect and more from this innovative and highly acclaimed production team! Dark & menacing mind-altering ambiences, heavenly pads, extraordinary arpeggiations... this CD is packed full of some of the most amazing textures & effects ever created. Lie back, shut your eyes, and let the ghost take control....
"Very bizarre... a multitude of creative possibilities... you can't get much scarier than this monster" (The Mix).
Audio CD: £59.95

THAT JUNGLE FLAVOUR VOL.2
Just arrived - the latest in the Zero-G line-up of jungle CDs! Rinsing out the drum 'n' bass flavour, That Jungle Flavour Vol.2' is a superb addition to extremely popular Vol.1 & must for the serious junglist producer. Featuring 350 rough & ready breaks, an enormous selection of pads, stabs and fx, plus voices and scratches to step up the dancefloor pressure. Rollin', rough, hard-steppin' and firing on all cylinders!
Audio CD: £59.95

DOUBLE PLATINUM DRUMS
Multi-Platinum record winners, producer John Boylan and drummer Michael Botts have put together one of the smartest, most tightly assembled collections of live drum loops to date. Phenomenally well-recorded and mixed in true stereo with the same high quality you expect from platinum records. These acoustic kits are played with raw, rockin' energy and plenty of feel. Loops & hits, Dry & Room, Intros, fills & ends for assembling complete tracks!
Audio CD 2-disc set: £79.95. CD-ROM 2-disc set formatted for Akai, Roland or SampleCell: £199.00

FREE WHEN YOU BUY AN A.M.G. CD*
The brand new AMG demo CD "Promotion" - a riveting collection of samples from many AMG products, including: Black II Black Killer Vocals, Keith Le Blanc II, Karma Chopra, Tony Mason Smokin, Abracatabla, Pascal's Bongo Massive, Tim Farriss, DJ Papa Large (Hot & Sweaty House Cuts), and Blackbeat. Plus! - lots of exclusive samples that don't appear anywhere else from: Black II Black, Terminalhead, Sample & Hold, David Ruffy's Drums II, and others. This is a huge and valuable collection of pro samples and it's FREE when you buy an AMG sample CD. (*Offer limited to one per household, while stocks last.)

JUNGLE WARFARE
For Jungle this is the one that EVERYONE says is the best of the bunch • Loops • Rolls & fills • Perc Kits • Pads & Chords • Bass • FX • Vocals.
"Excellent fidelity, balance & punch, & variation in feel & sound... there's no serious competition. Rated 5 stars out of 5" ☆☆☆☆☆ (Sound on Sound, UK).
"Kicking grooves... a wide range of styles... highly useful... AS UP-FRONT AS YOU CAN GET." (The Mix, UK).
"Jungle Warfare gives you just about everything you need to survive in the remix rain forest." (KEYBOARD USA)
Audio CD: £59.95

CUCKOOLAND VOL.1 'UNHINGED'
The incredible rhythms, textures & FX on 'Unhinged' will blow your mind! Grooves from 67 to 170 bpm provide rhythmical backing unlike anything else available, & the textures & FX are not of this world... This collection is ideal for all - from Trip Hop to Film. *"Rhythm & sound simply aching to be sampled & used in new & exciting ways... this is no ordinary CD"* (Sound On Sound,UK, Sept 96). *"Loops wonderfully diverse in style... Production is exemplary throughout... musicianship is of a high standard"* (The Mix, UK, October '96). *"The off-beat, rhythmic nature of the loops make them extremely useful as inspirational tools"* (Future Music, UK, February '97). Audio CD £59.95

SYNCLAVIER LIBRARY (AUDIO)
The five-CD-ROM Synclavier Library from Ilio (USA) has been compiled into two audio CDs containing over 2000 samples.
VOLUME 1: "ESSENTIAL" covers Electric and Acoustic Guitars, Electric Pianos, Synths, and Drums & Percussion.
VOLUME 2: "ORCHESTRAL" covers Strings, Harp, Brass and Woodwinds, Grand Piano, Orchestral Percussion including Timpani, Bells, Chimes, Gongs and more!
Accompanying manual gives loop points for every sample so it's extremely easy to loop samples quickly and effectively. Each Audio CD: £69.95. (See also our Catalogue, or call us, for full details of CD-ROM versions)

WRH

NEVER CAME THIS FAST

EXCLUSIVE UK DISTRIBUTORS FOR: AMG, BEST SERVICE, BIG FISH AUDIO, E-LAB, ILIO, INVISION, SOUNDS GOOD, SPECTRASONICS, USB, WC MUSIC, ZERO-G, AND MORE...

E-Lab (Sweden)

X-STATIC GOLDMINE 4

E-LAB have done it again! Over 1500 Ambient and Chill Out Loops & Samples from the dark side of the Moon. TRIPHOP & CHILL-OUT LOOPS, SPEEDY JUNGLE BEATS & SMOOKIN BASS BOOSTERS, ETHNIC CHANTS & BUBBLE BATH DIDGERIDOOS, WET CHILL OUT CHORDS & XPERI-*MENTAL* SYNTH VIBES, ANALOGUE SEQ FX & ENO-STATE VECTOR LOOPS, PSYCHADELIC DELAYS & DUB-ECHOES, AMBIENT BIRDS & JUNGLE WEATHER, SPOOK FX AND LOTS MORE! *"I will say this just once: GO OUT & BUY THIS ONE!... Absolutely brilliant."* (Musiker Magazine, Sweden). Audio CD: £59.95

X-FILES OF HOUSE

Hot new CD from E-LAB - a new goldmine of Deep & Progressive House loops & samples. To give you an idea, the loops and samples are in the style and mood of Armand van Helden, Tod Terry, or Deep Dish. These loops & samples will make your Hair Stand Out - pure joy. You won't be able to stop moving your feet when you hear this one. All samples provided with variations so you can create your own deep house tune instantly - perfect for injecting The new York club sound into your music - the sound of people like "Masters at Work".
OVER 1000 PHAT LOOPS AND SAMPLES. Audio CD: £59.95

X-FILES OF TECHNO

NEW! Another unmissable CD from the makers of the X-Static Goldmine series (E-LAB). ACID/ HARDCORE/ TEKNO LOOPS & SAMPLES - the styles which have been dominating Europe's underground scene for Years. The TR909, TR808, TR303 are all in there - Distorting like crazy. These are the hard beats of the The Underground Charts that set the Trends which others need to follow. Created by a succesful Producer of this underground rave phenomenon. Audio CD: £59.95

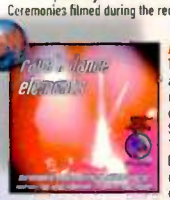
STRICTLY 12-INCH

Important new CD from E-Lab. Features Dance/Remix/House LOOPS & DRUMS. WHAT VINYLISTICS IS FOR HIPHOP, THIS CD IS FOR DANCE. The idea is similar. Loops, with variations, together with separate hits. A Remix CD for anyone in the need for good stomping House & Garage Loops. Very much "DJ sounding", & produced by a Remix/Dj team. If You want the sound of the dancefloor - get this one. All Loops have been tested for reaction on the floor! Audio CD: £59.95

Best Service (Germany)

VOODOO ELEMENTS (CD-ROM for PC)

This extraordinary CD-ROM for PC contains comprehensive archives of 200 fascinating drum and percussion loops, ceremonial chants and shouts and more, from the mystical realms of another culture, taken from the Best Service audio CD "Voodoo Grooves". An arranger program enables you to combine the sounds of this CD to create new rhythms. All recorded in Africa specially for this CD. Special bonus: videos of Voodoo Ceremonies filmed during the recording sessions! CD-ROM for PC: £19.95



RAVE ELEMENTS

This PC CD-ROM contains comprehensive archives of drum and percussion loops, drum grooves, bass lines, melodic chords, synth lines, House Pianos, Synth Strings at 120, 130, 140, 150, 160, 170, 180 & 190bpm. 'Circle Elements' software is included helps combine the sounds to create new and exciting club tracks. All material has been recorded especially for this CD. PC CD-ROM £19.95

IK Multimedia (Italy)

AXL This innovative sampling CD-ROM for Mac or PC contains 817 Brazilian percussion loops, plus an easy-to-use 'Auto Groovemaker' 8-track interface to compose your own combinations of the samples on the CD. The loop collection includes individual components of the complete Brazilian Batucada set recorded at tempos from 60 to 160 bpm, precisely edited and tempo-tuned. 'Auto Groovemaker' supports save-on-the-fly and incorporates a beautiful and easy-to-use browsing system. A great tool for professional and non-professional musicians alike. Available in audio format (loops only) or Interactive CD-ROM for £59.95

Music Mind (Denmark)

NEW ESSENTIAL SOUND SOURCE FOR AWE-32 USERS!

MICRO - WAVE-IT

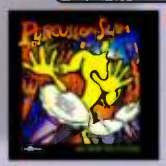
Not even in your wildest dreams could you imagine that your AWE-32 soundcard could sound so good! MicroWavelt is simply packed with entirely new, revolutionary SoundFont™ compatible instruments and sounds, all ready to kick new life into your Sound8laster™ card.

All the hard work has been done for you. It has taken more than two years to develop the MicroWavelt CD-ROM. The sounds have been recorded by professional musicians in professional studios to give you the most beautiful strings, wonderful guitars, the nastiest techno-drums, dreamy synth sounds, exotic ethnic percussion, drumloops, classical instruments and much, much more. All this to give you the opportunity and enjoyment of working with the same high quality sounds you can hear on your favourite records.

Fantastic sounds are a fantastic experience! Why make do with second best when you can get the sounds of top quality professional instruments for a fraction of the price? Take a listen to Pop, Dance, Film music, Rock or even Classical music... MicroWavelt can do it all - once you've tried MicroWavelt, you'll be able to wave goodbye to uninspiring sounds!

PC CD-ROM (for use with SB32, AWE32 or AWE64 soundcards (please call for further details and minimum system requirements)) **ONLY £24.95**

Invision (USA)



PERCUSSION SLAM

Hot new disc from Invision (USA), comes with loops, samples and standard MIDI-files. Multiple layers of percussion instruments were played live and the MIDI-files were created directly from the loops. Killer material for Dance, Pop, Latin, R&B, HipHop, etc. Enhanced construction kit format includes: multiple tempos of each groove, alternate instrument mixes, fills, MIDI-files & samples. Gives you the power to quickly create and modify tracks. Performed by Rafael Padilla and meticulously recorded at Mama Jo's Studios.
Audio CD: £59.95 Akai CD-ROM: £149.00

Time+Space (UK)

CREATIVE ESSENTIALS
HOUSE+GARAGE CONSTRUCTION

A complete sampling construction kit for House/Garage styles. Focussing mainly on loops, you'll find it delivers tons of top-class raw material. From frenzied funk to kool kongo, this is a great tool for remixers, producers and composers alike. Approx 300 samples.
AUDIO CD / Mixed-mode CD-ROM for PC or MAC - only £19.95

CREATIVE ESSENTIALS
JUNGLE FRENZY

All the jungle elements you need! Breaks run at 160bpm to make cutting up and mixing easy. Features drum rolls & fills, percussion loops & hits, basses, pads and jungle MC-ing, and the latest stabs, pads, noizes and FX - flavours from every tree in the Jungle - Intelligent, rough, hard, steppin' breaks & FX for todays Drum N'Bass samplists. This is unmissable - it's just about as UP-FRONT as you can get. Approx 300 samples. AUDIO CD / Mixed-mode CD-ROM for PC or MAC - only £19.95

CREATIVE ESSENTIALS SAMPLER DISC FREE!*

CREATIVE ESSENTIALS SAMPLER DISC including 300 samples (10 hot samples from each of the 30 volumes in the Creative Essentials Series). Plus! - an amazing interactive journey through the sounds of the whole series. It's FREE* when you buy any Zero-G sample CD or any three releases from the Creative Essentials series! AUDIO CD (includes CD-ROM part for PC or MAC) - Or you can purchase this Disc for only £9.95 *(*Offer limited to one per household while stocks last)*

LISTEN BEFORE YOU BUY

Over 40 Time+Space Jukeboxes now installed!

Listen to our CDs at dealers nationwide...

The dealers listed below have demonstrated their commitment to keep your sampler fuelled with inspiring new sounds! You have the opportunity to visit one of the following locations and listen to the entire contents of the sample CDs that interest you most - there you'll find the world's top 100 audio sampling CDs in one of our Sony 100-CD Sample-CD Jukeboxes - and they can supply any CD or CD-ROM from our catalogue!

A selection of our JUKEBOX LOCATIONS :

A1 Music, 88 Oxford St.	MANCHESTER	Tel: 0161-236 0340.
Andertons, 58/59 Woodbridge Rd.	GUILDFORD, Surrey, GU1 4RF.	Tel: 01483-38212.
Carlsbro, Academy 2 Sovereign Way, Anglia Square.	NORWICH, NR3 1ER.	Tel: 01603 666891.
Carlsbro, 22 Humberstone Rd.	LEICESTER	Tel: 0116-262 4183.
Carlsbro, 11-13 Hockley.	NOTTINGHAM, NG1 1FH.	Tel: 0115-959 1888.
Carlsbro, 720 City Road.	SHEFFIELD, S2 1GJ.	Tel: 0114-264 0000.
Carlsbro, 3-4 York Towers, 383 York Road.	LEEDS, LS 9 6TA.	Tel: 0113-240 5077.
Cranes Music, 5A High Street.	CARDIFF, CF1 2AN.	Tel: 01222-398215.
C.T.I., Fumbally Court, Fumbally Lane.	DUBLIN 8, Ireland.	Tel: Dublin 45 45 400.
Dawsons Music, 65 Sankey St.	WARRINGTON, WA1 1SU.	Tel: 01925-632 591.
Dawsons Music, 1A Princes Street.	STOCKPORT, SK1 1SL.	Tel: 0161-477 1210.
Emis, Old School Hse, Cossham St, Mangotsfield.	BRISTOL, BS17 3EN.	Tel: 0117-956 1855.
G, A & K Centre, 79-80 North Road.	BRIGHTON, BN1 1YD.	Tel: 01273-676 835.
Intasound, 70 Narborough Road.	LEICESTER	Tel: 0800-627 627.
KGM Studio Specialist 18-42 Charlotte St.	WAKEFIELD, WF1 1UH.	Tel: 01924-371 766.
Marcus Musical Instruments, 125 Royal Ave.	BELFAST, BT1 1FF.	Tel: 01232-439 955.
Millenium Music, 1, Hurts Yard.	NOTTINGHAM, NG1 6JD.	Tel: 0115-955 2200.
Modern Music 7-9 High St.	ABINGDON, OX14 5BB.	Tel: 01235 524 316.
Musical Exchanges, 89 Old Snow Hill.	BIRMINGHAM.	Tel: 0121-236 7544.
Musical Exchanges, 198-202 Binley Road.	COVENTRY.	Tel: 01203-635 766.
Music Connections, 202 New Kings Road, Chelsea.	LONDON, SW6.	Tel: 0171-731 5983.
Music Connections, Robjohns Rd, Widford Ind.Area.	CHELMSFORD, CM1 3AG.	Tel: 01245-354 777.
Music Connections, Kingsgate, St.Mary's Street.	WINCHESTER, SO1 1NF.	Tel: 01703-233 444.
Music Connections, Crosby Ct, George St.	BIRMINGHAM, B3 1QG.	Tel: 0121-212 4777.
Music Connections, 21 The Mall, Clifton Village.	BRISTOL, BS8 4JG.	Tel: 0117-946 7700.
Music Lab, 72-76 Eversholt St.	LONDON, NW1 1BY.	Tel: 0171-388 5392.
Music Village, 10 High Rd, Chadwell Heath.	ROMFORD, Essex, RM6 6PR.	Tel: 0181-598 9506.
Music Village, 86 Mill Road.	CAMBRIDGE, CB1 2AS.	Tel: 01223 324 536.
Prof. Music Tech, 4 Tyndale Hse, Cowley Rd.	OXFORD, OX4 1JH.	Tel: 01865-725 221.
Prof. Music Tech, 43 High Street.	ROMFORD, RM1 1JL	Tel: 01708-746 082.
Project Music, 433 Gt West Rd.	HOUNSLOW, Middx, TW5 0BY.	Tel: 0181-570 4444.
Rhodes Music Company, 21 Denmark Street.	LONDON, WC2H 8NA.	Tel: 0171-379 3398.
Rose Morris, 11 Denmark Street.	LONDON, WC2H 8LS.	Tel: 0171-836 0991.
Soho Soundhouse, 114 Charing Cross Rd.	LONDON, W1.	Tel: 0171-379 5148.
Sofiscotech, The Balcony, The Corn Exchange.	LEEDS, LF1 7BR	Tel: 01274-661 405.
Sound Control, 61 Jamaica St.	GLASGOW, Scotland.	Tel: 0141-204 0322.
Sound Control, Castle Street.	DUNDEE, Scotland.	Tel: 01382-225619.
Sound Control, 19-21 St. Marys Street.	EDINBURGH, EH1 1TA	Tel: 0131-557 3986.
Sound Control, 10 Moseley St.	NEWCASTLE.	Tel: 0191-232 4175.
Sound Control, 5, Red Rose Centre, Regent Rd.	SALFORD, M5 3GR.	Tel: 0161-877 6262.
Sound Division, Adelaide Hse, 383 Liverpool Rd.	LONDON, N1 1NP.	Tel: 0171-700 4242.
Spectre Sound, 104 Main Street.	BINGLEY, BD16 2JH.	Tel: 01274-568 843.
Time+Space (by appointment only)	BERKHAMSTED, Herts.	Tel: 01442-870681.
X Music, 20 Cotham Hill, Cotham.	BRISTOL, BS6 6LF.	Tel: 01179-734734.
X Music, 78 London Road.	BRIGHTON, Sussex.	Tel: 01273-624240.
X Music, 258a Fulham Road.	CHELSEA, SW10 9EL.	Tel: 0171-349 9444.

If your favourite dealer is not listed above, please tell them to contact us!

REMEMBER TO ASK FOR YOUR FREE COLOUR CATALOGUE!

ALL PRICES INCLUDE VAT & UK POSTAGE. We operate a FAST international mail-order service - delivery is usually within 48 hours when you pay by credit card (VISA/ MASTERCARD/ AMEX/ SWITCH/JCB), cash, postal orders, bank draft, or building soc. cheque (USE REGISTERED POST IF SENDING CASH). TO ORDER:

- TEL (Freephone Order Hotline): **0800 614 822**
- TEL (Orders / Enquiries): **01442 870681** • FAX **01442 877266**

INTERNET... http://www.timespace.com • *e-Mail: sales@timespace.com*

If paying by cheque, delivery will be much slower (!) - please allow up to 7 working days for clearance through the bank. Make cheques/POs payable to "TIME+SPACE" and post to:

TIME+SPACE • P.O. BOX 306 • BERKHAMSTED • HERTS • HP4 2AU • ENGLAND

International orders: please add £6 airmail or £12 express airmail. EC countries: please give us your international VAT number if you have one. Sales office open: 09.30-18.00, Mon-Fri. Prices are subject to change without notice.
TERMS & CONDITIONS OF SALE. All contracts in respect of goods between the Company and the Purchaser are subject to the Company's standard conditions of sale, a copy of which is available on request (see excerpt below). Prices were accurate at time of going to press. Errors & omissions excepted.

PLEASE READ THE FOLLOWING BEFORE PURCHASING ANY SOFTWARE FROM TIME+SPACE: "By opening the packaging and using the software on the CDs, you agree to become bound by the terms of the Time+Space Licence Agreement. The sound samples recorded on the CDs remain the property of their creators and are licensed, not sold, by Time+Space for use on sampling equipment. A right to use the sounds is granted to the original end-user of the product (Licensee) and is NOT transferable. The Licensee may modify the sounds. The sounds may be used for commercial or non-commercial purposes within musical compositions. The licence expressly forbids resale or other distribution of these sounds, either as they exist on the CDs, or any modification thereof. You cannot sell, loan, rent, lease, assign or transfer all or any of the enclosed sounds to another user, or for use in any competitive product".

<< FREE CATALOGUE

Call for your free copy - It's bigger than ever, featuring 100's of the world's best CDs & CD-ROMs. Or use the INTERNET to take a detailed look at what's available RIGHT NOW by logging on to:
http://www.timespace.com

FREE* CD WITH EACH ORDER>>

Each time you order from Time+Space you'll receive one free showcase CD from one of the following sound developers: Time+Space, Sounds Good, Spectrasonics, Ilio Entertainments, Best Service or AMG. (*Offer limited to one of each per household).

Dealer Enquiries Invited!

TIME+SPACE
THE WORLD'S NUMBER ONE SOURCE FOR INSPIRING SAMPLES

WRH

▶ to get the groove *and* the song, *and* do it so that it sounds like the band, *and* do it so that it sounds like something new."

Flood called this period "quite difficult", because "it was all this feeling around, and not quite knowing where we were going. We first started with trying to get the band to integrate the moods of the pieces, so it wouldn't sound like U2 on top of a load of loops, and then we tried to get the loops themselves back into the U2 mould. Larry listened to the feels of the drum loops, and recreated them himself; we then used his loops as a basis for him and the band to play live on top of. So we gradually replaced all inspirational loops and samples, apart from a few that were too integral. We credited those on the CD cover, leaving the sample in the song in a few cases. In other cases, like with Naked Funk and 'You Showed Me' by Gene Clark and Roger McGuinn, we just acknowledged their influence. But it was quite hard for the band to shift from having played to loops of other people to playing to loops of themselves. We felt it was essential to do that, though, because you can get very lazy with samples. They're an easy way to get the ball rolling, but you're always in danger of sounding like some basic samples with the band on top. You're in danger of being dictated to by what's there, rather than saying: 'this is just our springboard'."

Sampling was nevertheless not abandoned. In keeping with the band's aim to incorporate a dance music ethic, the crew then went on to sample, loop, and fly in all members of U2, not just the drums. Flood: "There were many guitar and vocal loops. On 'Mofo' there are little guitar and vocal samples that they played and we sampled. We selected the bits that we liked, and then Edge played them back in off a keyboard. We did that quite a lot, and ended up with maybe 20 or 25 percent of the sounds on the album being loops, samples, or programmed stuff, although these parts were always supplementary; we took great care not to clutter things. That reflected another aim that we had, and that also came from the dance world: we wanted to give the illusion of there being a lot of space in the music. In dance music, you only bring things in when you really want them, and even then you'll hold off for ages. Everything has a reason for being there. That affected how the music came out a great deal. It's knowing when to leave out, rather than when to put in, and knowing when to change things in subtle ways, by gradually enhancing them with an effect as the song moves on, or taking them out for another section."

BOLD STROKES

Giving the illusion of space is certainly something that the production team succeeded in on *Pop*, for even though some of the arrangements are quite complex, there's a clarity and logic to them, and Mullen's multi-layered rhythmic patterns, that is impressive and a far cry from many of their previous efforts. Flood acknowledges (a point backed up by Howie B elsewhere in this article) that this sense of space was also achieved by carefully layering all the elements of the arrangements and giving them places in the frequency spectrum where they didn't get into each other's way, and also by applying relatively little reverb in the mix. But before it came to the mix, shaping *Pop*'s songs and arrangements into their final, carefully crafted form took a lot of blood, sweat and tears. According to Flood, it was a continuous process of invention and re-invention that continued until the very last moment: "People ask me when I know a song is finished, and I say: 'when it's finished'. We had three different mixes of 'Mofo', and during mastering in November '96 in New York, I edited a final version of 'Mofo' from these three mixes. So even during mastering, we were trying to push the song to another level. It was a long process of experimentation; the album didn't actually come together until the last few months. Nellee left in in ▶

FLOOD'S STUDIO

Flood's own studio is a rather chaotic-looking affair, where he clearly doesn't spend a lot of time — apparently he only uses it for pre-production and the odd mix. Nevertheless, it's well-equipped, containing a Mackie 32:8 mixer, Tascam DA88 multitrack, and an Apple Mac with an Opcode Studio 5 MIDI interface which runs a Digidesign Pro Tools system. There was also a rack containing two Zoom effects units (the 9200 and 9010 used on the *Pop* sessions), an Akai S1000 sampler, an EMS Vocoder 3000, a Roland Super Jupiter module, a Helios EQ and mic preamp (also used with U2), a dbx 120XP bass enhancer, and an Ampex half-inch tape recorder. In the middle of the room stood two huge flightcases full of Flood's portable equipment, containing, amongst other things, an ADL Valve compressor, Summit compressors and preamps, the prized Eventide H3000 and H4000 processors, and even some vintage Neumann microphones from the '30s (Flood: "I call them the world's brightest and greatest"). But most eye-catching was the huge collection of vintage synths that graced the room: two enormous Roland System 700 synths, an ARP sequencer and 2600 synth, a Moog Series III, an EMS VCS3, a battered Yamaha SK10 string machine, an Oberheim 4-Voice and a Roland RE501 Chorus Echo.

"I started collecting these synths when I played in a band called Node, which was a four piece with all of us playing modular synths [see Node interview in *SOS* December '95], and when I was working with Mute Records bands like Nitzer Ebb and Renegade Soundwave. I use some of them during recording sessions; on *Pop* I used the ARP sequencer on 'Discothèque', and the backing track of 'Staring At The Sun' was played to the ARP running in free time, playing a really bizarre log drum-like sequence. I also put some guitar through the ARP 2600 on 'Mofo' and 'Please'. I used the VCS3 quite a bit on *Pop* as well. It's great because you can feed things into its line or mic input. I applied some VCS3 spring reverb and ring modulation in a few places, and used it a lot on the basic rhythm track of 'Gone'."

Above: Flood's vintage EMS VCS3, Yamaha SK10, and Oberheim 4-voice.

Left: The ARP sequencer and 2600 synth used on Pop. Also visible on the right is Flood's Moog Series III modular synth.

Sound Tools for Creativity

spl

STEREO VITALIZER®

from £369.--

This ingenious processor combines dynamic equalisation, harmonic filtering and phase shift manipulation. It is designed for simplicity of operation with one set of controls handling both channels.

The STEREO VITALIZER has become famous for its superb low end enhancement with extra punchy sub lows.
»The last word in one-stop mix fixing.«
(Home & Studio Recording)

RECORDING AND MIXING

- Fattening up thin bass guitar and kick drums
- Gives a professional gloss to all recordings
- Makes vocals stand out from the mix
- Ideal for and home and project studios
- Invaluable tool for heavy duty ambient/ techno dance tracks

CLASSIC VITALIZER®

from £549,--

RECORDING AND MIXING

- Replacing or supplementing mixer EQ
- Adding extra edge to final mixes or single tracks

MASTERING

- Reprocessing material for CD release
- Enhancing existing master tapes during post production

OPTIMIZER®

from £899.--

EXTENSIVE EQ FACILITIES

- 4 separate bands of parametric EQ
- Separate notch filter for each band
- Mono 4-way or stereo 2-way operation
- Variable roll-off in low, high or band pass for each EQ band

VERY HIGH SPEC

- Low noise (-93 dB)
- Huge dynamic range (114 dB)
- Wide 10 Hz to 23 kHz frequency range

EQ MAGIX®

from £899.--

RECORDING AND MIXING

The EQ Magix is the latest unit from SPL combining a high quality preamplifier, the legendary Vitalizer EQ system, an exceptionally high quality parametric equalizer and a panoramic output stage with ppm metering. The EQ Magix comes in a professional RF-proof chassis with a stunning front panel that is unique to every unit.

distributed in the UK by:

beyerdynamic

17 Albert Drive, Burgess Hills W. Sussex RH15 9TN

for more information call us on 0800 374994

the above are suggested retail prices

May '96 because he had commitments to work on the *Romeo & Juliet* film score, and it took a couple of months after that before things really started to take shape. They changed radically during the last few months, which is why Nellee isn't credited."

The 'last-minute' edits to 'Mofo' seem typical of the band's working methods during the construction of *Pop*. According to Flood, U2 always expect their production team to challenge them with, as he puts it, "bold strokes". Flood continued: "Even though there was a lot of programming and sampling going on, most of the time things went straight to tape. Laying something to tape, and committing yourself, rather than keeping them 'virtual', as they are with MIDI or on hard disk, is a bold stroke. When you change as much as U2 does, you do need to commit yourself somewhere. People will work to what's on tape as being the part. That's why I prefer to work with analogue tape [see the 'Flood On Analogue' box]. There were periods of doing rough mixes, during which we tried out different arrangements, and they would always be bold moves, rather than nitpicking here and there, because the band reacts far more strongly to that. Like on 'Please' — for ages the rhythm track played all the way through the track. It's a fairly tight groove/bass thing, and then we suddenly decided to drop out the rhythm section in the middle and add a load of strings and these weird synthetic sounds at the end of that break. With those three simple moves, you've created something very strong, and it's far simpler and more effective than just changing the hi-hat pattern in the chorus or something. Of course, we get into that too, but generally with U2, it has to be bold, it has to be strong. Otherwise, you get stuck working on small things that get

Bono listening to a playback at Hanover.

DECONSTRUCTING DRUMS

Three years ago U2 engineer Robbie Adams explained in *SOS* how he recorded Larry Mullen's drums with just three mics, an approach he had picked up from Flood, who, said Adams, "is bored with all this traditional, big stereo nonsense." Flood explained that his way of recording drums was partly born from necessity, and partly from reading Mark Lewisohn's classic book on The Beatles' recording sessions: "When we were working on *Achtung Baby*, we had two drum kits set up, and I had very few channels on the desk, so that was a bit of a problem. I noticed from the photographs in the Beatles book how there was always one mic parked just above the drum kit. I thought it was maybe just for the photo or something, but then I saw it in other studio shots as well, and so, because of the problem I had with too few channels, I decided to try it out on one of the two kits. I put one mic on the bass drum — an AKG D12 or Neumann U47 — a Shure SM57 on the snare, and an SM58 as the overhead just above the kit.

"What started to happen was that people would prefer that drum sound, even though it's virtually mono. I also noticed that with Larry, who is a powerful drummer, when you put the drums in stereo you have to have the levels up higher on playback, whereas the mono drums were more powerful, even at lower levels. When I thought about it, I realised that if you're standing in front of a drum kit, you *hear* it in mono — you don't hear the toms panning neatly from left to right in your ears. Also, a mic just above the kit compresses the sound. And that's the same effect that happens in the ears of a drummer or when you stand close to the kit; the sound is compressing in your ears because of the level of air pressure. So when you have a cheap, lo-fi overhead mic in that position, and add compression on a mic that's already compressing, it brings out the excitement, the same feel and natural balance that the drummer is getting."

"I've used the three-mic approach as a starting point ever since. You can do all sorts of things with it. For example, if the room you're recording in is rather dead, you can add a bit of room reverb just on the mad-sounding compressed mic. That will give the illusion of the drums having space, and yet the physical punch still comes from the middle. I will sometimes add two more overheads, like a 414 or 87, placed a bit higher up, or at the same height as the drummer's ears. A lot of the times we end up monitoring kick, snare and these higher overheads, and then if the track sounds a bit lame, we'll feed that extra low overhead mic in, which can bring out all the reflections that the drummer gets and that you may not hear normally. It's always good to experiment and listen to the sound the drummer gets in the room. When we were working on *Pop* in Miami, we were in a room that had very little character, so we put the two ambient mics right in the corner, pointing towards the ceiling, away from the drum kit, thus deliberately creating a woolly, booming drum sound that went well with the brightness of the drum kit. We were always pushing for character, and trying to stay as far away as possible from a generic rock drum sound."

dbx

MAIN DEALERS

Andertons Music Company
Guildford 01483 38212

Axis Audio Systems
Stockport 0161 474 7626

Blue Systems
Saffron Walden 01799 584095

Carlsbro Retail
Leeds 0113 240 5077

Carlsbro Retail
Leicester 0116 262 4183

Concert Systems
Altrincham 0161 927 7700

Dawsons
Warrington 01925 245422

Digital Village
Barnet 0181 440 3440

Digital Village
Croydon 0181 407 8444

Eddie Moors Music
Bournemouth 01202 395135

Funky Junk Ltd.
London 0171 609 5479

Guitar & Amp Shop
Brighton 01273 676835

HHB Communications Ltd.
London NW10 0181 960 2144

KGM
Wakefield 01924 371766

LMC Audio
London W3 0181 743 4680

Marquee Audio Ltd.
Shepperton 01932 566777

Michael Stevens & Partners
Bromley 0181 460 7299

Music Connections
London 0171 731 5993

Music Lab
London 0171 388 5392

Music Village
Cambridge 01223 316091

Music Village
Romford 0181 598 9955

Raper & Wayman
London N4 0181 800 8288

Sutekina Music
London WC2 0171 835 4656

Turnkey
London WC2 0171 379 5148

Willow Communications
Northampton 01604 21525

For further dealer information contact:
ARBITER GROUP PLC
Wilberforce Rd. London, NW9 6AX
Tel: 0181 202 1199
Fax: 0181 202 7076
Web: http://www.demon.co.uk/arbiter

dbx you can afford?

dbx are renown in recording studios and concert arenas throughout the world for their classic sound, professional specification and professional cost. Now you can experience American made dbx products at incredible prices; The Project 1 series from dbx

266A Compressor/Gate

In direct contrast with inexpensive compressor/gates which feature knobs and lights but lack superior audio performance, the dbx 266A provides it all.

Featuring the newly developed AutoDynamic™ attack and release circuitry to deliver compression for a wide range of applications. In addition to an OverEasy® switch, plus an advanced new dbx gate circuit which over-comes the functional limitations of traditional "utility" gates-all at a price suitable for almost every application.

When using the 266A's AutoDynamic™ Attack and Release controls, the centre settings deliver classic dbx compression, while the full control range produces voicings that extend from slow "levelling" to aggressive "peak" limiting.

The 266A's advanced gate circuitry uses a completely new timing algorithm to produce ultra smooth release characteristics. We use the wide dynamic range and high precision of the dbx VCA and true RMS detector to design in an extra wide threshold range.

262 Compressor/Limiter

Classic Stereo dbx compression in a easy to use, rugged metal chassis. Amazing value for money

- OverEasy® Hard-Knee Operation
- 2 Channels of Classic dbx Compression
- Balanced Inputs and Outputs
- Internal Power Supply
- True RMS Power Summing™
- Stereo Coupling

286A Mic Preamp/Processor

Perfect for use with Digital recording, the 286A is all the tools you need in one compact unit-at a fraction of the cost of buying the units separately.

- Mic Preamp with +48VDC Phantom Power
- OverEasy® Compression
- Frequency Detailable Spectral Enhancer
- Frequency Controllable De-Esser
- Expander / Gate
- Internal Power Supply

Other dbx classics...

1066 Dual Compressor Limiter Gate

Dual channel compressor limiter gate driven by the all-new dbx V2™ VCA featuring True RMS Power Summing™ stereo operation

120XP Subharmonic Synthesizer

Patented Waveform Modelled™ Synthesis; individual control of two ranges of subharmonics level, low frequency boost and separate subwoofer output level.

296 Spectral Enhancer

Two channels of patented spectral processing add detail, sparkle and definition to tracks, mixes and live sound while reducing background hiss.

dbx 1 Project

Distributed exclusively in the UK by ARBITER GROUP PLC Wilberforce Road London NW9 6AX Tel: 0181 202 1199 Fax: 0181 202 7076 Web site: http://www.demon.co.uk/arbiter

magnified out of all proportion."

Another bold stroke was the band's move to Miami halfway through the project. They went there to do a photo shoot, but then ended up recording for 10 days in South Beach Studios, because "the change of environment gave them new inspiration". Unsurprisingly, the track 'Miami' was written, and in part recorded there, as well as a "a lot of drum stuff, replacing loops and overdubs."

FATTING

When listening to Flood's descriptions of *Pop*'s recording process, the question arises of how on earth he kept his 24-track analogue tapes from wearing out over the course of more than a year of chopping and changing, and replacing overdubs. The answer, according to Flood, lies in the huge amount of submixes that he did to other analogue 24-track tapes, and the 'fatting' process that Robbie Adams described in *SOS* three years ago: "I did mixes of key components of songs to other multitracks and then did edits on that multitrack, making sure I kept track of everything with timecode. I never worked on more than one multitrack tape at the same time, because synchronisation always takes time and awareness. But because of all the submixes and overdubs to and fro, there are some songs on which the basic rhythm track is fourth generation. We also did 'fatting' to a sync'ed Tascam DA88; when someone wanted to quickly try some guitar overdubs, or do loads of vocal overdubs, and the 24-track was full, we put the overdub down onto the DA88. Then, later, you can select the bits you want, and fly them back onto the multitrack. The DA88 was also used for archiving."

A CHANGE IS AS GOOD AS A REST

Flood repeated several times during the interview that the main aim during the recording sessions of *Pop* was to "try to construct a new sound for U2 whilst still making them sound like U2." As well as by incorporating new musical influences, especially those of dance music, this was also done by consciously deconstructing mannerisms and sounds that the band had been using in the past; a lot of work went into developing new sounds and new ways of performing for all four members. As described above, drummer Larry Mullen was forced into this because of his back problem, and consequently had to react to loops from other records, sample CDs or programmed drums, whereas in the past, it had always been a rule that any loops and programmed drum patterns would only be taken from Larry's own drum playing. But as Flood explains, it wasn't just the working methods, it was also the sounds that were changed for *Pop*: "Larry was always known for his high-pitched ringy snare, and big drum sound, and this time we were trying to get a drum sound that was bone dry. It was very simple; we tuned

HOWIE B: SONGWRITING & HI-TECH PRODUCTION

What was U2's songwriting process for this record?

"Apart from maybe two songs which Bono and Edge had written before we started, during pre-production, it was fairly freestyle — there were jams, and songs were built from those. After the end of that jam, we'd look at that track and see if there was anything worth keeping; and if there was, what it was and how we would keep working with that tune. For example, we might stop working that day, and each work away on our own with a cassette, thinking of our own melodic ideas, or structural ideas. Bono would then start looking for a character to the song; what it might be about, and so on. It was a quick process in one way, but also fairly slow in another; it was fairly quick to get the song started, and then it was a case of moulding that piece of music into a song. That's where the production started."

Which equipment did you use in the studio?

"The main thing I was using was record decks, which I would use to turn them onto stuff. I also used an Akai S3200 to sample bits of Larry's drumming, and put them into completely different songs. For example, on 'Please', there was a sampled loop of Larry's drums which I had taken from his drumming on 'If God Will Send His Angels', which was interesting. I made a lot of loops of Larry's playing, as well as guitar loops. I sampled Edge all the time, too, and made sequenced guitar sample patterns, which was an interesting thing to happen to Edge — they'd never thought of doing that before. Sometimes I would sample, say, a guitar, but it wouldn't come back sounding like a guitar; it might sound more like a pneumatic drill, because I would take the raw sound and filter it, really destroy the guitar sound, and rebuild it into something completely different [see the 'Sampling' box for more on this].

"I also used a Clavia Nord Lead an awful lot, along with filter banks, voltage-controlled oscillators, and an Oberheim Echoplex for tape delays. The Nord Lead really shone out on this record — it's a fantastic synth. I'd just started using it when we began the album, so it was a fresh sound for me. It's a very quick keyboard to get a sound out of, because the way you work it is very 'analogue', even though it's a digital synth. The analogue-style controls are fantastic. Apart from the Nord, we used a Roland Juno 106, an EMS VCS3, and a little bit of Yamaha DX7. There's also a Hammond in there, and a fair bit of Rhodes."

Is there anybody within the band that can use sequencers?

"Yeah! Larry uses sequencers; he'll demo some ideas, maybe program a groove for himself, and play around with it; and Edge uses a very basic sequencing package to work on ideas. But sequencers aren't really the best thing to work on sometimes... you can become a slave to them. There were a few keyboards sequenced on the album, and I sequenced some guitar loops and a few bits of percussion, but generally, sequencers were not used much on this record. When we did, we used an Atari running C-Lab *Creator*."

Edge, Flood, Bono and Howie B working on a track. Note the whiteboard detailing track ideas and work-in-progress.

INTASOUND

0% INTEREST FREE CREDIT

BUY NOW PAY NOTHING FOR 3 MONTHS

0% INTEREST FREE CREDIT

AKAI S2000

12 x £83.25

Total 0% Credit Price £999

AKAI S3000 XL

18 x £99.94

Total 0% Credit Price £1798.92

AKAI CD3000 XL

18 x £127.50

Total 0% Credit Price £2295

AKAI MPC2000

12 x £99.91

Total 0% Credit Price £1198.92

FOSTEX D80

12 x £108.25

Total 0% Credit Price £1299

FOSTEX DMT8VL

12 x £83.25

Total 0% Credit Price £999

ROLAND JV2080

12 x £116.58

Total 0% Credit Price £1398.96

TASCAM 564

12 x £91.58

Total 0% Credit Price £1098.96

DYNAUDIO BM5

6 x £66.50

Total 0% Credit Price £399

DYNAUDIO BM10

10 x £59.90

Total 0% Credit Price £599

ROLAND JP 8000

18 x £83.05

Total 0% Credit Price £1494.90

YAMAHA AN1X

12 x £74.91

Total 0% Credit Price £898.92

YAMAHA CS1X

12 x £49.91

Total 0% Credit Price £598.92

ROLAND MC303

10 x £56.50

Total 0% Credit Price £565

YAMAHA A3000

12 x £108.25

Total 0% Credit Price £1299

NORD LEAD

12 x £83.25

Total 0% Credit Price £999

NORD RACK

12 x £108.25

Total 0% Credit Price £1299

ROLAND JV1080

12 x £83.25

Total 0% Credit Price £999

YAMAHA MD4

12 x £74.91

Total 0% Credit Price £898.92

CLEARANCE

Yamaha SY85	£699
Roland Juno 6	£199
Kurzwell K2000/P-RAM/8MB	£1899
EMU E64 Sampler (New)	£1899
Gem S3 Workstation	£999
Kawai K1R Module	£149
Boss DS330 GM Module	£199
C-Lab Falcon X/FDI/Syquest	£799
C-Lab Falcon MK2 530MB HD	£799
Digitech Studio Twin (New)	£229
Yamaha EMQ1 Data Recorder	£49
Yamaha EMT1 FM Module	£49
Kawai G-Mega LX GM Module	£149
Akai S2000 Sampler	£849
Quasimidi Technox	£499
BBE 461 Sonic Maximizer	£139
BBE 362SW Sonic Maximizer	£219
Roland MS1 Sampler	£295
Yamaha MU5 Sound Module	£179
Roland MVS1 Vintage Module	£399
Roland MOC1 Orchestral Module	£399
Roland MSE1 String Module	£399
Roland MDC1 Dance Module	£399
Roland MGS64 GM Module	£469
Mass 250 Amplifier (New)	£279
JL Cooper Mix Master	£69
Fatar CMS61 Master Keyboard	£195
Casio GZ50M GM Module (New)	£99
Fatar Studio 610 Master Keyboard	£195
Mackie LM3204 Mixer Expander	£539
Passport Encore Notation Software	£315
Passport Musictime Notation Software	£69
Passport Master tracks Pro Sequencer	£99
PG Music Powertracks Pro Sequencer	£35
PG Music Band in a Box	£65
PG Music The Pianist	£35
PG Music Jazz Pianist	£35
PG Music Jazz Guitarist	£35
PG Music New Orleans Pianist	£35
PG Music Ragtime Pianist	£35
Musicator Professional Sequencer	£209
Music Notes Play a Piece	£36
Voyetra Music Gallery	£45

ROLAND XP80

18 x £88.82

Total 0% Credit Price £1598.94

FOSTEX D90

18 x £83.05

Total 0% Credit Price £1494.90

TASCAM DA20

10 x £79.90

Total 0% Credit Price £799

YAMAHA REV 500

6 x £66.50

Total 0% Credit Price £399

FREEPHONE 0500 51 52 56

TEL: 0116 254 5456. FAX: 0116 233 6687

70 Narborough Road, Leicester LE3 0BR

down his snare to see how he reacted off that. Big drum sounds do work, and they're exciting, so it's very easy to get lulled into using them. But you have to think how you can do things in a different way: you have to keep pushing and pushing, and the beauty of working with U2 is that that is what they want." [see the 'Deconstructing Drums' box for more on how Flood miked up Mullen's drums].

To change Adam Clayton's bass sound, the team worked a lot with heavy processing, to the extent that several tracks sound as if they feature keyboard bass, but apparently it's all Clayton playing, with the exception of most of 'Mofo', which is indeed a keyboard bass. As far as Edge was concerned, he apparently wanted to show himself moving on. Flood: "Edge has been given this tag of having a certain type of sound, which isn't really fair, because on the last two or three albums he's already moved away from it; but people still perceive him as the man with the echoey guitar sound. So he was up for trying out all sorts of ideas, from using cheap pedals and getting the most ridiculous sounds, like in 'Discothèque', to very straight, naked guitar sounds, like in 'The Playboy Mansion'. The guitar sound that starts 'Discothèque' was him playing an acoustic guitar through a ridiculously loud amp and a filter pedal. I was sitting next to him without any headphones, so I couldn't hear the track at all; I was fiddling with the pedal. We then processed the guitar through an ARP 2600 synth, getting a different feel again. The nasty distorted guitar in the break is Edge playing through a Big Cheese, an effects pedal made by Lovetone. We wanted to shock with that sound, rather than: 'here comes the break and the really nice sound.' It takes you aback, and stands for something, and many songs were like that."

Edge and Larry Mullen: "You looking at me?"

Bono also wanted to take his singing into new territories, and so he and Flood discussed his voice right at the beginning of making the album. "I think Bono is one of the great singers of our time, but he was very conscious of areas that he felt he'd gone into too often, like the bombastic style and his use of falsetto singing. So a lot of effort went into getting him to come over in a different way. It was a process of trying to make him sound as intimate and upfront and raw as we could — so that you get his emotional involvement with the songs through the lyrics and the way he reacts to the music — without him having to go to 11 all the time. All his vocals were recorded with a Shure SM58, as usual, and then went through a Neve mic preamp, and had a little bit of valve compression added from an LA2 or a Summit. We only used extreme effects on his voice during the recording, for him to get himself into a different place, and then, gradually, we pulled most effects out. We didn't add many effects to his voice during the mix. In fact, we didn't add many effects in general in the mix. There *is* a lot of effects processing on the album, but much of it was added during recording."

EFFECTS & MIXING

The effects units actually used (described iconoclastically by Flood as "whatever worked") ranged from budget Zoom 9200 and 9010 units to more expensive gear like the Lexicon PCM70 and Yamaha SPX1000, as well as the unashamedly pro Eventide H3000 and H4000 ("the ultimate piece of

HOWIE B: MIXING & EFFECTS

Which console and multitrack did you use on *Pop*?

"We used a Otari MTR90 multitrack, with mainly a 1972 Neve desk. Rupert Neve made that for EMI — it was the first 24-buss desk that he made. It's a split console too, which was interesting, as most mixing and recording desks are in-line these days, and I did my apprenticeship on a split console. It was great to come back to that — a split console has its own character, and the way you record and mix is a bit different. The desk was also a fantastic tool for me — I used that like another instrument."

Is that how you achieved some of the amazing sounds on the album? For example the vocal treatments and heavy bass sounds all over the album, the echoes on the vocals and bass drum in 'If God Will Send His Angels', and the distorted drum sound on 'Miami'. Were these effects created during the mix or when recording?

"It was very easy to record the vocals; very little EQ, just a little compression, and off we went. Sometimes, depending on the song, there'd be an effect used later, but when we started off, it would just be Bono with his SM58 going for it. Sometimes he'd sing to an effect; delay, flanging, distortion or whatever, just to react to it. But it wasn't as if we spent three weeks looking for a particular vocal treatment; we didn't do that at all.

"The trick with the bass sounds is really to make sure the bass is there when you record it! Because later on, you can only bring out sounds that were already there. I didn't add anything; the bass was already there, it was just a case of putting it in a place where you can hear it. Sometimes that's purely a matter of level — it can be as simple as making the bass track louder — and sometimes you need to use EQ.

"On 'If God Will Send His Angels', there's no reverb at all on the drum kit, so again, the echoes you hear are just to do with the sound of the kit when it was recorded, and the balance that I set up later. On the vocals on that track, the reverb you hear is just an analogue plate reverb; two pieces of metal with a spring between them. The balance on that song is like the balance on all the others; there's nothing fancy going on there. It's the space that song happened in that gives it its incredible character.

"The drum sound from 'Miami' comes from quite a few things — it's basically very extreme EQ used sparingly, on particular tracks. The main groove is actually just Larry's hi-hat, but it sounds like a mad engine running or something really crazy — about as far away from a hi-hat as you can imagine. Part of the effect was deciding when to use it and when not to. Sometimes when you use something extreme and then take it away, the space that you leave when it's not there is just as extreme, even though there's no longer anything extreme going on! For me, the task in 'Miami' was to make it unlike anything else on the album, and also unlike anything else you'd ever have heard before.

"'Miami' was a live mix; I didn't use any computers or automation, which made it really interesting. Most of the album was like that, but with that track in particular, there was no need for automation, as it was a very simple track in the end; there were only maybe nine tracks of audio used on it. It was also more fun and more musical to do it live — I think I got a fairly large sound out of just nine tracks, and several of the things that happen on it only happen because I was doing it live. If you go into a mix with preset rules — you know, that you use this reverb on drums, and that processing on vocals — I think it ends up sounding very straight, and very contrived. But if you go in with the approach that anything can happen, with no set rules, that's when it gets exciting. That's how I attack mixing. It makes it more interesting, and it's more creative. You open new doors that way; you discover things that haven't happened before. Like I said, the desk was a very important instrument in the making of this album, especially the way that me and Flood use it. It's something we can both play, the way that Edge can pick up a guitar and play a fantastic song. I can go onto a desk and use it in a way that no-one else will, and it's the same with Flood."

HOWIE B: SAMPLING & DRUM PROGRAMMING

U2 have previously been quite controlled in their use of samples, employing only loops of their own playing, but it seems they were a lot freer this time around. Which tracks particularly benefited from the new approach?

"Well, we approached 'The Playboy Mansion' with a bit of a hip-hop attitude; and it worked really well. On that track, the rhythm track is two loops of Larry playing, and he's also playing live to those loops. So at some points, there are three drum kits going at once, in quite a controlled way — the arrangement is particularly interesting. The track started off as a live jam, and then we took that and programmed it up. Larry went off into a side room and made some sample loops of him playing his kit, and gave the loops to me and Flood. It was the same with the guitars; there's a guitar riff which comes in in the verse and chorus, which is a sample of Edge playing."

As well as loops, are some of the drums we hear on the final album programmed?

Not really. 95 percent of the drums on the record are 'real'. There are just the odd moments where you can hear loops; and it's fairly obvious where. 'The Playboy Mansion' is one of the places where people will say; 'OK, they've had a different attitude to recording here'. But on all the other songs, the drums are live."

I understand the track 'The Playboy Mansion' samples Gene Clark and Roger McGuinn's 'You Showed Me'

"No, we didn't sample that — it was a Turtles song which I played them, and U2 were inspired by that. One of the guitar riffs Edge plays on 'The Playboy Mansion' *is* inspired by that song, but we didn't actually use any samples on it. Edge played the riff and made it his own, but we thought we'd better respect the fact that we had been inspired by that song; that's why there's the credit. That happened on a few other songs; another one was 'Do You Feel Loved', where the inspiration was a Naked Funk song."

outboard gear"). But it would seem that in their use of these tools, too, the production team were guided by a well-developed set of ethics, as Flood explains: "I have been cited as using a lot of effects on U2 records in the past, but on this album we wanted to create space and avoid clutter, so we didn't use effects in a standard way, like putting reverb on the vocals because it's the done thing. We were only using effects for really creative purposes. They had to be there for a reason. We also tried to approach the whole mix like that. Instead of going through the ludicrous practice of spending five hours solo'ing the bass drum sound, EQing it and looking for the right effect for it, and then finding that it doesn't fit in context, we would simply bring everything up, get the balance right, and then go: 'OK, so what's missing or wrong?' If the track was a bit dull, we'd add some high to the predominant sound, or even to the whole mix. We were always listening to things in context."

Flood recounted that half the album was mixed at Hanover and the other half at Dublin's Windmill Lane Studios. Echoing Howie B's statements about approaching the mixing desk like a musical instrument (see Howie B's box on effects and mixing), Flood stressed that non-automated mixing was also important to the team: "When you have two or three people sitting at a desk doing a mix, pushing and pulling and changing the music, it becomes like a performance. I like the excitement of doing that and the excitement at the end when you go: 'yeah, this is it!' After all these months of creating, you want to be really excited about getting your final result. I hate the anti-climax with automation where you've just done the final version of your mix in the computer, and you go: 'oh, I'll have a cup of tea now, and then put it down.' Ultimately, doing a live mix with a group of people at the desk follows the same principle as we had for the making of the whole album: throw ideas around amongst everybody, so that people will be pushed into new territories and will react in a different way. My role as a producer in this project was to make sure that wherever they went, however new and unique the style, it would still sound like a U2 record. It had to become U2's best record so far, and if we hadn't achieved that, I would have felt that I had failed." From the evidence of *Pop*, Flood need not have sleepless nights. SOS

Thanks to Sound and Recording *magazine for the Howie B interview.*

INDIGO SERIES

PRICES SLASHED!

Special Offer Prices only £399+VAT

Usual Prices from £599+VAT

Special offer subject to availability.
Available from participating TL Audio stockists:

Audio Toy Shop	01225 447222	M Corporation	01425 470007
Axis Audio	0161 474 7626	Music Connections	0171 731 5993
Blue Systems	01799 584095	Music Lab	0171 388 5392
Digital Village	0181 440 3440	Sound Control	
Funky Junk	0171 609 5479	Glasgow	0141 204 0322
HHB	0181 962 5000	Turnkey	0171 379 5148
Larking Audio	01234 772244		

TL Audio®

Worldwide distribution:
Tony Larking Professional Sales Ltd.
Letchworth, SG6 - 1AN (UK)
Tel: +44 (0)1462 490600
Fax: +44 (0)1462 490700
WEB: http://www.tlaudio.co.uk

SASCOM MARKETING GROUP
Canada & USA:
Sascom Marketing Group
Tel: +1 905 - 469 8080
Fax: +1 905 - 469 1129
WEB: www.sascom.com

Fax us on +44 (0)1462 490700 or send for your FREE 16 page full range colour brochure

Name.....

Address.....

Post/Zip Code.....

SOS

music soluti

New Products

Novation Super Bass Station	
now with Arpeggiator/Distortion/Chorus	£475
Alesis Wedge - Flat Bed Reverb Unit	£419
Alesis Nano Compressor	£149
Nano Piano	£325
Nano Bass	£225
Nano Synth - QS6 sounds	£375
QSR - QS8 Sounds	£749
Point Sevens - Shielded Nearfield Monitor	£235
Spirit Absolute 4P - Power Monitor	£795
Akai S20 - Sampler	£499
Akai MPC2000 - Sequence/Sampler/Drum Machine	£1199
Alesis Studio 32 - 16 Channel, 4 Bus Desk	£999
Digitech StudioQuad v.2 - More Presets/FX	£525
Yamaha REV 500	£399
Lexicon MPX1 -	£1199
Yamaha - ANIX - Virtual Analog	**Coming Soon**
Yamaha - A3000 - Sampler **Book your Demo Now**	**Phone**
Yamaha 03D (Order Now)	£2999

Mixing Desks

Mackie
Behringer
Samson
Yamaha
Spirit
Soundcraft

Outboard

Lexicon
Alesis
Boss
Digitech
Yamaha
ART
Behringer
Dbx
LA Audio
Aphex
Mutronics Mutator

Digital Recording

Alesis ADAT XT
Akai DR16
Akai DR8
Akai DR 4 VR
Fostex DMT 8 VL
Fostex D-80
Fostex D-10
Fostex D-5
Tascam DA20
Tascam DA30
Roland VS880
Panasonic SV3800

Samplers

Akai S Series
Remix 16
Yamaha A3000

Keyboards / Modules

Akai
Alesis
Novation
Kurzweil
Yamaha

Off Junctions 7/8 A1M
British rail 20 mins. London Kings Cross

0% Finance Available.
Buy Now Pay Later
Interest Free Up to 3 Yrs on selected Products

ons

11 Hydean Way, Shephall, Stevenage, Herts. SG2 9XH

Monitoring

Spirit Absolute Monitors
Yamaha NS10M
Rogers Nearfield Monitors
Alesis Monitor Series
Samson Servo Power Amps.
Mass Power Amp.
Alesis Power Amp

Software / Soundcards

Cubase - Software
E-Magic - Software
Yamaha - Soundcards
Turtle Beach - Soundcards
Audiomedia II & III **(Much More in Stock Please phone)**

Logic Audio Discovery Only £249

Computers

Custom Built PC / Macs SqQuest EZ Flier 230 + Cartridge £259

SIMMS Memory **(Lowest UK Prices)**

Iomega Zip Drive + Cartridge £149

Packages

Package 1
Steinberg Cubasis
Midiman Winman 1x1
Samson 1502 Mixer
Yamah MU5 Module
Controller Keyboard+
Leads

RRP £835
Our Price £699

Package 2
Steinberg Cubasis
Midiman Winman 1x1
Samson 1502 Mixer
Akai S2000 Sampler
Alesis Microverb 4
Controller Keyboard
+ Leads

RRP £2214
Our Price £1875

Package 3
Steinberg Cubase V3
Akai S3000 XL Sampler
Novation Drum Station
Novation Bass Station
Samson Servo 150 Amp
Spirit Absolute Zeros
+ Leads

RRP £3770
Our Price £3180

Package 4
Yamaha Promix 01
Samson Servo 150 Amp
Tascam DA-20
Yamaha NS10-M
+ Leads

RRP £3421
Our Price £2850

Ex-Demo Sale

Mass 500 Amp	£383
Alesis RA1000 Amp	£299
Alesis Matica 500 Amp	£349
Alesis QS8 88 Note Keyboard	£1590
Aphex 104 Aural Exciter	£219
Aphex 108 Easyrider Comp	£219
Aphex 109 Parameter EQ	£367
Lexicon Alex	£289
Lexicon Reflex	£359
Behringer Autocom	£139
Alesis Midiverb 4	£275
Alesis Quadraverb 2	£595
DBX 262 2Ch Comp	£172
MTR Patchbay	£76
Akai SG01K Vintage Module	£286
Alesis ADAT XT	£2049
Akai DR4VR	£1056
Digitech Studio Quad Effects	£505
Alesis Quadraverb	£599
Novation Bass Station	£324
Novation Drum Station	£349
Samson Servo 150 Amp	£191
Fostex DMT8VL - Digital 8 Track	£850
Yamaha MT4X - 4 Track	£468
Yamaha QS300 **(Special Clearance)**	£899
Alesis QS8	£1457
Akai Remix 16	£773
Audio Technica 4033A + S/M	£433
Yamaha Pro Mix	£1680

Solution Special

Kurzweil Micro Piano SCOOP **IN STOCK**
realistic piano sounds **£349**
With Controller KBD **£499**
Kurzweil K2500 KBD
+ Sample Optional / Libary **Low Deal**
Digidesign Audio Media II (Mac) **£399**

Hotline - 01438 750751

Fax - 01438 750754

Mail Order - 01438 750752

(EU / WW. Export) - 01438 750753

All Prices Include Vat @17.5%
Delivery - UK (Same Day) / Eire (Next Day)
Europe / Worldwide Export
Accounts Welcome

Demo Suite (One to One Demos
+ After Sales Training)
Tailor Made Studio Design

If you see anyone else's prices are cheaper than ours please phone for our Music Solutions Special Price!

Blue Heaven?

YAMAHA A3000 DIGITAL SAMPLER

Given the wide range of studio and synthesis equipment Yamaha make, it's perhaps odd that there's been no serious sampler in their catalogue for almost 10 years. Now, after putting a toe in the water with the well-received SU10 mini-sampler, they're taking the pro sampling plunge once more with the A3000. CHRIS CARTER finds that still waters run deep...

Do you ever wonder how all these marvellous machines that we use are designed ? I do, all the time. Are there a lot of tech-heads in lab coats, or nerdy net-head types in pizza-stained T-shirts, sitting around telling the company execs about their great ideas? "Yeah, we'll include 64-note polyphony, unlimited samples, 54 different effects, editable parameters for everything, tons of output options, a sequencer, masses of storage, and it will have lots of red and green flashing LEDs and we'll include a really cost-effective display." And the marketing manager says "but won't it be a bit difficult to use?". "No," they say, "we'll include a REALLY BIG instruction manual!". A possible scenario, I suppose, and in the case of something like the A3000, very likely.

Despite what you may have read elsewhere, the A3000 is not the first serious sampler Yamaha have ever made. Their TX16W was launched way back in 1988, and was pretty uniformly received as being very powerful but also unnecessarily hard to use. Of course, since then Yamaha have made the successful SU10 mini-sampler (reviewed in *SOS* March 1996), but what a way to re-enter the pro sampler market: at last, a machine which is both affordable and powerful, a turning point in sampler evolution. However, it's not all lovely in the garden: the A3000 is amazing and infuriating in equal measure. Read on...

OPERATING THEATRE

Before we get down to the nuts and bolts of using the A3000, let me say that for £1299 it has some pretty mind-boggling features. Yes, most of the rumours you may have heard about it are true. The standard model is 16-bit stereo, 64-note polyphonic, comes with 2Mb of on-board memory and is capable of accommodating an additional 128Mb of sample RAM, using standard SIMMs. There is no upper limit to the number of samples it can hold, subject to how much memory is installed. As if that wasn't enough, *each* sample has its own envelope generator, LFO, single-band EQ *and* resonant, multi-mode filter (VCF), while the main stereo mix also has an additional 4-band parametric EQ. There are three effects banks, with 54 extremely versatile, editable effects patches in each bank, and a 'feed-through' feature for real-time effects treatment of external audio sources. It also incorporates an AWM2 tone generator and a basic MIDI sequencer, and can load SMF (Standard MIDI File) sequences, AIFF, Emu and Akai samples. It has space for an internal SCSI hard drive (with no size limit) and can directly control (automatically or manually) the playback of an audio CD from an external CD-ROM drive, while most of the front-panel knobs and function buttons can also be used as MIDI controllers for internal and external MIDI functions.

The A3000 is presented in a 2U rackmount case almost as deep as it is wide. To the left of the neat blue/grey front panel there are two audio input sockets and an input level knob; the inputs are capable of handling microphone or line levels. Next is a (very loud) headphone socket and the main stereo output volume control for the rear left/right output jacks. Below the basic, 2-line yellow LED

pros & cons

YAMAHA A3000 £1299

pros

- Sounds excellent.
- 64-note polyphony.
- Unlimited number of samples.
- Lots of on-board effects and EQ.
- Unprecedented features in this price range.
- Good compatibility, including Akai, Emu, WAV and AIFF.
- Can be used as a MIDI controller.
- Cheap, practical expansion options.

cons

- Limited and sometimes inscrutable display.
- Arcane operating system.
- No waveform display.
- Unconventional and frustrating sample/program implementation.
- Inaccurate and 'jumpy' control knobs.
- Fan hum.

summary

With slightly too many 'idiosyncrasies' for comfort, the A3000 could give you a fair few headaches, but the condition isn't chronic. On sound, features and price the picture is a lot more appealing and seductive. This sampler is going to stir up a nest of trouble with the competition and should be taken very seriously indeed, because even with its faults it is a formidable beast. Even though I may have given the impression I don't like it, I would like one.

SOUND ON SOUND

display there are what look like five rotary controls, which also double as push buttons. Each knob has an LED arrow above it, which, when lit, means that the button can be pushed to execute an action or function — simple, but effective. On the right-hand side of the front panel are 11 illuminated selector buttons arranged in a 5x6 matrix configuration (six 'Function Keys' and five 'Mode Buttons'), with a printed list of modes beneath. There are three other buttons, labelled Command (usually for accessing the disk drive), Audition (for triggering samples) and Assignable (see 'MIDI Play' section, later). Below the Mode matrix is the floppy disk drive. Around at the back (on the base, unexpanded machine) are the usual AC in, MIDI In, Out and Thru, left and right main outputs, and left and right assignable outputs, plus a little SCSI2 connector (see 'SCSI1 or SCSI2' box). Finally, there's a small fan.

IN THE DRIVING SEAT

When the A3000 is switched on, it runs through a little performance with all the LEDs dancing around for a few seconds. You're then presented with the default screen, Program Play. Worryingly, the switch-on default mode doesn't produce any sound, even though the sampler loads up with a nice selection of raw synth waveforms, courtesy of the internal AWM2 tone generator. To hear anything you must first access Sample Edit mode and perform a procedure called 'ToPgm' (to program). This 'selects' a sample (or waveform) and makes it available to the current program.

The sampler uses an unusual system for arranging programs: there are always 128 of them resident in memory, and although you can rename them, you can't have any less or more than the default 128. The programs themselves don't deal with the parameters you would normally associate with synth or sampler programs: instead they're just empty slots for placing banks or individual samples into. Only one program can be active, and to use the A3000 multitimbrally involves setting MIDI channels for each individual sample or bank of samples in Sample Edit mode.

THE SAMPLER THAT NEVER WAS

In the A3000 manual there are occasional references to an instrument called the Yamaha A7000: apparently the A3000 can load and convert A7000 disks containing drum voices, normal voices and programs. Hmm... We at *SOS* had never heard of an A7000 and initially thought it might be a new, as-yet-unannounced, Yamaha sampler. Not so: a call to Yamaha UK elicited the information that the A7000 was a development prototype/super synth/sampler that Yamaha were thinking of producing a couple of years ago, but decided against and instead came up with the A3000.

Yamaha A3000

FEATURES LIST

- 64-note polyphony.
- 128 programs.
- Three multi-effects banks (54 effects in each bank).
- AWM2 Tone generator.
- Unlimited number of samples (dependent on memory).
- Multi-mode VCF per sample.
- 16-part multitimbrality.
- 4-band parametric EQ.
- 2Mb of memory (11 seconds at 44.1kHz stereo).
- Expandable to 128Mb using standard 4Mb, 8Mb, 16Mb or 32Mb SIMMs in pairs.
- Maximum sample time with 64Mb (6 minutes 20 seconds at 44.1kHz stereo).
- Imports samples from: Akai, Emu, WAV, AIFF, TX16W, A7000, MIDI SDS and MIDI SMF.
- CD-ROM, five demo floppy disks.
- Internal HD connecting kit.
- Options: AIEB1 I/O board with six audio outputs, co-ax digital in/out, optical digital in/out.

SAMPLE THIS

Sampling involves first going to the Record Monitor page and setting some parameters so that you can hear the input signal; here you also set a monitoring level and get a metronome click going, if you need one. Then it's off to Record Set-up mode, where you can specify a sampling frequency (5kLoFi, 5kHz, 11kLoFi, 11kHz, 22kLoFi, 22kHz or 44.1kHz), sample pre-trigger time (0ms-500ms), stereo or mono sampling, analogue or digital input, Auto Normalise (to achieve the optimum level for a sample), manual trigger or auto sampling, and sample key range. Next, you visit Meter mode, where you can adjust trigger levels for sample start and sample stop, and visually monitor the input signal on a bargraph meter. Unfortunately, you can't stay here while you sample, because you now have to go into Sample Record mode, which doesn't have an input meter to check the signal level. So far we've been in four different modes and not a sample in sight.

On the only page in Sample Record mode there are two options: Go and Optimize. Maybe I should briefly explain the Optimize feature. If there are a lot of samples in memory and you've been editing, trimming and deleting them, the sample memory becomes fragmented, with bits of unused memory floating about and unable to become part of the mothership memory — you know what I mean. Anyway, press Optimize and all are one again. Are you still with me? Choosing Go starts sampling, and while the A3000 does its stuff you have the option to Abort or Finish the process. Once the sample is in memory, you then have to go to Sample Play mode and select the sample to audition it, because you can't hear it from Sample Record mode. This has to be one of the slowest, most convoluted sampling procedures I have ever come across. The only part of the process I like is the fact that you can hear, in real-time, the effect the different sampling frequencies have upon the input source. This is a useful feature if there isn't much memory available, as you can decide whether or not a sound can take being sampled at a lower bandwidth.

TRIM THAT LOOP!

Once you have some samples in memory (and, apparently, if there's enough memory on board there's no upper limit to the number of samples) you must first assign them to a program to hear anything, as the A3000 doesn't allow monitoring of raw samples. Now, I know I just said a moment ago that you can audition a sample in Sample Play mode, but all this option does is temporarily assign a sample to the nearest free program location, so that you can hear it.

Many of the parameters you'd normally associate with program editing are instead handled in Sample Edit mode. This is rather unconventional, but I suppose you'd get used to it. Sample key span, output destination, LFO depth, effect send, filter setting, envelope shape, pan, MIDI channel, and more, are all handled at the Sample Edit level. Unfortunately, this imposes some creative restrictions on how the samples can subsequently be used and grouped into sample banks and programs (see the next section for more).

The A3000 uses three types of samples:

- Mono
- Stereo
- Sample Banks

The first two are pretty self-explanatory; the third, however, is the equivalent of what would usually be regarded, in synth or sample terms, as a program. When you've edited the parameters in a sample (key span, ADSR settings, pan, tuning, LFO depth, and so on) you can make a new Sample Bank and begin adding samples, a bit like filling a folder full of documents. This Sample Bank is now treated as a sample, and can be placed within programs as if it were a normal mono or stereo sample. It sounds like a good way of organising a lot of samples into manageable chunks until you try to edit one of them, because you can't edit individual samples within banks! First, you have to go through the Remove Sample process, which takes it out of the bank, then you can edit the sample, and finally add it back into the bank again. What a palaver!

Taking into account the pretty central role of editing and looping in any sampling process, Yamaha have tried to give some thought to making the most of the limited display. In Sample Trim/Loop mode, you can view sample waveforms in five ways: by the obscurely named End Address Type; by Length; by Time; by Beat; and by Graph. The first four display options show the sample in numerical

form (if the Beat display is selected, the A3000 calculates the bpm and shows it with the number of beats in the loop). The last option, Graph, is a wavy line that bears no visual relationship to the actual sample. The best method I found — and none are what you might call intuitive — was to edit the loop by ear *and* eye, switching between the different display options until I got the results I wanted.

There are also a number of DSP effects available for applying to samples. Resample, for example, is actually time-stretching and pitch-changing and, while it's considerably faster at stretching a sample than an Akai S3000 or something like the *Alchemy* sample editor, the results can be a little lumpy and distinctly flammy-sounding, even at the best setting.

There's an interesting feature called Expand in Sample Edit mode. This has Detune, Dephase and Width parameters, and can thicken a mono sample or widen the image of a stereo sample. This is a really useful feature if you want to add a chorus effect to a sample and all the effects banks are being used. Another useful featurette is the Random parameter (found in Sample Edit Pitch mode). This applies an adjustable, brief, random pitch variation at the start point of a sample. Using the Expand and Random features together is a great way of adding some movement and life to individual bland-sounding samples.

Yamaha say that a free software package, called *Wave Editor*, will be available soon, and support from Steinberg's *ReCycle* is also imminent. This kind of software should help to strengthen the A3000's acceptance in the sampler market because although in terms of features it has everything needed to achieve impressive results, sample manipulation, editing and looping are definitely an uphill struggle.

EASY ON THE EDIT

Samples are arranged in programs in a fairly unusual way on the A3000, because although a particular sample can be used across more than one program (up to and including all 128 programs, if needed) any parameter settings that have been applied to the sample, such as keyboard span or effect assignment, remain with that sample when it is used in any other programs. So parameter changes made to any individual sample will have a knock-on effect for other programs using the same sample.

One solution is to apply any new settings to a duplicate copy of the sample, but this is a memory- and time-consuming process. Another solution is to use the so-called 'Easy Edit' feature, which overrides the original parameter settings for a sample in a new program. But there are some annoying limitations to this 'solution'. For instance, you can't exceed a sample's original key span: if it was set at C2-B3 you can't extend it to C2-B4. Also, if the original sample is panned hard right and you try to 'Easy Edit' the pan to the left, it will only pan as far as the middle. The list goes on, but I'm sure you get the idea. Both solutions are inelegant, and it's a shame that Yamaha couldn't have come up with a more versatile arrangement.

MIDI PLAY

This sampler is full of little surprises, and one of these is Panel Play and its associated 'Assignable' function. This mode allows most of the front-panel buttons and knobs to be used as MIDI controllers for either A3000 programs or external MIDI gear. The six 'Function' keys can be programmed to play MIDI keyboard notes — with adjustable velocity, and on different MIDI channels if you wish — while the five rotary knobs can be programmed to transmit MIDI controller information such as pan, volume and portamento time. This is a really handy feature (originally seen on the Emu ESi32) and, once set up, is a quick and easy way of triggering samples and loops and altering a few basic MIDI parameters, without delving too far into the inner workings of the A3000.

NOTEPAD

The A3000 features a basic, single-track notepad sequencer for trying out ideas, but it only has Record, Pause, Continue and Playback controls, so don't expect too much from it. There are no restrictions on the number of sequences you can record, and you can load in banks of previously saved sequences or MIDI files (from DOS floppy) recorded on an external sequencer. The sequencer also includes a speed control to vary the playback between half and double the original tempo but, annoyingly, once the sequencer is in play mode the rest of the sampler is locked out to you, until you press Stop.

EFFECTS & EQ

Two of the A3000's most impressive redeeming features are its effects and EQ. The effects are nicely diverse, excellent in quality, and all have a dozen or more editable parameters. There are no restrictions on how they're used, either. You can have three different effects in series, or three of the same effect type in parallel and, unusually, effects banks can also be configured so that the front-panel audio inputs are routed through them for real-time monitoring. Indeed, so flexible and sophisticated are the effects that there's no reason why the A3000 couldn't be used as a very capable stereo multi-effects unit. Tied in with the real-time effects monitoring feature, and assuming you have

A3000 EFFECTS IN FULL

Digital Scratch	Distortion
Auto Synth	Noise gate
Tech Modulation	Chorus
Noisy Mod Delay	Celeste
Flanging + Pan	Flanger
Flow Pan	Symphonic
Noise + Ambient	Phaser 1
Low Resolution	Phaser 2
Noisy	Pitch Change 1
Attack LoFi	Pitch Change 2
Radio	Ensemble Detune
Digital Turntable	Rotary Speaker
Jump	2 Way Rotary
Beat Change	Speaker
Voice Canceller	Tremolo
3-band EQ	Auto Pan
Aural Exciter	Ambience
Auto Wah +	3 Delay
Distortion	2 Delay
Auto Wah +	Echo
Overdrive	Cross Delay
Touch Wah +	Delay + Auto Pan
Distortion	Hall
Touch Wah +	Room
Overdrive	Stage
Overdrive	Plate
Amp Simulator +	White Room
Gate	Tunnel
Compressor	Basement
Compressor +	Canyon

PLEASE PLEASE ME...

Despite the enormous number of features and editable parameters in the A3000, there are a few frustrating omissions and oversights. As I said elsewhere, once the sequencer is in playback the A3000 refuses to let you do anything else until Stop is pressed (even the dinky Akai S20, reviewed elsewhere in this issue, lets you edit samples while its sequencer is running). In addition, samples can't be split and saved across more than one floppy disk, so unless you have a hard drive don't use any single samples longer than 1.4Mb. The A3000's envelope generators are difficult to program, because of the limited display and because the parameter values seem to work in reverse, but this situation is exacerbated by the fact that there no preset envelope shapes, even basic ones. Finally, I could find no mention anywhere in the manual of direct-to-disk recording. Surely if you can connect massive internal and external hard drives this facility should be provided. Almost every current SCSI-based sampler I can think of has a D-to-D option.

SCSI1 OR SCSI2?

Originally, the A3000's SCSI connector was to be an optional extra. However, at the last minute Yamaha decided to include it in the base machine specification — which was nice. The instruction manual gives very detailed instructions (six pages) on how to install your own internal hard drive, and the A3000 even ships with a useful hard drive connection kit, consisting of internal SCSI and power leads. The manual describes the type of drive you should buy in great detail, and specifically says, on page 334, that it should be a SCSI1-compatible type. However, the SCSI2 connector is a small half-pitch, 50-pin type, so if you're going to use an external hard drive, optical drive or CD-ROM drive with the A3000, make sure it has a compatible connector or budget for an adaptor.

enough memory, is the ability to record effects with samples, in mono or stereo. These effected samples can then be assigned to individual or paired outputs, leaving the effects banks free to work with other, un-effected, samples. This is a very versatile arrangement that, given enough memory, allows you an almost unlimited number of effects for your samples and programs.

Some effects, such as the Digital Scratch, Voice Canceller, Digital Turntable and Auto Synth, are a little gimmicky, and the reverbs have a definite 'love 'em or hate 'em' Yamaha-ness about them. However, there are lots of positives: the 'Beat Change' effect is actually a powerful number-crunching, real-time, MIDI-controllable time-stretch feature that works almost as well as the 'Resample/Time Stretch' feature in Sample Edit mode, and although it's optimised for rhythm loops it has enough editable parameters to cope with almost anything. (See box on page 209 for full effects list.)

Although the effects banks contain some very good filter and EQ setups, the A3000 has another trick up its sleeve: separate multi-mode VCFs (Voltage Controlled Filters) for each sample. These babies can do some seriously extreme filtering, from radical bass cutting and boosting to ear-bleeding resonant shrills. The filter modes available are Low Pass 1 and 2, High Pass 1 and 2, Band Pass, and Band Eliminate. Each filter mode offers control over cutoff frequency, gain, Q/width, filter sensitivity and filter scaling. In addition, each VCF has its own envelope generator, LFO depth and separate single band, +/-12dB equaliser, with a range from 32Hz to 16kHz. And this isn't all, because the main stereo output also has its own, entirely separate 4-band, +/- 12dB parametric equaliser. Phew! What a line-up.

The A3000's back panel. The included SCSI connector is standard on all UK A3000s. The slot on the right is for the optional AIEB1 I/O expansion board.

ATTACK OF THE MASSIVE MANUAL

It's a shame that Yamaha haven't learned from the mistakes they made with their first sampler, the TX16W. Some of the terminology used in the A3000's manual is downright confusing. Sometimes a sample is described as "waveform data", sometimes not. At the beginning of the manual "start, end and loops" are described as having "points" (naturally), but the manual later insists on calling them "addresses". Try this: "Each end address is shown by distance from the corresponding start address, in address increments". Or "End and loop end addresses are indicated by their absolute address values on the waveform". What? This sounds like techno-babble from the 1980s. Why? Are Yamaha intentionally trying to confuse people or has the manual been badly translated?

I thought Roland and Akai manuals were long, at 200 pages or so, but the A3000 instruction manual is massive, at over 370 pages. Admittedly, the sampler needs one this big because there are so many features and functions, and if you don't read it through at least a couple of times you'll be banging your head against a wall within hours of turning the A3000 on. On the bright side, once you get used to the style, layout and arcane terminology, it is readable, and to help you along there are two very good indexes and lots of explanatory diagrams. There is also a basic 'Starting Out' section meant for the sampling novice, and all users would be well advised to start there anyway, as it eases you gently into the Yamaha mind-set and prepares you for the rest of your journey through the manual and eventually the A3000.

THE IMPORT & EXPORT DEPT

When it comes to importing samples, the A3000 has pretty much got all the popular formats covered. It can read DOS-format (or PC disks formatted on a Mac) DD and HD floppy disks containing WAV, AIFF, Yamaha A7000 and TX16W samples and, although it doesn't say so in the manual, you can import Emu and Akai samples from floppy disk (unfortunately, Roland sampler users have been left out in the cold). My first attempts to load Akai samples from an Akai floppy were a little problematic, because although the A3000 cannot read Akai keygroups and programs, it refuses to recognise an Akai sample unless it's part of an Akai program. Strange. In the end I managed trouble-free loading of Akai samples, complete with intact loops. Also supported are MIDI SDS (Sample Dump Standard) files, and MIDI SMF (Standard MIDI Files) type 0 files, for playing back sequences. Unfortunately, the A3000 won't save data onto PC, Emu, Akai or other non-Yamaha format disks. Apparently, the A3000 can also read WAV, AIFF, Emu and Akai sample data from an external hard drive or CD-ROM, and can control the playback functions of an audio CD mounted in a CD-ROM drive, which is a rather neat feature.

EXPANDABLE IN EASY STAGES

About two thirds of the space inside the A3000 is occupied by the power supply, floppy disk drive and the main PCB, with a sizeable area left free for an optional internal hard drive. Detailed instructions are included on the type of SIMMs the A3000 can use, how to install them, and also how to install the optional AIEB1 I/O board. If this expansion board is fitted, an additional pair of digital input and output ports (S/PDIF optical and co-ax) and six assignable audio outputs are made available. The digital input allows recording at 48kHz, 44.1kHz and 32kHz, and playback at 44.1kHz. The cost of this board is a very reasonable £149 including VAT, and it's likely to be an essential purchase.

All these DIY options are a nice change from the usual 'No user serviceable parts, contact your dealer' sticker, and I think it's about time that manufacturers started to treat their customers like adults. After all, many of us are quite capable of upgrading our PCs with new drives and memory, and a sampler is a lot easier to deal with than a PC. Nice one, Yamaha.

SUMMING UP

The A3000 sounds great. When sampling from CD it's impossible to tell the difference between source and sampler. Stereo samples are rock solid, with no phasiness, and samples imported from other machines sound as good as the originals.

After using the A3000 for a week or so, I had developed a strong love-hate relationship with it. There are still elements of the machine that

continue to mystify and infuriate me — its sluggish and sometimes puzzling response when changing modes, and the way parameter values don't keep up with knob rotations sometimes made me feel as though I was wading through treacle, and the limited display prevented me from getting the whole picture. One of the A3000's problems, especially considering the basic display, is that Yamaha have given it so many features and an arcane interface with which to access those features. Yamaha themselves admitted that the ill-fated TX16W suffered from 'over engineering' and the A3000 is undoubtedly subject to the same malady. If the Yamaha R&D department had given half as much thought to the human interface as they obviously have to the wealth of features they've poured into this sampler, it would be unstoppable. As it is, the balance may be way off for some people, particularly professional samplists. As a fairly short-term user/reviewer, my biggest problem with it was productivity — or lack of it. It's a bit like going from a Apple Mac to a DOS PC: you feel as if there must be an easier way to do this or that simple task, but there isn't. Working with the A3000 and an Akai S3000XL side by side, it became apparent that what I considered fairly speedy everyday tasks, such as sample editing, looping, arranging samples into keygroups, putting samples into various programs and setting up multitimbral programs, took at least three or four times longer on the A3000. Even taking into account my familiarity with Akai machines, I still think I would outrun a seasoned A3000 user doing similar tasks, with ease. Some may not see this as much of an issue but, believe me, if you're doing a remix or some other fast turnaround work, you need the speed.

Having said all that, if the A3000 was my only sampler, I think I could live with it. On sound, features, expandability and price the A3000 is miles ahead of the competition, and if it was your only sampler purchase, I'm pretty sure you'd eventually be content with your acquisition. Just be prepared to invest some time negotiating the steep learning curve. SOS

info

- £ £1299; optional expansion board £149. Prices include VAT.
- A Yamaha-Kemble Music (UK), Sherbourne Drive, Tilbrook, Milton Keynes MK7 8BL.
- T Brochure Line 01908 369269.
- F 01908 368872.
- W http://www.yamaha.co.uk

THE ALTERNATIVE CIRCUIT

Alternatives at this price are decidedly thin on the ground. The Akai S3000XL looks thoroughly under-specified compared to the Yamaha, but is a lot easier to operate, and you do get the bonus of the superb *MESA* sample editing software package. What lets the whole Akai range down is the price of upgrade options — almost double what Yamaha are asking. Other alternatives could be the Emu ESI32 or the highly respected Roland S760: both use nice resonant filters, and the S760 has an RGB output. All the above alternatives have Akai compatibility, and are a lot easier to get to grips with than the A3000. However, they're also more expensive than the Yamaha, though dealers are beginning to discount some of these samplers and some offer freebies (such as extra memory or CD-ROM). It has to be said that, for its price, the A3000 has a very generous feature set, which would be hard to replicate from another manufacturer's range without spending more money.

EASY PARKING - FRIENDLY SERVICE

GIG Sounds Ltd
86/88 Mitcham Lane,
Streatham, London SW16
Tel: 0181 769 6496 or 5681
Fax: 0181 769 9530

Established 1978

The Original The Best
Mail Order - Part Exchange

GIG SOUNDS

MON-FRI 10AM 6.30PM SAT 10AM 6.30 PM

GIG Sounds Ltd
195 London Road,
Croydon, Surrey CR0 2RJ
Tel: 0181 686 4546
Fax: 0181 681 5755

The Music Retailers Association

Call with Confidence
All prices include VAT

SECONDHAND GOODS BOUGHT AND SOLD. GUITAR & HI TECH SERVICE DEPARTMENTS

DRUMS - GUITARS - WOODWIND & BRASS - BOOKS & MUCH MORE

SOUNDSCAPE- SIMPLY THE BEST

The best selling hard disk recorder is available as either a single unit, multiple modules or as a complete running PC package

Soundscape

New Low Price £1999 Inc free 1.2Gb drive

GIG sounds have enjoyed great success with Soundscape and are pleased to say that the time stretch pitch shift option is now available from us for only £150 CALL FOR A DEMO.

Yamaha MT50 £299

HI TECH RECORDING

Roland JP 8000	IN STOCK
Akai S3000 XL Sampler	CALL
Akai S2000 Sampler	CALL
Korg N364	CALL
Roland XP80	£1599
E-MU E6400	£2200
DBX 1066 Compressor	£499
DBX 266 Compressor	£229
Alesis Microverb 4	£229
Alesis Midiverb 4	£299
Fostex D5 DAT	£839
Fostex D80	£1499
Yamaha MD4	£849
GEM S3 Turbo S/H	£899
Yamaha MU90	£549
Korg NS5R	£549
Yamaha RX5 Drum Machine	S/H £495
Roland RA90	S/H £495
Roland RA50	S/H £349
Roland U110 Tone Module	S/H £199
Roland JX10P + PG800 S/H	£699

TOPAZ MAIN DEALER
TOPAZ PROJECT 24 IN STOCK

AKG D3700 £79 Inc Cable

PA SYSTEMS

Martin, JBL, FBT
Peavey, EV, Tannoy, Laney,
Bose, Studiomaster

KORG

Prophecy	£799
Trinity	£1499
Trinity Plus	£1699
Trinity Pro	£1999
Trinity Pro X	£2399

TIME+SPACE
Jukebox in both stores

Radio Mics

MICS

AT Liberator	From £199
Trantec S1000	From £229
AKG WMS 51 (D3700)	From £249
Trantec Systems S/H	From £150

AKG, EV, SHURE, SAMSON,
BEYER DYNAMIC, AUDIO TECHNICA

FREEPHONE STREATHAM 0500 123 616

Finance. Written details on request
Streatham Tel: 0181 769 6496

Overnight Delivery
Croydon Tel: 0181 686 4546

HUGE RANGE OF ACCESSORIES. SOUND ADVICE IN PA. RECORDING, KEYBOARDS ETC.

BABEL SYSTEMS

Please call for the UK's best quote

UK NEXT DAY DELIVERY · LOWEST PRICES · WORLDWIDE EXPORT · FINANCE AVAILABLE

BUY NOW Buy Now and Pay in Six Months Please Call For Details PAY LATER

TEL: 0181 944 6090 FAX: 0181 879 3184

NEW POWERMACS

PowerMacintosh 4400/160/ 16/1.2/CD
PowerMacintosh 4400/200/ 16/CD/L2/Ethernet

PowerMacintosh 5400/180/16/2 Gig/8xCD/28.8 Modem
PowerMacintosh 5500/225/32/2Gig/12xCD/33.6 Modem

PowerMacintosh 6400/200/16/2.4Gig/8xCD/L2/28.8 Modem
PowerMacintosh 6500/250/32/3Gig/12xCD/L2/33.6 Modem
PowerMacintosh 6500/275/32/4Gig/12xCD/L2/33.6 Modem

PowerMacintosh 7300/ 166/16/2gig/CD
PowerMacintosh 7300/180/16/2gig/CD
PowerMacintosh 7300/200/ 32/2gig/CD

PowerMacintosh 8600/ 200/32/2gig/ L2/CD/ZIP

PowerMacintosh 9600/200/32/ 4gig/CD/L2/IMS
PowerMacintosh 9600/200MP/34/4gig/CD/L2
PowerMacintosh 9600/200/0/0/CD/VAR
PowerMacintosh 9600/233/0/0/CD/VAR

The Family Macintosh
5400/180 and 5500/225

The Apple Home Office
6400/200 and 6500/250

The Apple Creative Studio
6500/275

POWERBOOKS

Apple 1400cs/117/12/750
Apple 1400cs/117/16/750/CD
Apple 1400cs/16/750/CD CSW2200 & case
Apple 1400c/133/ 16/1.1/CD

Apple 3400c/ 180/16/1.3
Apple 3400/ 180/16/1.3/ 6XCD/Ethernet
Apple 3400/200/ 12/2/6XCD /Ethernet
Apple 3400/240/16/3/12XCD/Ethernet

MAC RENTALS

7300/200/32/2G/12xCD	£149 Per Week
8600/200/32/2G/12xCD	£299 Per Week
9500/200/64/2G/8xCD	£299 Per Week
9600/233/64/4G/12xCD	£399 Per Week
Powerbook1400/24/750/CD	£199 Per Week
Powerbook 5300C/16 500	£149 Per Week

MONITORS

Apple 15" multiscan
Apple 15" AV multiscan
Apple 17" 1705 TCO multiscan
Apple 17" 1710 TCO Trinitron multiscan
Apple 17" 1710AV Trinitron multiscan
Apple 20" Trinitron multiscan II
Formac 17" F17 FST300
Formac 17" ProNitron F17400
Mitsubishi 15" Diamondtron HX multisync
Mitsubishi 17" DiamondPro 87TXM
Mitsubishi 21" DiamondPro 21TX
Mitsubishi 21" DiamonPro 91TXM
Microvitec 14"
Microvitec 17"
Sony SF11 15"
Sony SF11 17"

SCOOP PURCHASE

17" Microvitec .28" dot pitch £329
14" Microvitec .28" dot pitch £179

DIGITAL VIDEO EDITING

16.7 million colours @ 30/25 frames per second. Full NTSC/PAL resolution Motion-JPEG compression in real time

Broadcast quality digital video

Realtime Effects
Breakout Box
Alpha Channel Output
Black level adjuster
360KB per frame
28MB DRAM & VRAM

USED EQUIPMENT

Please call us for our latest list of used Mac equipment, we can offer part exchange on your old system and we also buy in used Macs.

SCANNERS

Agfa Duoscan
UMAX vista S6e
UMAX vista S12
UMAX Powerlook II
UMAX Powerlook 2000
UMAX Mirage A3
UMAX Vista transparency adaptor
Microtek Scanmaker E3
Microtek Scanmaker E6
Microtek Scanmaker 35t Plus
Epson GT5000
Epson GT8500
Epson GT9500
Epson transparency adaptor
Visioneer Paperport VX

SOFTWARE

Adobe, Claris, KPT, Macromedia, M.Y.O.B, Quark, Symantec and much more.

Please call for the latest prices

PRINTERS

Apple Stylewriter 1500
Apple Stylewriter 2200
Apple Stylewriter 2500
Apple Laserwriter 4/600PS
Apple Laserwriter 12/640PS
Apple Laserwriter 16/600
Apple Laserwriter 12/660PS
Epson Stylus Colour 500
Epson Stylus Colour 600
Epson Stylus Colour 800
Epson Stylus Colour Pro
Epson Stylus Prol XL +
HP Laserjet 6MP
Lexmark 4079 +
Lexmark 4079 + Pro

STORAGE

Quantum 1.2gig internal/external
Quantum 2.1gig internal/external
IBM 4.0gig internal/external
IBM 8gig external SCSI Raid
Iomega Zip drive
Iomega Jazz drive
Syquest 200 meg drive
Yamaha CD-R 4x write/6x read,toast

SYSTEM SOLUTIONS

If you need advice on networking or system intergration please call us for help and advice. We specialise in system design intergration and set-up on site

AUDIO SOLUTIONS

Digidesign, E-Magic, Steinberg, Opcode, Yamaha CD-R recorders + Masterlist

FINANCE

We offer finance facilities from personal loans to Apple Comercial Credit, Please call for details

TRANSAX Cheque? YES

Access

VISA

E&OE

Authorised Apple reseller

Part Exchange Welcome

All trademarks are acknowledged as belonging to there respective companies

Behringer Eurodesk

Buy now with nothing to pay for 6 months

E-Magic Audiowerks8

2 input 8 output audio card with stereo digital S/PDIF output, bundled with the Virtual Multitrack Recorder to give 8 track digital capability on your computer £499

Fostex D90

8 track digital hard disk recorder
Buy now ***from only £83 per month on 0% Finance***

Akai S3000XL

16 bit stereo digital sampler 32 voices, 8 individual outputs, expandable to 32 meg of RAM, SCSI, Digi I/O, HD recording, M.E.S.A Mac editing software

EMU E 6400

64 voice sampling synthesizer with 4mb of memory
From only £139 per month on 0% finance

Emu Orbit V2

The Dance Planet 8 meg professional techno/high energy industrial dance 640 presets

Kurzweil K2500

Keyboard & Rack

Alesis Monitor 1

One of the most popular Nearfield monitors available

Soundscape V2

IBM compatible PC based Direct to disk digital recorder 8 to 128 tracks, real time digital eq, sample rate conversion, realtime fades with 18 bit dynamic rangedigital mixing, options include timestretch, ADAT interface, 8 channel I/O, removable hard drives. Soundscape Plus - features 12 tracks, Audio/Video in sync, EDL processing, Emagic Logic Audio extension and CD-R plus in.

Roland VS880

All in one hard disk recorder with up to 64 tracks of digital audio, digital mixer with 14 input channels From as little as
£109 per month on 0% finance

Korg Trinity

16 track synth/ workstation, with touch screen, options include hard disk recording and sample playback

Panasonic SV3800

Industry standard DAT machine

Yamaha QS300

61 key AWM2 tone generation, 3093 phrases, interactive sequencer and 3 digital effects

Alesis ADAT XT

8 track digital multitrack recorder with onboard digital editor and autolocator

EMU E4x

8 outputs, SCSI hard drive, digital I/O, built in FX, 32 MIDI channels, 128 voices, expandable to 128 MB, 16 outputs.

Yamaha 02R

32 bit digital recording console 2FX processors, 50 dynamics, 4 band parametric 44/8/2

All prices include VAT @ 17.5%. 0% finance available on selected items, next day delivery on items held in stock E&OE.

LA Audio

Classic Channel Eq

Soundtracs Project 8

with meterbridge 24/8/2 mixing console

Fostex DMT8 & D5 package

8 track digital recorder and DAT machine

From only £99 per month on 0% finance

Apple 7300 and Cubase VST and Digidesign Audiomedia III board

Cubase sequencing and direct to disk non-linear recording and editing. Virtual EQ and FX modules.
The complete system ready to go with Apple 7300/166Mhz computer with 32 meg of RAM, midi interface, 17" colour monitor, keyboard and mouse.
From only £106 per month.

Yamaha 02R digital console

40 input 8 Bus console
moving faders and total automation
4 band parametric and dynamics
2 on board fx processors
digital connections to ADAT SP-DIF, AES/EBU

Akai DR16 Digital HD multitrack recorder

16 track digital direct to disk system
(will also record to removable 2.6 gig M/O disks)
8 inputs, 16 outputs,
video output board for full colour display for easy editing
Sp-DIF, ADAT, AES/EBU, SMPTE, MIDI 9 PIN options

Genelec 1029A

Bi-amplified nearfield monitors, ideal for the project studio, with optional sub-woofer.

Roland JP8000

Fat sounds with analog modelling
From just £63 per month inc VAT

Yamaha A3000

Pro Sampler, 64 note polyphony, 128 meg sample RAM, 5 realtime controller knobs, realtime time-stretch, 3 independant FX blocks, Parametric EQ and optional SCSI interface.

From just £55 per week inc VAT

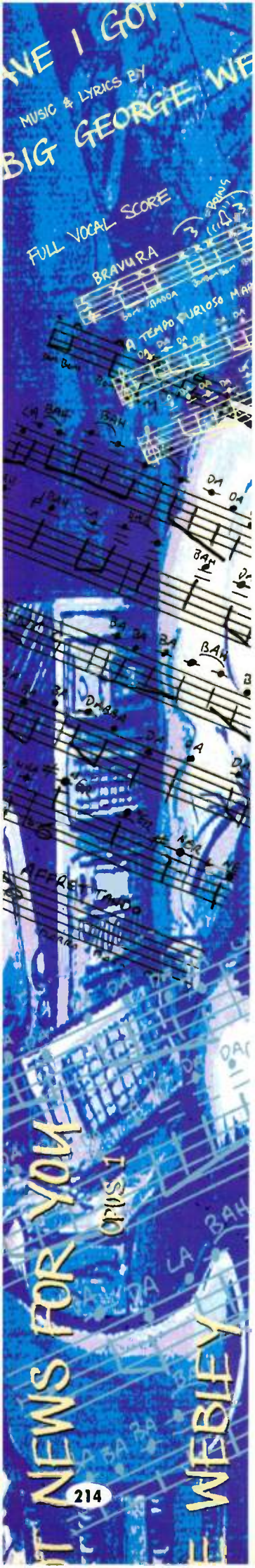
Buy Now - Pay Later

BABEL SYSTEMS

UK NEXT DAY DELIVERY · LOWEST PRICES · WORLDWIDE EXPORT · FINANCE AVAILABLE

Tel: 0181 944 6090
Fax: 0181 879 3184

MasterCard WRH · VISA · SWITCH · TRANSAX



HAVE I GOT JINGLES

A PERSONAL VIEW OF THE COMMERCIAL MUSIC INDUSTRY

BIG GEORGE WEBLEY recounts some personal experiences of the jingle music business and drops a few hints about how you might get in on the action...

With most of the pieces I write for this magazine and its excellent sister title, *Gigging Musician*, I try to be as objective as possible. This time it's personal.

If passports still stated occupation, mine would say: 'Composer of music with an average duration of 29 seconds'. I'm not proud: the fact is that I would far rather be composing soundtracks for Steven Spielberg. I've tried to do it, too, a couple of years ago. I visited Hollywood on a reccy (reconnaissance) and after a series of meetings with incredibly shiny happy (but non-committal) people, an opportunity arose to blag my way into his office. He wasn't in, but his security officers were and I had a very nice day getting thrown out.

Of course, I don't just compose 30-second pieces of tosh for the highest bidder. Last year I composed the score (eight songs, three refrains, two scene changes and an Overture) to a new Christmas play written by the incredible, funny, mad-as-a-March-hare Elly Brewer. The play was called *Beaten By Toffee — The Witch Who Hated Christmas*, and including scoring out over 50 pages of manuscript, driving over 1000 miles to attend rehearsals, and demo-ing up all the songs, my total fee for the job was £500. This is not to be sniffed at by any means, but if you work it out as an hourly rate (excluding travel time and cost) it comes to considerably less than I would earn collecting supermarket trolleys. On the other hand, if the play gets picked up by a West End entrepreneur and goes on to become a national institution, like *Oliver*, I'll be rich enough to buy a small country on the royalties. Mind you, these kinds of overnight successes usually take 30 years or so to pay off. But, in truth, I'd have done it for nothing, as the exhilaration of the first night has been burnt into my soul for eternity.

ANCIENT HISTORY

When I first started out as a session bass player in the late '70s (I'm now 39), the big jingle sessions were recorded at either Abbey Road Studio 1 or the legendary, but now demolished, Anvil Studios in Denham. These sessions could feature up to 100 musicians playing together for a whole day to record the theme tune, ad break stings and 'spotting' (the incidental music) to an entire TV series.

There would be a film screen showing the pictures in black and white, with a countdown line at the bottom, in sync with the click track, to cue the piece in. These techniques are still used today by actors when they do post-production ADR (Automatic Dialogue Replacement, more commonly referred to as Looping). It's also used by Foley artists (the people who smash a watermelon covered in cream crackers with a hammer to emulate the sound of a head getting smashed in with an axe).

At these sessions there was always another screen, to separate the rhythm-playing riff-raff (me, the guitarist and the drummer, mainly) from the real, classically trained orchestral players. Whether this was for audio separation or musical snobbery I really can't say. But it was hilarious to see the Principal Cellist and viola players, in full evening dress (one has standards you know, pip pip), sweating their way through a ten-hour mid-summer session with no noisy air-conditioning during recording, whilst the rocking section of the ensemble were in dayglo beach wear, surrounded by ripped-up fag paper packets and cans.

MODERN TIMES

Sessions like these happen very rarely today — which is bad news if you play French horn or oboe but not if you have a MIDI setup in your bedroom. Nowadays the majority of TV budgets goes into the pocket of two or three of the principal participants: the presenter, producer and executive producer. Theme tunes, and music in general, are very low down on the financial priorities list. Mind you, being badly paid in TV terms can seem like winning the pools for someone who has spent years building up a home studio to earn the odd £50 doing backing tracks for a club singer.

With Channel Five being beamed into almost a dozen houses across the country, and the prospect of trillions of high-quality new channels (I mean high-quality in terms of the digital method of delivery, and most certainly not in terms of programme content), the need for home-produced TV jingles will increase dramatically.

ADD A LITTLE PITCH

One of the most annoying things TV production companies ask composers to do is "pitch an idea". In theory this seems like a perfectly reasonable request. The trouble is that they don't want you to pitch an idea; they want you to complete the job.

FOR YOU!

for no money whatsoever, before they decide. This wouldn't be so bad if you knew who 'they' were. Often the person who gave you the brief of the show hasn't actually got a say in commissioning the music — which means that you're pitching an idea to someone who then has to decide whether to pitch it to the right person.

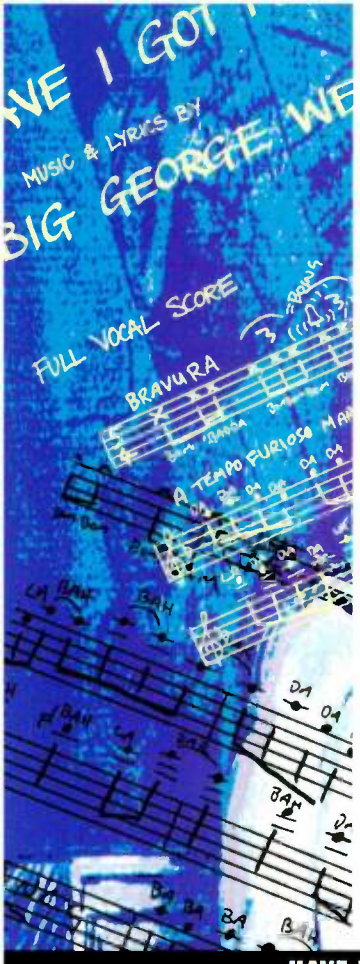
The policy of many TV departments and independent production companies is to put the music out to tender. Generally, this means that although someone has already got the job of doing the music (usually an old friend or relative of someone high up in the production) three or four other composers are asked to pitch for the show. I've been on both sides of the equation, and when I confronted a top executive about this the answer was "it will go in your favour for next time". In my humble opinion that's complete bollocks. If someone has already been given the job, other people should not be asked to spend a lot of time working for nothing. Give someone the job, and if it's not up to standard, sack them.

STOP THIEF, OR I'LL DO NOTHING

If someone samples your music without your permission in the pop industry you take them to court and sue for massive damages (see the June issue of *SOS*). But if you pitch an idea to a TV company and they pinch it, what can you do? I said this article was personal, so I can only relate my own experiences, but just about every composer I know in the industry will have a similar story to tell, and will have done the same as me: nothing!

So here's one of four tales I could tell: once upon a time a top producer from a major independent TV company asked me in to chat about a forthcoming show, fronted by one of our leading presenters. The music brief I was given was: a fairground tune with a hardcore rave backbeat, "and make it sound mental". I went away and wrote a rather excellent traditional fairground tune, if I say so myself, which leaned a little towards a military band (this was my creative input) and then added said backbeat. In truth, I didn't like the rhythm at all, but that was the brief and I was just the Monkey in this relationship. I duly took the Organ Grinding TV producer a cassette containing my tune, followed by a version without the rave beat and, lastly, a breakdown of the various fairground tune voices ▶

"Being badly paid in TV terms can seem like winning the pools for someone who has spent years building up a home studio to earn the odd £50 doing backing tracks for a club singer."



HAVE I GOT JINGLES FOR YOU!

(tubas, trumpets, glockenspiels, and so on). The reaction was a little muted, maybe because the tune and the beat didn't marry up particularly well, but, as I've said, that was the brief I was given.

The next thing I heard, about a fortnight later, was that they had commissioned someone else to write the theme. Well, you can't win them all — maybe whoever got the job had been able to make more sense of the brief than me. A month later the programme was broadcast, and I was surprised to hear how very similar the theme tune was to the one I had composed, only a with different beat. On checking the end credits (all media whores do this religiously) I saw the composer was someone I had played with years before in a band. I called them up to congratulate them on the theme (bastards) and asked how they'd come up with such a superb piece of music. They told me they'd been given a tape of a tune with and without a hardcore rave beat, as well as all the elements of the orchestration (my tape), and told to write something exactly like that but with a jazzy backbeat. I didn't say anything, as they weren't to know it was my tape. But what to do about it? I

> "If you pitch an idea to a TV company and they pinch it, what can you do?"

hadn't registered the piece, and even if I had, what could I do? Sue a leading production company for passing my idea onto someone? Every production company in the world would be queuing up to use me if I did that — I don't think! Put it down to experience — a rotten, stinking, unfair experience which you just have to swallow, more than once.

IT CAN BE MURDER

It's not all bad manners and deceit. Sometimes you can be in fear of your life. One job I had was for a Middle Eastern finance company who wanted a 30-second TV ad in a western style but with a traditional beat. It seemed easy enough and I went

HAVE WE GOT OPPORTUNITIES FOR YOU

Being a composer shouldn't be about making money as much as doing good work. Yes — and pigs fly. Sometimes it's worth doing two soundtracks for the Royal National Theatre and a 20-minute dance for the Royal Ballet, which collectively pay less than £1000. Not just because they are serious musical compositions for stuck-up luvvies, but because you can boast about it when someone from the wonderful world of showbiz asks you what you've done recently.

Making a living out of music has never been a strong point with careers advisers. The local Job Centre isn't any better; in fact, the more colleges and community groups that run music and media-related training courses, the fewer the opportunities available. So just how do *you* go about making a living?

Well, if it was easy, everyone would be doing it, so don't expect a clear-cut answer on how you'll become a multi-millionaire composer. How would I know! But if you're looking for a way into the cut-throat world of media music composition, I have a couple of ideas you might want to try. They won't pay initially, but they will give you something more important than a couple of hundred quid — namely: a track record.

• TUNE IN AND DROP OUT

Every home in the country has access to at least one 'All New' local FM radio station. The DJs who are so cheerful on-air about everything, are, on the whole desperately sad individuals in need of mainstream recognition. They are your first prey. Compose one of them a jingle. It will mean you have to sit through a few hours of their shows to listen to their style (sic). Do a number of versions. Start with a couple of seconds of crash bang wallop with their name intoned low and slow in an American accent — they seem to like that sort of thing. Go up to a couple of minutes of background music for them to chat over. They will almost certainly use your jingles, and if they don't, try another DJ.

• PLAY SCHOOL

Next, offer to do a soundtrack to a play for a local theatre group. They may be the worst actors to ever stand on a stage, but the play will only last a couple of performances and be watched by half a dozen people, whereas the credit you get will last forever. You'll get your name on the poster, but don't expect much remuneration — you probably won't get much more than £50. However, the discipline of writing mood music for a village hall play is not a million miles away from writing a tense scene for a horror film.

• MUSIC OFF THE SHELF

Library albums (and there are more of them on the market than there are drops of water in the ocean) are CDs full of jingles and musical beds that no-one wants — at the moment. Some people can literally make £100,000+ a year from these, and others can make less than £1.73. Personally I've never done any library music, as I come from the lazy bastard school of composition, and need a deadline to panic me before I can even be bothered to remember where middle C is.

This is how library albums work: a company releases a CD full of tracks which the composers give them free of charge (maybe musician costs are covered, if you're established in this field). Thousands of copies are given to production companies, TV and radio stations, and so on. Then the waiting starts — it could be a couple of years. Eventually one of the tracks will be used by a broadcaster who doesn't want the hassle of getting a talented composer to write music specifically for their needs but would far rather wade through a million generic CDs full of tracks called 'Evening Mist'. The composer and the library company split the performance royalty 6/12ths each (see 'Right Royalty Rip-off?' box for an explanation of royalties).

Library albums are usually set out with tracks at full length (approximately two and half minutes) as well as in convenient 30-second, 20-second, 10-second and 5-second versions. For a full a list of the relevant library companies, look through your industry directory. What do you mean, you haven't got one? A good industry directory is as essential to being in the media business as headed notepaper. The classified section at the back of this magazine has a selection of the best directories on the market. [Also see our feature on library music in the February '96 issue of *SOS*.]

• JINGLE SELLS

There are a number of jingle production companies in and around Soho who can turn round any length or style of music in an afternoon. On the whole, the results they achieve make Karaoke backing tracks sound like the greatest music ever produced. They will inevitably expand as the TV and radio networks increase, and maybe there's a place for you on their conveyor belt. We all have to start somewhere: the experience a composer could gain working in that environment might be invaluable, and you'd be paid a wage, which is something most composers never have. Fortunately, though, quite a few commissioners hate that calibre of music production, and the route into TV for independent composers is still very much open.

• MONEY TALK

When the time comes to actually get paid by a proper media company for your work, remember that money isn't a dirty word. One of the greatest lessons I was ever taught was to answer "I'm £250 per day" without stuttering, being embarrassed or backtracking when the questioner looked aghast. That was in the early 1980s; these days instinct helps me get the maximum amount on offer, which can be as low as £100, but that's the 1990s. If you come across as cheap, that's what they'll think of you and your work. Having said that, asking for a grand a day isn't going to cut any ice until you've got a couple of Oscars and a toilet full of BAFTAs.

The fact is, lots of money is made making music that never goes out on record. From the lifeless audio (I can't call it music), that brainwashes you in a lift, to the eerie, slow one-note pulse that accompanies a dark alley scene on a TV cop show, to the techno beat accompanying a corporate training video, music is bigger, more imaginative and certainly more fulfilling than the record industry's output would lead us to believe. And a piece of that action can be yours.

the complete wireless solution for your production

hand held audio

tel:0181~880 3243 fax: 0181~365 1131

Unit 2, 12~48 Northumberland Park, London N17 0TX

The Gateway School of Recording & Music Technology

a joint initiative with

KINGSTON UNIVERSITY

school of computer science and electronic systems

higher diploma in

Sound and Music Industry Service

A TWO YEAR COURSE STARTING SEPTEMBER 1997

0181 549 0014

e-mail: gateway education@king.ac.uk

http://www.king.ac.uk/~xe_516/gateway.html

TUBE - TECH

Superior Valve Technology

LCA2B

Compressor / Limiter (Stereo)

- Seperate compressor and limiter
- Freq. response: 5Hz to 50KHz (-3dB)
- Very Low Noise: <-85dBU
- Compressor ratio from 1, 6:1 to 20:1
- Compressor threshold: off to -10dBU
- Output gain control

MP1A

Two Channel Mic Preamp

- Gain from +20dBU to + 70dBU in 5Db steps
- Pad in front of input transformer (-20dBU)
- Tube push-pull output amplifier
- CMRR > 60dB @ 10kHz
- microphone input impendance = 1200Ω
- DI input impendance > 1MΩ
- Built in 48V phantom power
- Noise figure typical 5dB @ 200Ω
- freq. response 15Hz to 60kHz (-3dB)

Call now for a brochure and price list on the whole range of Tube-Tech Products

SYSTEMS WORKSHOP

PROFESSIONAL AUDIO TECHNOLOGY

The Old Smithy, Church Street, Oswestry, Shropshire SY11 2SP

Tel: 01691 658550 Fax: 01691 658549

CIS Mail: 100330, 3222

HAVE I GOT JINGLES FOR YOU!

The Have I Got News For You theme band, left-right: Steve Sidwell (trumpet), Phil Todd (tenor saxophone), Terry Disleyworld (piano), Ian (Stubby-R) Thomas (drums), Steve Donnelly (guitar) and some dodgy old bass-playing composer with sad sideburns (allegedly).

▶ to the library to borrow a CD of that country's traditional music, in order to get the groove of their rhythm. The beat sounded like badly timed clapping accompanied by someone whacking a biscuit tin with a hammer. I duly recreated a similar backbeat and added an inoffensive MIDI top line. It sounded just the ticket — to me — and I sent it off by Data Post. The next morning I got a call from the angriest man I have ever had on the other end of the phone. He was going absolutely ballistic because I had used the wrong type of biscuit tin, or something as insignificant as that, which made the music sound as though it was from a neighbouring country, who just happened to be their mortal enemies. They didn't pay and with Salman Rushdie in mind, I didn't chase them up about it.

"One of the greatest lessons I was ever taught was to answer 'I'm £250 per day' without stuttering, being embarrassed or backtracking when the questioner looked aghast."

ALLEGEDLY

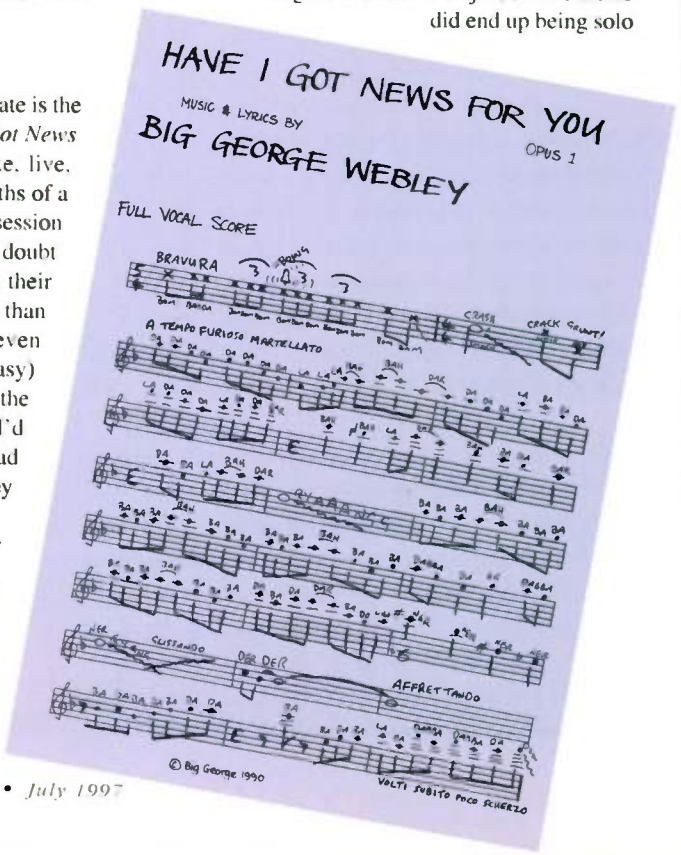
Probably my most notable jingle to date is the theme for the BBC2 series *Have I Got News for You*. It was recorded in one take, live, during a one-hour session in the depths of a basement studio in Soho. I used top session players to sight-read their parts and I doubt if the sax player and trumpeter had their instruments in their hands for more than five minutes. The first time they even looked at the parts (which are not easy) was as I was counting them in with the click track. As for the music itself, I'd only written it the night before and had scored the parts out on the train journey to the studio.

Due to circumstances beyond my control, the original theme I'd written for the show, which had been accepted, needed to be changed, along with other aspects of the show. I was told this news the day before the recording session was scheduled. It was too late to cancel, the players had been booked, and so there was nothing for it but to pen another theme. I knew the opening title sequence was 32 seconds long, but that included the four-second tympani drumming and Big Ben boinging sequence already completed in conjunction with the animator's storyboard. The end credits would be a little longer, so I decided to write a 45-second opus which I could edit down.

I knew the piece had to be manic, with a big kick at the end, and have a few demented twists and turns in the middle. So that evening I fixed a tempo (192bpm) and charted out the right number of bars. Next, I structured the piece — chord patterns, drum fills, stops, and so on — then it was time for bed, at 2am. Then it was up again at 7.30am for a nice cup of tea before getting the train to London, where I ignored the strange looks of my fellow commuters while I merrily "dah dah dah dahed" the top line to the piece, which I completed during the 45-minute journey. That was back in the summer of 1990 and the rest, as they say, is history.

HERE'S TWO I DONE EARLIER

I got a call to do some music for *Catch Five*, a series written and presented by Joseph (*Catch 22*) Heller, about the long-time dead artist Rembrandt. He was the bloke who painted voluptuous naked ladies laying about doing nothing much at all and old geezers either looking miserable or holding up pieces of paper. They wanted the music to be authentic to the period, although one of the producers said, with great authority, how Rembrandt used to listen to the solo pianoforte whilst working. I was more than pleased to inform him that the piano wasn't invented for over a hundred years after Rembrandt had popped his clogs. I didn't lose the job, but the music did end up being solo



piano, as that's what Rembrandt *would* have listened to, had it been around while he was alive.

Another piece for Channel 4 was the sport series *The Big Eight*. Once again, the budget didn't allow for an ensemble of musicians. Wheelchair basketball, featured in the series, is a fast-growing sport played by dedicated, tough athletes who are definitely not disabled in their approach to competitive action. I wanted to reflect the lightning speed of the game and the massive hardware pile-ups that occur on a regular basis in the music (wheelchairs move very fast and the crashes are spectacular). For the rhythm track I recorded the sound of a basketball bouncing in an empty school hall, which became the rhythm, and layered screeching guitars over the top. It is one of my favourite pieces.

DEADLINES

Deadlines are a crucial element of jingle writing. One minute the production team say they'll be listening to the latest version of (you hope) your 30 seconds of telly notoriety at their next meeting, early next week. The next thing you know, they've decided it's not quite right and they don't know why. Could you do a version a bit more... "umm, consumer driven" (sic), and can they have it early this afternoon? You, of course, panic, comply immediately and they in turn get round to listening to it in two days time. And before you know it the *Radio Times* is advertising the series with the producer's best friend from university doing the music that you were assured was 100% yours.

Don't worry: that doesn't happen all the time — just most of it. But if your work is good, you're able to bring it in on time and you've got a good (and flexible) attitude, you'll get on. Getting kicked in the teeth is just one side of the coin; the other is knowing that millions of people are listening to your music every week. SOS

RIGHT ROYALTY RIP-OFF?

The most important fraction in a composer's life is 12/12ths. It's how PRS (the Performing Right Society) work out the royalty payments from film, TV and radio performances. These days it's almost impossible to earn that fraction, as most production companies have cottoned on to a source of income they have no right to, and you have no choice but to let them have it. PRS made a suggestion a while ago that TV production companies who only administer a piece (that means 'do nothing whatsoever') are only entitled to 2/12ths of the income, but all production companies contract for 6/12ths of the royalty income. In theory you could kick up a stink about this, but it would probably end up in you earning 0/12ths, as they would get someone else.

"It's not all bad manners and deceit. Sometimes you can be in fear of your life."

SOUND SOLUTIONS

COMPUTER MUSIC SUPPLIES

Yamaha Soundcards!

Yamaha MU10	Only.....	£179.00
Yamaha SW60	Only.....	£129.00
Yamaha DB50	Only.....	£99.00

Turlte Beach Soundcards!

TBS2000	£159.00
Tropez Plus	£249.00
Pinnicle	£409.00
Pinnicle Digital I/O	£489.00
Fiji	£319.00
Fiji Digital I/O	£359.00

Software

Wavelab	£380
Cakewalk Pro Audio	£299
Koan Pro	£159
XG Edit Reg	£25
Sound 2 Midi	£99
Home Studio	£89
Cakewalk Pro	£179
Fast Edit	£179
Personal Comp	£69
Piano Discovery	£69
ReSample Pro	£99
Cubase	£299
Logic Audio PC	£399

Soundcards

Terratec EWS64	£449
Audiowerk 8	£499
Triple DAT	£1099
D Man Digital Audio	£229
EQ Man	£89
Maxi Sound 64	£149
Card D Plus	£569
Digital Only Card D	£339
Multi Wav	£449

Bits 'n' Bobs !

S/C Cable	£19.95
MK 161	£165.00
Creative Ess	£19.95
AWE CD's	£29.00
YSTM20DSP	£75.00
MK149	£109.95

More Software

Logic Audio PC/Mac Discovery	£269.00

Special Offer

Twiddly Bits and Newtronic Midi Files, Creative Esentials sample CD's all in stock at incredible prices!

We supply Master Keyboards, Software and all other Computer Music Supplies, inc Newtronic Midi Files, Sample CD's etc. Please phone for further offers...

Systems now available! e.g. Pentium 150, 32Meg, Tropez Plus & Cakewalk Pro Audio only £1770! Other Configurations available, phone for details..

The above is a small selection from our range..Please phone for items not listed.

Prices include V.A.T. No Credit Card Surcharges!

Tel: 01403 732606 Fax: 01403 732606

Web:http://www.soundsol.com

Email:sales@soundsol.com or Email:info@soundsol.com

Secure Online `ordering! Virtual Shop, News & Reviews, Music and more!!!

Don't tell anyone. They'll all want one.

NOT TRUE.

PR

DIRECT MAIL

ADVERTISING

EXHIBITIONS

BROCHURES

INCENTIVES

POINT OF SALE

CORPORATE ID

People don't buy what they don't know. Tell us, we'll tell them, they'll want one.

Call Gez Kahan on 01628 487820.

SWAN PUBLICITY LTD

79 - 80
North Road
Brighton
BN1 1YD
01273 676835

THE GUITAR, AMP &

You name the price you want to pay (within reason)
Yes we are huge!

Phone: 01273 671971 - 676835

We are not just a guitar shop. Here are a few facts:

We are one of the largest outlets for hi-tech in the south

we are not box shifters & offer superb after sales service with 2 on site engineers + 7 experienced sales people.

We simply refuse to be beaten on price and will beg, steal or borrow to get you the best deal.

We stock all items & much more than our advert suggests. All are on demo within our huge 5000 sq ft showroom.

All members of staff run their own digital studios.

We are young and hungry for your business

We love P/X & secondhand deals

We specialise in crossover music, we offer 700 guitars & 25 drum kits to back up our huge hi-tech department

We can't print most of our prices because they are so low.

In just over 4 years we have gone from a £3000 bank loan + dingy backstreet guitar shop to one of the largest outlets in the south, why don't you ring or come in and find out why.

We are proud to offer the incredible 0% finance over a period of 24 months

Here are a number of amazing finance deals we can arrange in under one hour. It's easy!

1. Fill in a simple form over the phone **2**. We send you the form to sign **3**. Send it back & we despatch the goods
It really is that simple, Read on.

KEYBOARDS/SYNTHS

	Deposit	Per Month
Korg Trinity	£170	£63.54
Roland XP10	£40	£14.79
Korg X5D	£60	£22.48
Korg X5	£50	£18.70
Roland XP50	£99	£37.50
Roland JD800	£150	£56.20
Roland RD500	£150	£56.20
Roland XP80	£139	£52.33
Korg Prophecy	£85	£31.87
Korg Trinity Pro	£275	£103.12
Korg Pro X	£335	£125.62
Yamaha ANIX	£99	£37.50
Yamaha CSIX	£59	£22.50
Fatar Studiologic 1100	£79	£29.83
Fatar Studiologic 880	£60	£22.29
Alesis QS6	£79	£29.83
Alesis QS8	£99	£39.50
Alesis QS7	£170	£63.54
Roland A33	£43	£16.08
Yamaha QS300	£120	£44.79
Korg X3 Interactive Workstation	£99	£37.50

We stock many many more drum modules and sound modules. We refuse to be beaten on price and will provide you with service and technical support second to none!!

SOUND MODULES

	Deposit	Per Month
Roland JV 2080	£140	£52.29
Roland JV 1080	£99	£37.50
Roland SC88 Pro	£70	£26.20
Roland MDB1 Bass - Drums	£40	£14.95
Roland MC303	£56	£21.37
Roland PMA5	£39	£14.83
Yamaha MU90	£60	£22.29
Yamaha MU80	£55	£20.62
Yamaha MU50	£38	£14.20
Yamaha P50	£35	£13.08
Yamaha VL70	£50	£18.70
Yamaha SU10	£30	£11.20
Yamaha RY20	£38	£14.20
Yamaha QY700	£99	£37.50
Emu Planet Phat	£96	£35.95
Emu Carnival	£99	£37.50
Novation Drum Station	£50	£16.83
Novation Bass Station	£40	£14.95
Korg NS264	£60	£22.29
Korg X50 Module	£50	£18.84
Korg X5 Module	£39	£14.83
Waldorf Pulse	£60	£22.45
Waldorf Pulse Plus	£69	£26.08
Akai Vintage Synth	£30	£11.25

DIGITAL RECORDING

	Deposit	Per Month
Tascam DA20	£79	£29.83
Roland VS880	£149	£56.08
Fostex D90	£149	£56.25
Fostex D80	£129	£48.75
Fostex DMT8VL	£99	£37.50
Fostex XR7	£49	£18.75
Fostex XR5	£39	£15
Fostex D5 Dat player	£87	£32.83
Tascam 564	£109	£41.25
Tascam 424 Mark II	£53	£19.83
Tascam 414	£35	£13.08
Yamaha MD4 Mini disk	£90	£33.70
Yamaha MT4X	£49	£18.75
Alesis Adat	£249	£93.75
Roland VS880!	£235	£88.49
Akai DR16	£399	£150

SAMPLERS

Akai S3200XL	£350	£131.20
Akai S3000XL	£179	£67.33
Akai S2000	£99	£37.50
Akai S20	£49	£18.75
Akai CD3000XL	£199	£75
Akai MPC200	£119	£45
Emu E6400	£235	£88.49
Emu ESI32	£99	£37.50
Emu 4K Turbo	£403	£150.91
Yamaha A300	£129	£48.58

Roland

"PRICE CRASH - PRICE CRASH"

ROLAND KEYBOARDS

XP 80 ..... £1399 Call
XP 50 ..... £999
XP 10 ..... £395
JP 8000 ..... £1495 call for amazing quote
RD500 ..... £1295 Great digital piano with free stand worth £250
NEW VK7 ..... £1695 Incredible new organ
Moneyback guarantee on this one!
A33 ..... £349
The best value mother keyboard around
NEW RD500 MK11 ..... In stock In stock £call

MODULES AND SEQUENCERS

JV 2080 ..... £sorry your gonna have to ring us for an amazing quote on the worlds ultimate expandable module.
JV 1080 ..... £849 Industry Standard!
SC88 Pro ..... £call "117 voices"
NEW MBDI ..... £399 Call - Great new bass and drum module
Dance module ..... £299 PRICE CRASH (RRP £495)
Vintage Synth Module ..... £299 PRICE CRASH (RRP £495)
MD303 ..... £Best price in the universe.
We promise for by far and away our best selling piece of hi-tech equipment!!
VS880 £Great new price on this stunning 8 track hard disk recording unit with digital f/X and mixer. *BEST SELLER....BEST SELLER*
GR30 - Probably the best guitar synth ever made. Trust us we know! Many more Roland products in stock - far too many to list but we're only a friendly phone call away!
Boss F/X Entire Range in stock ..... Call
Boss SX700 ..... £349
Boss GX700 ..... £369
Boss GTS £529

KORG

The award winning Trinity series range is stock at the best prices on the Planet!

Trinity Pro X ..... £2999 Much cheaper
Trinity Pro ..... £1999 Much cheaper
Trinity Plus ..... £1799 Much cheaper
Trinity ..... £1499 Much cheaper
N364 ..... £1299 Call
N264 ..... £999 Call
N5R Module £549
X5P Keyboard ..... £549 our best seling keyboard
OS R/W Module £269
XSDR Module £369
NEW X3 Interactive Workstation ..... £995 - in stock!
KORG PROPHECY "Techno Heaven"
We can offer the Korg Prophecy at the amazing price of £689 whilst stocks last - Be quiet on this one!
Korg Pandora - Great Guitar Box ..... £149!

YAMAHA

Just a small sample of our huge stock from the worlds largest musical manufacturer.

NEW AN1X .....£899 Probably the dance product of 1997 - Be Quick
NEW A3000 Sampler£call Incredible Spec and Sound quality make this one of the best value samplers ever!
NEW PRO MIX 03 ..£2999 Available 24 month 0% finance
Read the reeviews, come in for a demo. Nuff said.
NEW MU90R Module.....£call
If you see or are given a better quote on any Yamaha product please please ring and we will beat it.
AN1X mega synth.....CALL!
CSIX "Dance product of '96" £499
P150 Weighted Piano £1195
MD4 Mini disk recorder.....£699
SU10 Great pocket sampler £259
QY22 Pocket sequencer/Module etc. £349
MU90 Great new module.....CALL
MU80 Loads of voices.....£475
MU50 Great value module.....£275
QY700 'Amazing'.....£999
MU90R Superb spec new reverb £349
VL7 Virtual Acoustic module.....£429
P50 One of the best piano modules.£279
RY20 Great drum machine.....£289
MDFII Data files £249
MU5 Great budget module £179
Rev100 Nice 18 bit reverb.....£199
QS300 Dance workstation.....£949

AKAI

Simply the Best

NEW S20.....£495
Killer new budget sampler We've got 'em".
3200XL.....£Not allowed to print!
3000XL + free zip drive - free 32 meg all this for .....£1695 - Mega!
3000XL CD Free 32 meg.....£1895
2000XL ....£999 + free 16 meg + Zip drive
We stock and have on demo the amazing
DR16 ....
DR8 .....
DR4 .....
Please ring or come in and we can discuss some amazing discounted prices with you
Vintage module...£249 (RRP £299)
Piano module.....£249 (RRP £299)
Gen Midi moodule .£249 (RRP £299)
Re-Mix.....£695
MPC 2000.....£1195
No one can tell you more about this product than us.

Ring for price, advice or info.

E-MU

This months mega E-MU details

E6400 Sampler.....£1995 + free 16 meg
ES132 .....£895 much less
Planet Phatt.....£799
Orbit 2.....£799
Carnoval.....£799
Call for Mega deal on E4X and E4X Turbo. Launchpad Midi Performance Controller On Demo.
Morpheus £799

MAIL ORDER HOTLINE

WRH

KEYBOARD CENTRE

5000 Sq Ft of showroom!!! 9 experienced staff!!
Hi-Tech recording specialists

Fax: 01273 671236 - 671971

3 Phone Lines
01273 671971
01273 676835
01273 671236

DIGITAL AND ANALOGUE RECORDING AND MASTERING

Fostex D90	£1495 Call best UK	Yamaha MT4X	£395
Fostex D80	£1095	Yamaha MT50	£275
Fostex DMT8 VL	£895	Sony MDX4 Minidisk	£799
Fostex D5 Dat	£695	Sony MZR30 Portable minidisk	£329
Fostex XR7	£399	Sony DTCA6 Dat Recorder	£699
Fostex XR5	£295	Panasonic SV3800 Dat Recorder	£995
Fostex XR3	£219	Akai DR4 / Akai DR8 / Akai DR16	£Best UK Guaranteed!
Tascam 564 Minidisk	£call best UK	NEW FOSTEX D160 16 tracks digital. No compressor.	
Tascam 424	£429	SCSI Backup	£2999
Tascam 414	£349 Great price and free goodies!	Available 24 month 0% finance!	
Tascam Porta 3	£149	Alessis Adat - limited quantities	£1995
Tascam DA20 Dat	£CALL Not allowed to print!		
Tascam DA30 Dat	£999		
Yamaha MD4 Minidisk	£699		

MIXERS

Soundcraft PRICE CRASH	**PRICE CRASH**	Behringer 26.4	£Much less than £500
Spirit Folio SX	£479 call	Behringer 16.02	£195 Mega!
Powerstation	£849	Yamaha Pro Mix 03	£2999
Spirit Studio 24.8	£1695 Much much less	*Avaiable on 24 months 0% finance*	
Folio F1 16.2	£349	Yamaha Pro Mix 01	£1295
Folio F1 14.2	£299	Yamaha 16.4	£195 Built in digital F/X
Folio F1 12.2	£249	Studiomaster 8.2	£195
Spirit Notepad	£149 call	Studiomaster 12.2	£249
Mackie 24.8.2	£2350 (1 only)	Studiomaster 16.2	£299
Mackie 16.8.2	£1895	Studiomaster Vision	£799
Mackie 16.4 VLZ	£please call	Studiomaster Powerhouse	£649
Mackie 14.2	£379		
Mackie 12.2	£295		
Behringer Eurodesk	£call. Best UK Guaranteed		

We stock many more desks than these listed. Ring for a great quote on the Samson range. All are boxed and ready for 24 hour delivery to your door.

BEHRINGER

Composer	£229 call
Autocom	£149
Multicom	£229 call
Ultratex 1'1	£189
Dualatex	£129
Multigrade	£229 call
Ultracurve	£649 much much less
Cybermix	£395 Automate your desk

Entire range Behringer on demo

DigiTech

Digitech Quad	£429
Digitech TWK	£199
Digitech RP6	£249
Digitech Studio400	£665
Midi vocalist	£395
Vocalist Workstation	£649
Studio vocalist	£895

DBX - Renowned worldwide

DBX296	£225 Spectral Enhancer
DBX266A	£179 Compressor/gate - great value
DBX286A	£279 Mic Pre-amp/Processor
DBX120XP	£249 Subharmonic Synthesizer
DBX 1066	£465 Superb compressor/Gate

novation

Drumstation	£369
New Rack	£429

FATAR

New Studiologic series in stock

SL2001	£best UK
SL1100	£best UK
SL880	£595 call
SL760	£495 call
SL161	£195 call

SOUNDCARDS

Midiman Full Duplex Audio Card	£239
With Samplitude software	£289
Midiman EQ Man Card	£89
Turtle Beach Fiji	£369
Turtle Beach TBS 2000 Plug % Play Sound Card	£169
Turtle Beach Tropez Plus 32 voice sound card	£269
The Pinnacle Plug & Play card with Kurzweil synth engine	£479
As Above with Digital I/O	£579
Yamaha DB50XG	£119
Yamaha SW60	£149

Time + Space & Sounds OK
CD Sample Juke boxes on permanent Demo!

ALESIS

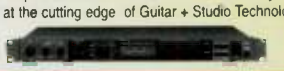
Quadraverb II	£549
QS8	£1495
QS7	£895
QS6	£599
Adat XT	£1995
Midiverb III	£295
Microverb IV	£195
Nanoverb	£135
3630 Compressor	£195
MEQ230	£229
SR16	£195
DM5 Drum module	£349

ZOOM

505
10-10 • 20-20
30-30 • 40-40
12-02 • 12-04
90-50 • 80-80

IN STOCK!!
We would definately lose our dealership if we provided our prices!Please call.

These products offer inbeatable value for money + stand at the cutting edge of Guitar + Studio Technology



KURZWEIL

Music Systems
SPECIALISTS

PC88	£1495
KZ500R	£2495
K2500 with sample option	£2999
Micro Piano	£349
K2000	£Ring for best UK

SOFTWARE

Cakewalk Homestudio	~~RRP £99~~
Cakewalk Professional	~~RRP £199~~
Cakewalk Pro Audio	~~RRP £329~~
Sound 2 Midi P>C>	~~RRP £99~~
Time Bandit MAC	~~RRP £329~~
Cubase VST MAC Score	~~RRP £449~~
Cubase VST MAC	~~RRP £329~~
Cubase 3,00 PC	~~RRP £329~~
Cubase 3,00 PC Score	~~RRP £449~~
Recycle MAC & PC	~~RRP £199~~
Wave Lab PC	~~RRP £599~~
Logic Audio PC	~~RRP £599~~
Logic Audio MAC	~~RRP £569~~
Emagic Sound Diver MAC	~~RRP £169~~
Opcode Vision PC	~~RRP £295~~
Opcode Studio Vision Pro MAC	~~RRP £499~~

+ Many Many More

CALL FOR A GREAT QUOTE

MICROPHONES

We stock hundreds of different microphones at incredible prices. Just a small selection:

Audio Technica ATM4050	£695
Audio Technica ATM4033A	£395
Audio Technica 4000C Condenser	£99 great value
Audio Technica ATM33 Condenser	£149
AKG C1000	£189
AKG C3000	£249
AKG414	£call
Rode NZ Mics	£395
Rode N1 NEW	£295
Rode Classic (value)	£995 Best seller
Shure SM58's	£95

Ring for a great quote on Beyerdynamic, Sennheiser and many many more we are unable to list.

STUDIO MONITOR

Soundcraft AGO's	£199 call
Soundcraft AG1's	£249 call
Alesis Mon 1's	£299 call
Alesis Mon 2's	£699 much much less
Yamaha NS10's	£299 call
Alesis Point 7's	£249 call
Just in: Harbeth DPM1's	£349

Probably the best value nearfield monitors we've ever heard!.

POWER AMPS

Alesis RA100	£299 please ring
Samson Servo 170 NEW	£199
Mass 150	£279 great deal ring
Studiomaster 700	£395
Studiomaster 1200	£549
Mackie 1400	£549

Many more in stock

KEYBOARDS SECONDHAND/EX DEMO

Tascam DA 30 Mk I	**£549**
Akai S1100 (4Meg)	**£999**
Roland R8	**£249**
Roland TR 707	**£129**
Akai SO1 Sampler	**£129**
Korg T3	**£649**
Yamaha TG55	**£299**
Proteus 1	**£199**
Roland JX3P + Programmer	**£299**
Yamaha SY22	**£225**
ART Multiverb Alpha	**£249**
Alesis Quadraverb	**£249**
Behringer Multiband Exciter	**£CALL**
Samson 15Band EQ	**£149**
Casio VZ-8M Synth Rac	**£175**
Fostex B16	**£999**
Tascam 48 8 track	**£795**
Ensoniq Mirage	**£250**
Ex-Demo QY300	**£875**
Ex-Demo Korg Prophecy	**£649**
Akai 2800 Sampler	**£999**
Tascam MM3 Keyboard Mixer	**£395**
Sansui IMX 12 6 Track Recorder (with Mixer)	**£395**
Yamaha DPM7 Automated Mixer	**£595**
Studiomaster 8:2	**£149**
Ex-Demo Korg Pro X	**£1995**
Ex-Demo Roland XP80	**£1149**
Yamaha DX7	**£249**
Yamaha SK10 Keyboard	**£99**
Roland 202 Strings	**£149**
Seck Electrin Pian	**£149**
Ex-Demo Yamaha QY700	**£799**

All Ex Demo Equipment come with a full years written guarantee! & All secondhand equipment comes with a three month warranty!

700 Guitars in stock. All leading makes

Separate acoustic department

Massive drum department. 25 kits in stock !!

Amazing after service

Helpline

PA Specialists

Installations

0% Finance

Next Day Delivery

Easy Parking

Educational Discounts

Demo Suite

WE ARE THE ULTIMATE HAGGLERS!

PLEASE RING NOW!!

01273 671971

Sample shop

Our regular look at the hottest new sample CDs and CD-ROMs.

SAMPLING SOUND SYSTEM: ROOTS REGGAE

(MIXED-MODE CD/AKAI CD-ROM)

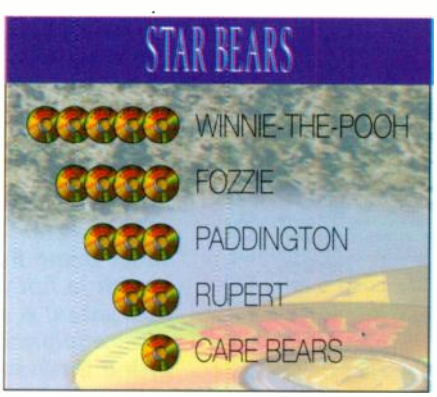
Sampling giants East West and the Swedish company Sounds Good have put their heads together and come up with a budget library that delivers a good selection of sounds for a third of the price of regular sample CDs. Retailing at £19.95, all the discs in the library (currently seven releases) come as either dedicated Akai CD-ROMs (for the slightly higher price of £39.95), or as mixed-mode CDs featuring all the sounds in standard audio, WAV and AIFF formats. Volume seven, *Roots Reggae*, is a good example of how keeping the cost down doesn't have to mean compromising on quality. The standard of the material is just as you might expect from a major big-budget sample CD, but the actual recorded tracks take up only 32 minutes of CD time.

Roots Reggae contains a smaller than usual but none the less sensibly chosen selection of samples in the form of drum-kit loops, guitar grooves and licks, and Hammond B3 and Clavinet sampled phrases, as well as a good number of percussion and bass parts.

Interestingly, this CD has a very 'traditional' reggae feel in that all of the parts are performed and recorded live; if some of the samples are a touch rough around the edges, it all adds to the overall laid-back style that any good reggae track delivers by the truckload. Although the drum loops and fills represent a good cross-section of current reggae flavours, the emphasis seems to be on the excellent Hammond and guitar chords and licks. The recording quality is good throughout. The layout of the samples within the tracks has also been thought through well: chords are provided in both major and minor for each of the 12 semitones in the octave. This flexible approach is also evident in the Clavinet licks and guitar loops: although not every possible combination of key signature is accounted for, there's still more than enough here to render this release useful and often quite inspiring.

Percussion-wise, all the reggae trademarks are featured (including some wonderful Timbale parts); the tempos range from 60 to 90bpm in increments of 10. Scattered among the groove and loop tracks are a handful of the individual percussion and single drum hits (mostly cymbals, hi-hats, snares and kick drums). These work well enough, and while the modest number provided here could never hope to compete with bigger releases, the sounds themselves are a welcome inclusion and eminently useable just the same. The presentation of these sounds as WAV files worked fine on my PC and I didn't find any major glitches to speak of, either.

In conclusion, for less than £20 you get access to a great source of raw, unprocessed reggae sample material. Sure, at only half an hour it's unlikely to keep sample-hungry power users amused for very long, but samplists working to a tight budget who are unwilling to sacrifice quality in their search for good material could do a lot worse that consult the Sampling Sound System. *Paul Farrer*



SAMPLING SOUND SYSTEM: POPPED VOL 1

(MIXED-MODE CD/AKAI CD-ROM)

Another volume in the Sound Sampling System from Sounds Good, *Popped* is part of the 'Drum Tools' section of the library. It basically consists of two drummers (Mats Persson and Christer Jansson) performing a series of loops, fills and individual single samples on a number of standard studio drum kits. As the title suggests, these loops have a strong pop bias — as is freely admitted in the track titles, which name the bands or artists who 'inspired' the loops: Peter Gabriel, Tom Petty, The Who, XTC, Cream, The Small Faces, Blur and New Order among them. The audio section of the CD times out at just over 24 minutes and the drum loops are categorised according to tempo and stylistic content; as usual, the tempos go up 10bpm at a time, in this volume from 80bpm up as high as 150. This gives library owners a huge degree of flexibility when it comes to interchanging sampled loops and grooves between discs, and will also prove a big help to anyone without the ability to perform complex time-stretching or compression functions within their sampler.

The emphasis seems to be on more raw-sounding indie pop styles as opposed to hipper or more polished drumming. This effect works extremely well for a good number of the loops, but occasionally the 'rough and ready' approach gives the impression that the recording quality is not as good as it might be. There's a good range of snare and bass drum sounds, and the loops are faithful in tempo and style to the classic pop songs they have their roots in, but as the disc progresses to individual drum samples, there's more than just a hint of grottiness to a good number of the sounds.

As an introduction to the world of drum-sample CDs, *Popped* really does quite well: the flexibility of the tempo structures and the good number of fills and loops more than make up for the slightly disappointing single-hit samples — and, of course, the fact that all the samples have been chopped up and are ready to load into your computer as WAV or AIFF files will be a great help to many users. The playing is of a suitably high quality, the layout is logical, and if you're looking for some solid beats with a rich 'indie' feel to them, *Popped* will satisfy most samplists for a short while, if not longer. *Paul Farrer*

£ Audio CD £19.95 each; Akai CD-ROM £39.95 each. Prices include VAT; add £3 for delivery.
A East West, Suite 1A, 25 Meeting House Lane, Brighton, East Sussex BN1 1HB.
T Orders: Freephone 0800 393027. Enquiries: 01273 736733.
F 01273 328881.

The intelligent choice for digital mastering has to be 18 bit DCC. Why? - mirror-image reproduction, a greater dynamic range than 16 bit DAT or CD and a price that just can't be argued with. Philips 18 bit DCC recorders are used in thousands of studios across the UK. Like them, why not examine the facts then make the intelligent choice?

COMES COMPLETE WITH REMOTE

DCC730
£219 INC. VAT

18 bit digital stereo recorder with SP/DIF I/O ports, optical input, alpha-numeric infra-red remote control and all cables.

BONUS PACK
£269 INC. VAT

ADD A PHILIPS DCC HEAD CLEANING SYSTEM PLUS 10 PHILIPS DCC 90 MINUTE TAPES WORTH AN EXTRA £82!

DCC170
£199 INC. VAT

18 bit portable stereo digital recorder with optical I/O ports, SP/DIF input, remote control, earphones, rechargeable battery pack, mains adaptor, carry case & cables.

BONUS PACK
£249 INC. VAT

ADD A PHILIPS STEREO MICROPHONE PLUS 5 PHILIPS DCC 90 MINUTE BLANK TAPES WORTH AN EXTRA £75!

Intelligent Comment

'the recording quality is to all intents and purposes indistinguishable from DAT or CD. Indeed, if you're using the analogue input, you'll actually get a little more dynamic range than you would with a DAT machine.' ***Sound On Sound***

'... it's easy to forget you're listening to tape and not a silver disc.. the improved dynamics of the 18 bit system are again apparent... certainly there's no feeling that this is CD's poor relation.' ***What Hi-Fi***

'...the Philips exhibited excellent dynamics and a beautifully seamless sound that caught the air and space of the hall, subjectively far superior to when it was recorded from either analogue or 16 bit CD. ...All in all, I was seriously impressed with the DCC's'. ***Hi-Fi World***

'In contrast to the two MiniDisc (MD) machines, the DCC sounded bold and vital, and ultimately more engaging - there was more going on, giving the aural senses more of a workout. The treble sounded clean and crisp, without the fried-eggs quality of the MD recorders, but with plenty of detail and a more palpable sense of presence. ...the mid band was similarly more vital and engaging. The Philips was much more consistent than the others, with none of the rather crudely drawn quality that becomes apparent on MD when the music turns stressful...by far the best sounding of the three'. ***Hi-Fi Choice***

Discerning Rightly

'These new generation DCC machines start out by sampling the incoming signal not at 16 bits but at 18 bits which gives rise to a potential improvement in both dynamic range and residual noise of around 12 dB... DCC sounds just the same as DAT...The way DAT keeps going up in price, DCC could well become the home recording standard of the latter half of the nineties.' ***Sound On Sound***

'...DAT is starting to get out of reach with its escalating, almost elitist price range...The DCC730 is much better and cheaper than the recordable MiniDisc; it even makes a handsome partner for a direct-to-disk system. If only you could use it to back-up data I'd give up on DAT altogether. Go out and buy one...' ***The Mix***

'Philips allegedly invested £500 million in the research and design of DCC... the low-cost DCC730 could seriously challenge DAT's hold on the high-tech market. ...could encourage small studios to adopt the format over the increasingly expensive DAT alternative.' ***Future Music***

'I've used a good quality DAT machine for years and am no stranger to the way digital tape can render analogue sound dry and antiseptic. But the Philips simply wouldn't entertain the possibility, giving a surprisingly warm and fulsome rendition. The bass was particularly well-rounded and lacked the sense of sterility so common with digital. There was no trace of hardness higher up the frequency range.' ***Hi-Fi World***

'All DCC recorders will accept a digital input at 32, 44.1 & 48khz, which is good news for anyone who wants to transfer a DAT collection to DCC. DCC's ability to handle any sampling rate you can throw at it might even precipitate a glut of second-hand DAT machines!' ***The Mix***

★ ★ ★ ★ ★ 18-BIT

PHILIPS DIGITAL CCC

SRTL

All DCC products advertised here are available through a nationwide dealer network.
Call SRTL on 01243-379834 to place your order, request literature or locate your nearest stockist.

SRTL, Record House, Emsworth, Hampshire PO10 7NS

CALL SRTL ON 01243 379834 FROM 9.30AM TO 5.00PM FOR FREE DELIVERY

sample shop

STRICTLY 12 INCH

(AUDIO CD)

E-lab started out by releasing rave-orientated sample CDs with attitude, and carved a unique niche for themselves in a market that was maybe just a little too precious. Since then they've expanded their repertoire dramatically, often extremely successfully.

The brief for *Strictly 12 Inch* is to enable you to strip down a song and make it so boringly repetitive that it becomes a hypnotic dance-floor utility — there are drums with percussion, drums without percussion, and yet more drums with percussion, with four on the floor provided by the ubiquitous 909 throughout. All loops are prepared in stereo, and not too wide, and there's little or no reverb to be heard anywhere.

Track 1's demo is a typical mid-'90s 'remix' example, complete with 'Come on!' shout, sparse bass and drums, and a long-winded evolution: very stock in trade. (Though it sounds as though it was it knocked up in 15 minutes, it probably took all day.) Tracks 2 to 70 comprise several bars of programmed drum loops with parts dropping in and out, followed by the component loop snippets and single hits, but the beats never break beyond the bounds of 120 and 130bpm — safe as houses!

Tracks 71 to 86 feature around 10 programmed drum loops each, with the bpm between 120 and 130; most are one-bar, some are two. All fade out after two or three cycles, annoyingly and for no good reason. Full beats with snare, kick and hats all going predominate, and several versions of many patterns are offered, with the only difference being how many voices are currently playing.

Then come banks of single hits, mostly from old Roland drum machines. This section I found the most interesting. Some drum-machine samples have been taken in quick succession while knobs are being twiddled; others have been successfully tweaked. I found tidy examples of 909 kick, snare, hats and claps, enough to set you on the right track if you're still looking for an authentic club sound. Unlike 16-bit drum machines and multitimbral synths, which only ever seem to be stocked with thin cymbals and toppy hats, these tracks have hi-hats with a bit of meat in them.

None of the beats are useless, but neither are there any really roasting rhythms, though I did pick off about 20 patterns into my sampler which I thought had sufficient movement in them to justify a little experimentation later. Don't expect to get inspired to write a hit tune when auditioning this CD, either: I found it somewhat lacking in both inspiration and usefulness. After all, if you're going to base a remix around a new programmed (as opposed to live or rare groove) drum beat, then having individual kick, snare, and hi-hat tracks is a must. A set of MIDI files corresponding to specified keyboard sample maps would have dramatically expanded the flexibility of this product — and other products have done this before. There is, in fact, a second CD demo-ing several e-lab products which does contain some MIDI files, but none correspond to *Strictly 12 Inch* as far as I could ascertain — a chance missed. And why didn't e-lab offer a set of topped and tailed ready-to-sample short loops, instead of a single long sequence per track which leaves significantly more twiddly work for hard-pressed samplists already suffering from terminal RSI to do? Because a half a minute or so of unbroken drums gives the untrained ear a clearer picture of how beats might work in a mix. Which prompts the question: who is this product aimed at? Not, I suspect, at experienced re-mixing engineers, or even your average *SOS* reader. No, you're looking at bedroom jocks with a couple of Technics turntables and a PC. That must limit the potential market for *Strictly 12 Inch* to about two million hopefuls in the UK alone...

Wilf Smarties

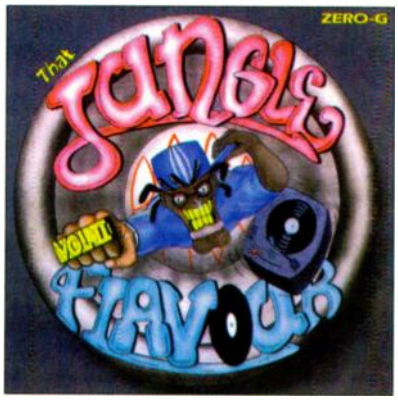
£ £59.95 including VAT and UK p&p.

THAT JUNGLE FLAVOUR VOL II

(AUDIO CD)

This is the sequel to Zero-G's useful *Vol I* (though it wasn't called that then). Loops come first, 350 of them. One-, two-, and four-bar loops are presented as four-bar patterns with no sleeve indication of how many bars you really need to sample. I guess with RAM at a fiver for 128Mb nobody cares about wasting digital space any more, but my S770 can only stock up to 16Mb and there must be thousands of time-limited S1000s still in active service out there. The loops are mono, not entirely clean, and quite heavy on the snare. Nearly all are programmed using single hits or very short live snips, usually an eighth of a bar long. This tends to give a gated, nervous feel.

The initial impression is authentically jungly, but not as leftfield or as original and diverse in content as the very first Zero-G Junglist product, *Jungle Warfare*. This relied heavily on



cliffhanger fills to provide drama, whereas the loops here chug along almost inconspicuously. Tempos are all around the 170 mark, though the occasional half-speeder is included.

Track 18 and a rubbery fade-in fill is the first pattern to really grab my attention; a bit of Keith Le Blanc-esque rrrrrrrrrr sticks out on track 20. Tracks 25 and 26 espouse some pretty wild distortion. Track 28 includes some digital springiness and a time-stretched percussion part playing in more than one key, in the same pattern, at constant tempo. Interesting. Track 33 is worth checking out for a variety of reasons, filter-swept dub echoes and dual-speed cut-ups being two of the most persuasive. I do like the sound of filter envelopes mapped to key off or key on, or both. An old trick for S770 owners...

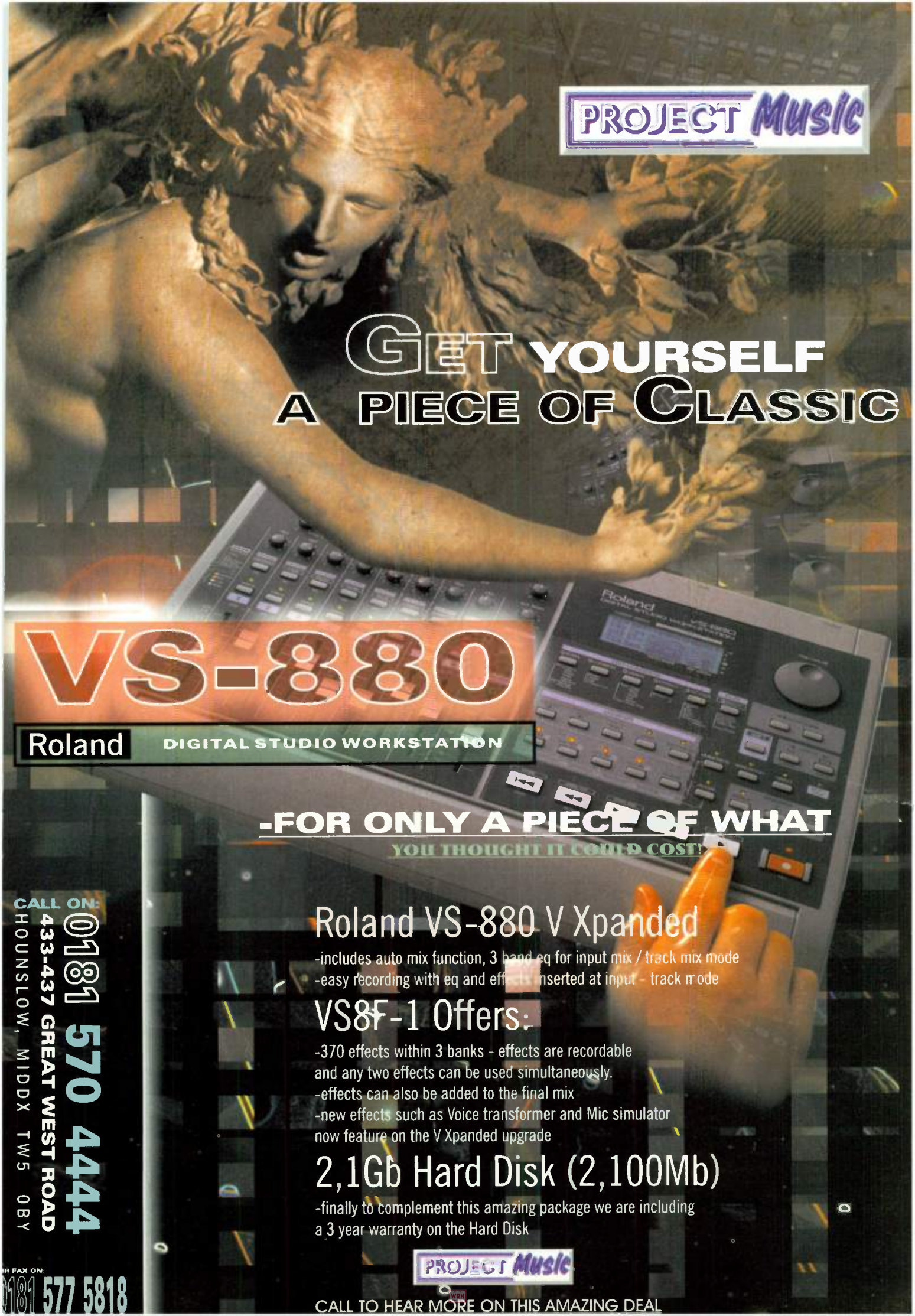
Suddenly it's stabs and tones time. Now this is more interesting: cartoons, horror and sci-fi, all with a light touch. Old classics re-appear, filtered or speeded up. A mish-mash of organ tones, orchestral strikes, weather, ethnic, rare and retro-synth samples (some of this reminds me of the excellent Cold Cut sample CD *Kleptomania*, in attitude if not in content). You can tell that these grubby samples are regarded with genuine affection by the creators of this disc.

Later you're hit by a set of spurious straight-from-the-synth shots, which are much less characterful than the found sounds, and probably irrelevant if you've got a decent soundcard: file under 'filler'. Some sustained chords suffer a three-semitone pitch-bend downwards after a second or two — a typical jungle cliché, in case you hadn't noticed.

The last section features some West Indian bantering with the content shrouded in dub. This is followed by the world's shortest scratching section — four OK samples — and a digital tone, infuriatingly placed at the end of the CD as usual.

Could these loops be out-takes from the first volume? They certainly don't improve on the original. With a few notable exceptions, they steer a pretty safe course over well-charted territory — more game park than jungle. And, of course, it's a year on, and a month is a long time in dance-floor styles. *Wilf Smarties*

£ £59.95 including VAT and UK p&p.
A Time & Space, PO Box 306, Berkhamsted, Herts HP4 3EP.
T 01442 870681.
F 01442 877266.
W http://www.timespace.com


PROJECT Music
GET YOURSELF
A PIECE OF CLASSIC
VS-880
Roland
DIGITAL STUDIO WORKSTATION
-FOR ONLY A PIECE OF WHAT
YOU THOUGHT IT COULD COST!
Roland VS-880 V Xpanded
-includes auto mix function, 3 band eq for input mix / track mix mode
-easy recording with eq and effects inserted at input - track mode
VS8F-1 Offers:
-370 effects within 3 banks - effects are recordable
and any two effects can be used simultaneously.
-effects can also be added to the final mix
-new effects such as Voice transformer and Mic simulator
now feature on the V Xpanded upgrade
2,1Gb Hard Disk (2,100Mb)
-finally to complement this amazing package we are including
a 3 year warranty on the Hard Disk
PROJECT Music
CALL TO HEAR MORE ON THIS AMAZING DEAL
CALL ON:
0181 570 4444
433-437 GREAT WEST ROAD
HOUNSLOW, MIDDX TW5 0BY
FAX ON:
0181 577 5818

Cheap Shots

SNAPSHOT MIXING ON A BUDGET

Fully automated mixing could make your life a whole lot easier, but if you can't get your hands on a suitcase full of banknotes, CRAIG ANDERTON has some ideas for achieving similar results at minimum cost.

How many times have you been working on the perfect mix, only to blow it in the last few seconds by forgetting to bring down (or up) a particular instrument? (Those with expensive automation systems can flip to the next article.) Well, don't feel bad: it's a common problem, and one of the solutions is automated 'snapshot' mixing.

The snapshot approach assumes that mixer settings are relatively constant for several measures at a time. Therefore, a mixer with snapshot automation stores all control settings (or at least level settings) as a recallable 'snapshot'. As you play a song, each time the mix needs to change, you move the controls and store the settings as a snapshot. You can then superimpose the occasional dynamic fader change (such as ducking a bad note, turning up an effects send briefly, and so on) without having to think about the rest of the control settings.

Some mixers use manual snapshot recall, others are triggered by MIDI program changes, and still others use an internal sequencer to trigger a series of snapshots in order. In any event, the end result is a more precise and recallable mix.

However, mixers with this capability are relatively expensive. Even low-cost external fader boxes (the Niche ACM, for example) might be too much for a budget already strained by buying a hard-disk- or digital-tape-based system. Fortunately, there are some low-cost snapshot solutions using gear you probably already own. We'll cover two methods: one for those with analogue multitrack tape recorders who mix down to DAT and also have access to two tracks of hard-disk-editing capability; the second, simpler method is for those with multitrack machines that use digital tape (Alesis ADAT, Tascam DA88, and so on) or hard-disk technology (Roland VS880, Vestax HDR, Emu Darwin, Otari Radar, and so on).

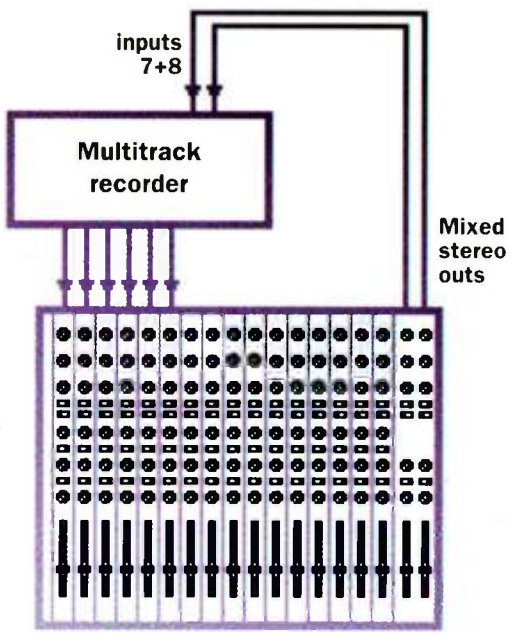


Figure 1.

SNAPSHOTS *A LA* DAT

Here's the procedure if you're mixing down to DAT from an analogue multitrack. The idea is to record the mix section-by-section to the DAT, changing settings between each section as necessary, then using the hard disk editor to 'splice' all the pieces together into a final mix. Note that if you don't have a DAT but prefer to mix down to half-inch analogue or something similar, you can follow the same basic idea but do your splicing with (gasp!) razor blades instead of using a hard disk system.

1. Set up your mix, and start mixing to DAT.
2. As long as the mix is okay, keep recording to DAT.
3. As soon as there's a problem, or you want to make a change, stop the analogue tape, then, a few seconds later, stop the DAT.
4. Rewind the analogue machine to before the place where you need to make the change.
5. Play back the multitrack without recording to DAT, and set the mixer controls as desired for the next section.
6. Rewind the analogue machine to about 10 seconds before the point before you made the changes (the reason for rewinding before the splice point is to make sure that the signal after the splice point includes any reverb tails or other time-based processing).
7. Set the DAT to record, then put the multitrack into playback. Record the next section of music to DAT.
8. Repeat steps 2-7 until the entire song is mixed.
9. Your DAT now consists of several sections of the song, each mixed optimally and separated by a little silence.
10. Bounce the DAT over to your hard-disk editing system.
11. Play back the hard disk until you reach the splice point that will define the end of the first section. Define a region between this point and what will be the splice point in the next section, then cut. Caution: make sure the 'splice' occurs on the beat, or where there's something like a heavy snare hit, as this will tend to mask any abrupt level changes.
12. Keep splicing the various parts until you end

up with a final mix, then bounce this back to DAT for archiving.

Although this method helps create perfect mixes, it is time-consuming and requires two processes: making the original mixes, then doing the off-line editing on the hard disk. The next method is faster, easier, and more intuitive.

SNAPSHOTS *A LA* DIGITAL MULTITRACK

One side-effect of digital recorders (tape or hard disk) is that they have brought back the art of pre-mixing. This is partly from necessity: with eight tracks as the standard entry-level format, you'll probably need to pre-mix if you want a complex, layered sound. But digital audio also makes quality pre-mixing possible — unlike pre-mixing with analogue machines, the digital process doesn't build up noise and distortion.

Our second snapshot method uses two unused tracks on your digital-tape or hard-disk multitrack to hold the final mix. The downside is that, with an 8-track, you'll only have six tracks left for basic recording; this method works best if you have a lot of tracks available to start with. However, the advantages of this type of mixing are quite compelling (especially with 16 or more tracks) as it gives snapshot mixing 'for free.' Here's how to do it.

1. Connect the system as shown in Figure 1, where the recorded tracks go through the mixer to two unused tracks.

2. Go to the beginning of the song, put the multitrack into Record, and start mixing to the two unused tracks.

3. As long as the mix is okay, keep recording.

4. As soon as you want to change the mix, stop the multitrack and rewind prior to where you wanted the mix to change.

5. Play back the multitrack and adjust the mix levels, EQ, and so on.

6. Rewind the multitrack to about 10 seconds before the point where you want these changes to kick in.

7. Punch in at the precise moment where the new mix should take over. Unlike analogue, there's no punch-out gap to fret about (you can optionally use a rehearse mode, if available, to set and audition the punch points).

8. Repeat steps 4-7 until the entire song is mixed.

9. Your final mix is now located in what had been two unused tracks. Bounce them over to DAT (or whatever your mastering machine might be) using analogue or digital outputs, and you're done.

This is really a great way to mix, as it gives the advantage of intuitive, real-time mixing up to the point where you need to make a change, at which time you reset a few controls and carry on.

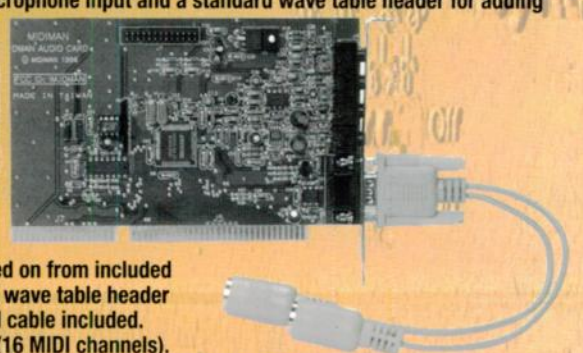
Fully automated mixing that recreates all fader and control moves is convenient and effective. But when you have to do more with less, either of the above approaches can give you a perfect mix without too much effort — and very little cost.

SOS

"How many time have you been working on the perfect mix, only to blow it in the last few seconds?"

DMAN - The PC Digital Audio Card for All Musicians

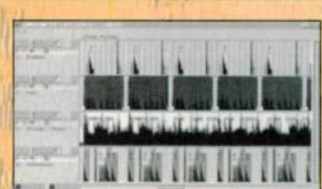
DMan makes it possible to turn your PC (486 DX 33 or better) into a digital recording studio. DMan is a high quality, full-duplex PC Digital Audio card.DMan allows you to monitor what you are recording while listening to previously recorded tracks - just what you would expect from a serious digital audio card. DMan also includes a high impedance microphone input and a standard wave table header for adding any quality wave-table daughter board. Oh, and it's guaranteed for life!



Features:
16 bit ISA card. 6 Available IRQs.
High quality digital specs: better than 85 dB S/N.
Stereo line level inputs and outputs.
Full-duplex for simultaneous stereo record and playback.
Full Windows 95 plug-and-play compatibility,
Windows 3.1 drivers also included.
Auxiliary stereo input is mixed with main stereo inputs.
High impedance microphone input internal 20 dB gain block can be switched on from included software to support mics with smaller signal amplitudes. Built-in, standard wave table header for addition of any wave table daughter board (optional). MIDI interface and cable included.
Built-in MPU-401 (UART mode) interface provides 1 MIDI In and 1 MIDI Out (16 MIDI channels).
The MIDI out can be used to drive either an optional on-board wave table daughter board or an external MIDI module.

Specifications:
16-bit A / D and D / A converters.
Sample rates of 11.025 kHz, 22.05 kHz, 44.1 kHz and 48 kHz.
Total Dynamic Range: 95 dB.
Instantaneous Dynamic Range: 85dB.
Signal-to-Noise: 85dB.
Total Harmonic Distortion: 02%.
Inter-channel Isolation: 95dB.
Frequency Response: 20Hz to 20 kHz.
Line Level Impedance: 13.6 k Ohms.
Line Level Amplitude Acceptance: 2 volts rms or less.
16 channel, UART mode MPU-401 MIDI interface.

DMan Digital Studio combines Dman with a 4 track version of Samplitude, the Award Winning PC hard disk recording software. Dman Digital Studio provides you with everything you need to turn your PC into a digital audio recording system.



Call us for full information or contact your nearest dealer.
MIDIMAN UK. Hubberts Bridge House, Hubberts Bridge, Boston, Lincs PE20 3QU.
Tel: 01205 290680. Fax: 01205 290671

midiman
GUARANTEED FOR LIFE

Midiman have over 30 other products including:
PC Interfaces (16ch up to 64ch) Sync boxes,
Mixers & Midi Accessories
All guaranteed for life

DMan™ Digital Audio Card

Cool World

COOL EDIT 96

PETER RIDSDALE gives his personal impressions of cult shareware program Cool Edit.

The two big windows show a waveform of Ronald Reagan's speech plus a spectral view, with one syllable highlighted and the small window showing colour customisation.

I don't know about you, but I tend to be deeply suspicious of shareware — it usually conjures up an image of something hastily cobbled together by a nerd, possibly containing some hideous undetectable virus and bound to play havoc with your IRQs and DMAs. However, my prejudices have been shaken by *Cool Edit*, a sample editor created by David Johnston of the Syntrillium Corporation, which is the nicest software sample editor I have ever used. Updates seem to come thick and fast from Syntrillium, and the latest is *Cool Edit 96*, a sleek, glossy, streamlined version of the already excellent *Cool Edit 95* (a *Cool Edit Pro* is in the pipeline). Frequent updates might suggest that the program is in need of perpetual bug fixes, but this seems not to be the case — in my experience, *Cool Edit* is absolutely rock solid. It's just that Syntrillium aren't content to rest on their laurels: they exude a real enthusiasm about the development of their software.

I didn't intend this review to end up as a testimonial, but I feel that I should let you know that I registered my copy many months ago — just as soon as I found out how powerful the program was. Like most good shareware, this has some limitations deliberately built into the freely distributable version of the program, which are unlocked when you register it.

Excellent value though *Cool Edit* is, it's only fair to point out at the outset that the program has no MIDI sample dump capability and no SCSI sample dump support. If you're transferring your finished edits to a soundcard sampler that can deal with any of *Cool Edit*'s supported file formats (see below) then this may not be a problem, but those working with hardware samplers will either have to resample via the audio outs on their soundcard or find a third-party utility able to convert one of the supported file formats into their chosen format.

To say that *Cool* profoundly changed my life would perhaps be a bit of an exaggeration, but to say that it radically changed my working methods would be closer to the mark. I had absolutely no problems downloading *Cool*, and it recognised my soundcard immediately. After connecting a CD player to my soundcard's phono sockets, I was ready to start.

RECORDING AND EDITING

Recording samples with *Cool* is straightforward — you first decide whether you want to work in mono or stereo and at 8- or 16-bit resolution. The default sample rate is 44.1kHz, but you can sample at any frequency from 6kHz to 48kHz if you need to. All the common soundfile formats are supported (including Macintosh AIFF and SND, Amiga IFF, RealAudio, *SampleVision*, SoundBlaster VOC, and of course WAV and RAW files), and there are some less common ones tucked away in there too. Hit the Record button, press Stop when you've done, and Bob is instantly elevated to close relative status. The sample waveform can be seen graphically displayed in green on black, but all ▶

NOW YOU CAN GET A BUILT-LIKE-A-TANK, 4-BUS, SWEPT MID, PFL/AFL LIVE SOUND CONSOLE GOOD ENOUGH FOR DIGITAL RECORDING... MACKIE'S NEW SR24•4 & SR32•4 MIXING CONSOLES.

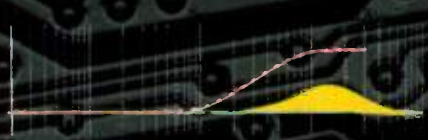
GREG MACKIE DID IT AGAIN... The new 4-bus SR24•4 & SR32•4 mixers are the first live sound consoles with the high headroom, low noise, VLZ circuitry and superb sound quality of our 8•Bus consoles.

That's because the SR Series consoles are equipped with many of the same features, components & design.

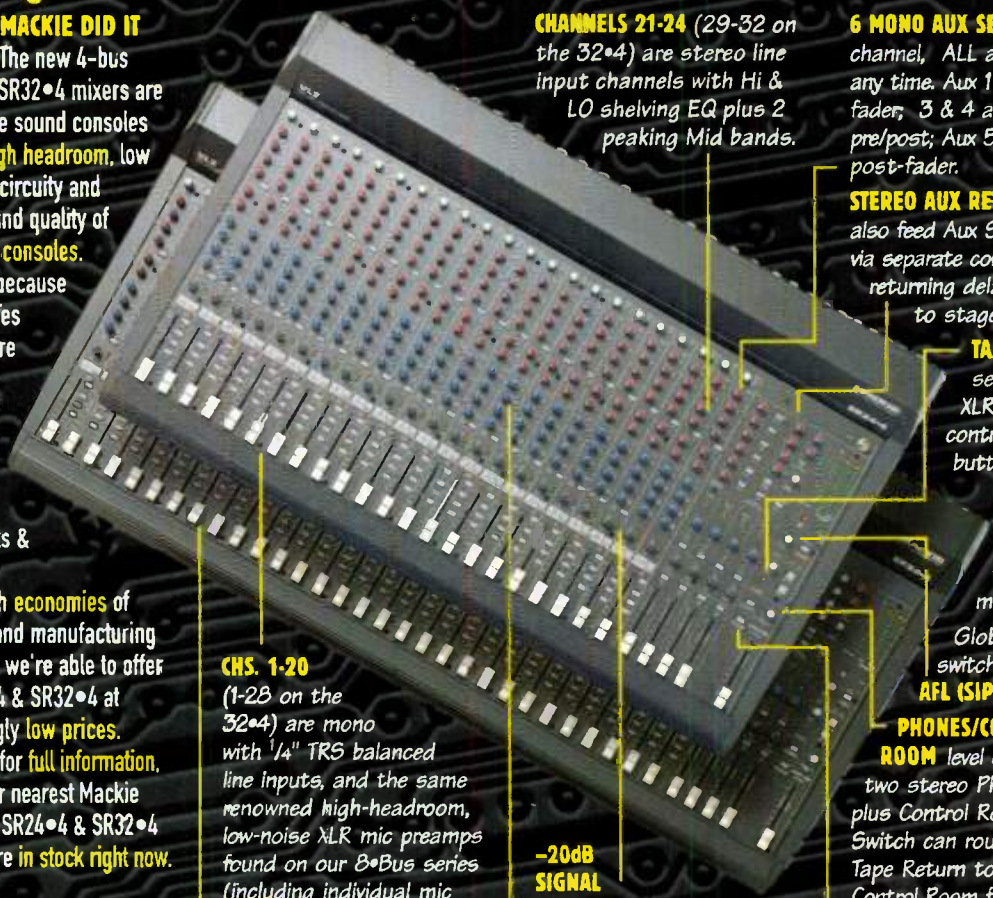
Through economies of materials and manufacturing processes, we're able to offer the SR24•4 & SR32•4 at astonishingly low prices.

Call us for full information, or visit your nearest Mackie dealer. The SR24•4 & SR32•4 consoles are in stock right now.

A NEW MACKIE INNOVATION: FACTORY "AIR" EQUALIZATION on each submaster! A unique peaking EQ circuit for enhancing guitars, vocals, drums — and sound reinforcement speaker systems themselves. Centered waay up at 16KHz, AIR applies a gentle boost to the extreme high end without affecting lower treble octaves like HI shelving EQ does (red line).



You've gotta hear AIR to believe the "high fidelity" effect it has on PA systems, especially those with horns and compression drivers.



CHS. 1-20 (1-28 on the 32•4) are mono with 1/4" TRS balanced line inputs, and the same renowned high-headroom, low-noise XLR mic preamps found on our 8•Bus series (including individual mic **TRIM** controls & globally-switched phantom power), **HI SHELVING EQ** with 15dB boost/cut at 12kHz, **SWEEPABLE MID EQ** from 100Hz to 8kHz (1.5 times wider bandwidth than other consoles), and 80Hz **LO SHELVING EQ** and **LOW CUT FILTER** with 18dB/octave roll-off at 75Hz just like on our 8•Bus consoles.

ALL CHANNELS feature **60MM FADERS** with the same precision log-taper as our 8•Bus series. New design uses a recently-developed, long-wearing wiper contact material for extended fader life and improved resistance to solid and liquid contaminants.

CHANNELS 21-24 (29-32 on the 32•4) are stereo line input channels with Hi & LO shelving EQ plus 2 peaking Mid bands.

–20dB SIGNAL PRESENT LED

SOLO switch. PFL or Solo In Place (SIP/AFL) via Master Section Solo mode switch.

"DOUBLE-BUSSED" SUB OUTS let you feed an 8-track recorder without repatching.

Balanced **XLR MAIN OUTPUTS** (plus balanced 1/4" TRS outs).

Dual **HEADPHONE OUTPUTS.**

INSERTS on every mono channel, sub & main buses.

Balanced **MONO MAIN OUT** with output level control.

6 MONO AUX SENDS per channel, ALL accessible at any time. Aux 1 & 2 are pre-fader; 3 & 4 are switchable pre/post; Aux 5 & 6 are post-fader.

STEREO AUX RETURNS also feed Aux Sends 1 & 2 via separate controls for returning delay or reverb to stage monitors.

TALKBACK has separate rear XLR input, level control & assign buttons to send Talkback to Main Mix or to Aux 1 & 2 for stage monitors.

Globally switchable **PFL or AFL (SIP) SOLO.**

PHONES/CONTROL ROOM level control drives two stereo Phone outputs plus Control Room output. Switch can route stereo Tape Return to Phones/Control Room for monitoring 2-track recording.

TAPE RETURN TO MAIN MIX also disables other inputs to mains so you can play music during breaks without losing channel and submaster settings.

STEREO

MACKIE™

Mackie Designs Inc. • USA • Represented in the UK by Key Audio Systems Ltd.
Robjohns Road • Chelmsford • CM1 3AG • Essex • 01245 344001 • 01245 344002

Cool Edit 96

Cool Edit 96 displaying a waveform of Ronald Reagan's speech.

colours — and even the toolbar — can be customised, if you're that kind of person. You can also see a spectral view of your sample, and there's a frequency analysis window as well, which analyses the slice of audio marked by the current cursor position. In earlier versions this was static, but now it tracks in real time, providing frequency and dB (level) information relating to whichever part of the waveform the cursor is passing over.

If you want to examine a small portion of the sample, just click and drag — the selected portion is highlighted in pale blue. The display at the bottom right-hand side of the screen will tell you how long your selection is (down to three decimal points) and, by continuing this process, you can zoom all the way down to individual sample level. There used to be a slight delay as the screen redrew itself, but in this version, it's virtually instantaneous. Any highlighted section can be copied and pasted in the usual way, and you have the option of deleting it using the Cut command; alternatively, you can keep the selected section and discard everything else using Trim.

If you're interested in creating loops, there's an automatic zero-cross function; combined with the visual enhancement offered by the zoom facility, this makes looping quite effortless. It's generally much easier to transfer the edited sample to a MIDI sampler and set the loop length to maximum, rather than fiddling with the start and end points in the sampler itself. If you have a sequencer that can handle audio tracks, you can simply import your edited WAV files directly into the sequence, which means you don't lose any sound quality. *Cool Edit 96* has been designed to be compatible with *Cakewalk*, which means that you can edit audio files without even leaving the sequencer program, and I find it works fine with *Logic Audio* on the PC.

THE TRANSFORM MENU

So far, what's on offer is pretty conventional, but it's in the processing of samples that *Cool Edit* really lives up to its name. In the unregistered version, only two of the Transform functions will work at a time and, although it's still possible to work with the program, you have to re-boot it every time you want to change functions — which rapidly becomes tiresome. This is, of course, quite intentional: once you've paid the modest registration fee, all 20 functions become available. At this point, I'll run through the processes as they appear...

• **INVERT:** this simply turns the wave over on its horizontal axis, providing a 180° phase inversion. This will make no appreciable difference to mono signals, but if you have a stereo file where one channel has somehow become inverted, you now have a means of fixing it.

• **REVERSE:** reverses the selected section of audio so that it plays backwards. An interesting effect can be achieved by copying a sound with a long decay, such as a cymbal or gong, then pasting a reversed version of it to its beginning. This produces a sonic palindrome, which sometimes disguises the original sound to the extent that it's no longer recognisable.

• **SILENCE:** this function replaces any selected section of audio by digital silence. You can also generate any amount of the golden stuff in the Generate menu.

• **AMPLIFY:** does what it says, but you can attenuate sounds here, too. Presets enable you to fade in and fade out, and level changes can be expressed in either decibels or percentages.

• **CHANNEL MIXER:** this provides control over stereo signal levels, and also lets you invert left or right channels independently. Aside from correcting problem files, you'll also be able to experiment with central image cancellation, which can sometimes allow you to remove the vocals from a track — though this is seldom entirely successful, in my experience. However, on some tracks the vocals are much diminished, and sound as if you're only hearing the output of the reverb without the direct signal.

• **DYNAMICS:** includes a compressor, an expander, a limiter and a noise gate. Control of this function is by means of a graph where the input value is along the x axis (horizontal) and the output value is along the y axis (vertical). A straight line from left to right has no effect on the sound because all input values match the output values. When compression is taking pace, the input/output gain line bends at the threshold point. Like many of these functions, this one could almost be the subject of a whole article on its own.

• **ENVELOPE:** this is one of the programs I use most often. For example, I often use a fade-in on the first few milliseconds of the sound being edited, and I'll sometimes fade out a little more

pros & cons

SYNTRILLIUM
COOL EDIT 96

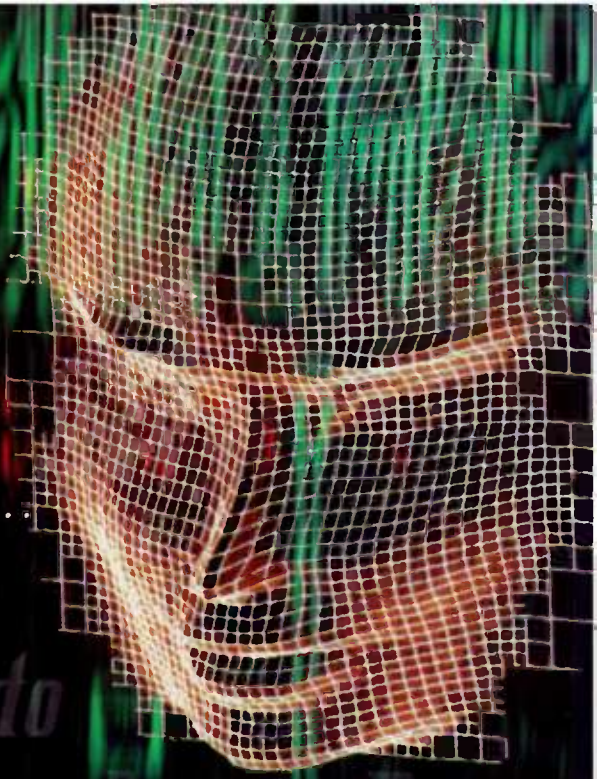
pros
- Extremely easy to use.
- Many sound-processing possibilities.
- Easy superimposition of samples.
- More than just a sample editor.

cons
- No MIDI or SCSI interface.
- No de-clicking.

summary
A brilliant sample editor which proves that shareware can be 'professional'. Syntrillium are constantly updating their software and a multitrack version of *Cool Edit Pro* complete with de-clicking and many other features is at the beta testing stage.

SOUND ON SOUND

Wake up to the new face of recording at the UK's best music store...



The incredible Roland VS880 Xpanded for just £295 deposit & 24 monthly payments of £83.33 interest free* at Musical Exchanges

OLD SNOW HILL, BIRMINGHAM B4 6HX - ENQUIRIES: 0121 236 7544
8-202 BINLEY ROAD, COVENTRY CV3 1HG: 01203 635766
p://www.musical-exchanges.co.uk email mx@dial.pipex.com

Finance
ubject to status -
ritten details on request.

MX

MUSICAL EXCHANGES
Mail Order: 0121 236 1839

LIFE'S A BATCH

Cool also has a macro or batch processor called Cool Scripts, which records every operation you undertake until you get it to stop. The subsequent batch file can be edited, then stored, and is useful if you want to repeat some long and involved chain of events. It also serves to remind you exactly how you arrived at a sound that you made six months previously; compared with an audio file, it takes up very little memory space. Use of this feature combined with the Info notepad means that you don't have to clutter up your hard drive with memory-guzzling WAV files.

▶ generously at the end of the sample. This completely eliminates start and end glitches.

• **NORMALISE:** will amplify the waveform to any specified percentage of maximum — the point where the peaks reach, but don't exceed, the digital clipping level. You can also equalise the two sides of a stereo signal, and there's the facility to set a DC bias, presumably for countering unwanted DC offsets.

• **DELAY:** allows up to 100ms of delay to be added, producing a slapback effect — good for those Duane Eddy sounds. There are, however, far more versatile time-altering functions elsewhere.

• **ECHO:** this provides repeat echo effects; the presets include both canyon and shower emulations. As with most of these functions, you can add your own presets. If you require even more control over your echo, then the next function might interest you...

• **ECHO CHAMBER:** presents you with a virtual room in which you can not only specify the room length, height and width, but also damping factors and the position of the sound source and microphone. If you've ever wanted to know what a room four feet high and 2000 feet long would sound like, here's the place to find out!

• **FLANGER:** this one also incorporates stereo phasing, and a brief glance at the names of the presets will give you a good idea of what's on offer — Under Water, High School Movies, Sci Fi 60s and so on. You also get more parameters to play with than on a typical effects pedal.

• **REVERB:** this section gives you control over reverb length, attack time, high-frequency absorption and perception/timbre as well as the usual mixing facility — but don't expect top-end reverb from an unassisted PC processor. If you want to put a canyon effect on a short sample, make sure it's followed by enough silence to allow the reverb to do its thing.

• **FFT FILTER:** another one that could have a PhD thesis written about it but, fortunately, you don't have to know the difference between a Von Hann and a Blackman-Harris windowing function to use it. Presets include the really useful stuff — notch, low-pass and band-pass filters, and so on — and you can learn a lot just by studying their settings, as in all the other parts of the program. I might also add that the on-line help is generally clear and informative.

• **QUICK FILTER:** essentially, this is an 8-band graphic equaliser.

• **NOISE REDUCTION:** an invaluable tool if you ever take samples from noisy sources, such as TVs or audio cassettes. It uses the same method as Digidesign's *DINR*: you first sample a bit of tape hiss or noise so that the program can subtract this from the wanted signal. You can eliminate mains hum, and even the residual noise, from your soundcard, but you can also get strange effects by taking away signal information from your signal. Noise profiles can be saved as FFT files, and, providing you are modest in your expectations, you can achieve a worthwhile reduction in background noise without doing too much damage to the wanted audio.

• **BRAINWAVE SYNCHRONIZER:** this is definitely the most curious part of the program, and, to be quite frank, I haven't yet got to grips with it. According to the Help notes, it's a way of 'waving' audio in order to stimulate brainwave activity. It's claimed that alpha, beta, delta and theta waves can thus be produced, inducing meditative states of mind. Sounds great for the New Age writers out there, but for the moment make mine a strong cup of coffee.

• **DISTORTION:** from light fuzz to the heaviest of metals is available, if you don't have some other means of generating the effect. Call me old-fashioned, but I'm usually more interested in getting rid of distortion than actively seeking it out — this might be just the job for grunging up dance loops, though.

• **MUSIC:** this one's a sample sequencer. By dragging notes onto a music stave, you can write a piece of music of up to 256 notes. *Cool Edit* will automatically transpose your sample to the pitches specified. You can also specify which key and octave to put it in, and it will even turn your sample into chords.

• **STRETCH:** allows you to expand or contract soundfiles, and you can choose to preserve either the original pitch or the tempo. If you have a sample ▶

A drum-loop waveform with the frequency analysis window open.

THE NEXT CHAPTER IN THE HISTORY OF SOUND HAS JUST BEEN WRITTEN

TRILOGY

MIXING CONSOLES

A new and innovative concept in mixing console design.

1 FRONT OF HOUSE

2 RECORDING

3 ON STAGE

The Trilogy establishes new and exciting standards that are unmatched by any other sound equipment currently available. Whilst most mixing desks are built with only one primary purpose in mind, the Trilogy has been designed as a front of house mixer, multitrack recording console and on-stage foldback board all rolled into one neat, remarkable package.

Live or in the studio, on-stage or out front, equally at home in concert hall, club, theatre, school or venue, the Trilogy will enhance any performance. Backed by Studiomaster's legendary quality control, the Trilogy is the ultimate workhorse for anyone who is serious about sound.

- 3 Band EQ with Mid Sweep
- Main & Group Outputs Balanced
- 6 Balanced Aux Sends
- 4 Stereo Aux Inputs
- PFL & Solo Monitoring
- Expandable - Trilink ™ System
- Internally Modular
- External Power Supply
- Robust Steel Construction

WHEN YOU NEED TO GET SERIOUS....

TRILOGY TRILOGY TRILOGY

Studiomaster

nt to get serious so please send me details of the TRILOGY 166, 206 & 140EX

me .....

dress.....

.....

.....Postcode.....

Tick here ☐ if you would like to be kept up to date with STUDIOMASTER'S product range.

Studiomaster House, Chaul End Lane, Luton, Beds
LU4 8EZ UK Tel 01582 570370 Fax 01582 494848
Studiomaster Inc. 3941 Miraloma Avenue, Anaheim
CA92807 USA Tel 714 524 2227 Fax 714 524 5096
http://www.studiomaster.com

Cool Edit with four different windows open.

▶ that is, say, 11 seconds long, but you want it to fit into a space 14 seconds long, you just set the time you want and *Cool Edit* will automatically work out the ratio. This is the place to transpose samples: you simply click through 11 semitones in either direction — octaves can, of course, be expressed as percentages. As you might expect, the bigger the shift you apply, the more the side effects show up.

USING *COOL EDIT*

Apart from the usual copy and paste options, *Cool Edit* also features Mix Paste, which allows you to superimpose samples. You can paste either from the clipboard or from any file on your hard drive, which is handy if you have a file that's too long to fit on the clipboard. Simply place the cursor at the point where you want your new sound to begin and then choose whether you want it to overlap or modulate. (The modulation is somewhat akin to ring modulation.) You can also specify how many times the sample is copied. If you make a mistake, it doesn't matter, because there are multiple levels of Undo: the default is five, but you can add more if you're cautious by nature. You can also open any number of screens and freely copy and paste between them.

Either side of the stereo can be treated separately, and this combined with Mix Paste enables *Cool Edit* to transcend its sample-editor status. Indeed, you can make whole compositions without ever leaving the program, and the experience of working with it isn't so much of editing but rather of sculpting. There's a kind of tactility about the shaping and collaging processes involved that makes this program a real joy to use.

Let me give you a practical example in order to illustrate the kind of thing you can do. First sample two minutes of orchestral music — something fairly abstract such as Debussy works best. Double-click anywhere near the centre of the screen and the whole piece will be highlighted. Reverse it and stretch it by three semitones, preserving neither the tempo nor the pitch. Move the cursor towards the bottom of the screen until an R (Right) appears. Move it to the top of the screen, and L appears. Double-clicking selects either the left or right channel. Cut the right channel and then paste it onto the left channel, but offset by a few seconds. (Debussy should now be clearly audible turning in his grave, as his piece will be rendered totally unrecognisable.) Next, Mix Paste a drum loop into the empty right-hand channel, then click on Loop Paste in the pop-up box and specify how many cycles you want. If you now want to add different sounds to the drum pattern, you can see very clearly where the beats are, and Mix Paste will quite seamlessly mix that prize bedspring sample right into the body of the rhythm. Without taking it any further, you already have a new piece of music that's a million miles away from both Debussy and Ragga.

You can also use *Cool Edit* to turn your CD-ROM into a normal CD player, providing you have the correct driver installed. If you take the trouble to enter track names, it will recognise the CD the next time you play it and will display the appropriate track listings.

As well as generating noise and simple waveforms, *Cool Edit* will generate and store telephone number tones. Hold your telephone receiver to the speaker as you dial, and then *Cool Edit* can automatically call up your local pizza outlet next time you're so engrossed in the program that you can't bear to tear yourself away to make food.

CONCLUSION

Cool Edit is the best sample editor I have ever used, and at the price, there's very little to criticise other than the lack of MIDI sample dump support. It might be nice if it had a de-clicking facility, and I'd like to see it being made MIDI-compatible but, given its low cost, these are hardly fair criticisms. True, it has a few features not directly related to the business of editing sounds, but who's complaining about that? No-one is actually forcing you to meditate or to set up an auto-dial telephone number database. All in all, it's extremely easy to use and does what it sets out to do elegantly and efficiently. SOS

"Hit the Record button, press Stop when you've done, and Bob is instantly elevated to close relative status."

info

E *Cool Edit 96* is downloadable from the Internet at the web address below — if you're still using Windows 3.1, you can run *Cool Edit v1.53*. You can try out *Cool Edit 96* for nothing, after which there are two levels of registration costing $50 and $25.
A Syntrillium Software, PO Box 62255, Phoenix, Arizona 85082-2255, USA.
T 001 602 941 4327.
F 001 602 941 8170.
W http://www.syntrillium.com/

Hi-Tech's No.1 ANDERTONS SuperStore

UP TO 18 MONTHS 0% FINANCE BY PHONE

You phone our 0% Hotline on 01483 38212 and we'll fill in a quick and easy finance form with you
We send the forms for you to sign, then you send them back with the deposit
We despatch the goods to you and you get months to pay back the balance
NO INTEREST CHARGES • MONTHS TO PAY

CALL NOW

CALL NOW

BEHRINGER MX8000 - 24 CHANNEL
Package with Fostex D80 and Looms
£2,499
Package with Adat XT and looms
£3,300

SOUNDCRAFT SPIRIT STUDIO 16 CHANNEL
Package with Fostex D80 and Looms
£2,149
Package with Adat XT and looms
£2,995

Fostex D90
In Stock!
Call for package deals with desks

Yamaha 03D
Interest Free Credit Deal
Deposit £295
18 Months @ £150

Monitoring Systems

New in Stock
Genelec 1029A
Power Monitors £749
Sub Bass 1091A
On Display
Soundcraft Absolute 4P
Power Monitors

DBX Dealer For:

DBX 1066 Compressor	£CALL
DBX 286 Mic Pre amp	£CALL
DBX 266a Compressor/Gate	£229
DBX 262 Compressor	£149

Akai DR8 + DR16
Call for prices with HD

Tascam DA38
Now Only £2199

Lexicon MPX-1
Call for latest Price

Stockists of the following DAT Recorders:

Panasonic SV3800
Tascam DA30 MkII
Sony DTC A8
Sony DTC A6
Tascam DA20

New Yamaha AN1X
Only £890
Interest Free Credit Deal
Deposit £98
12 Months @ £66

New Yamaha A3000
Only £1299
Interest Free Credit Deal
Deposit £129
18 Months @ £65

Korg Prophecy
Only £699
Interest Free Credit Deal
Deposit £99
10 Months @ £60

Fatar 880 Master Keyboard
Only £579
Interest Free Credit Deal
Deposit £79
10 Months @ £50

Yamaha MU90
Only £599
Interest Free Credit Deal
Deposit £99
10 Months @ £50

Soundcraft Folio SX
Only £479
Interest Free Credit Deal
Deposit £79
10 Months @ £40

	Total	Deposit	Payments
Akai S3000XL	£1799	£197	18 x £89
Akai MPC2000	£1199	£119	18 x £60
Alesis QS6	£699	£99	12 x £50
Yamaha CS1X	£599	£99	10 x £50

	Total	Deposit	Payments
Digitech Vocalist III	£729	£79	10 x £65
E-MU Planet Phat	£899	£99	10 x £80
E-MU Orbit V.2	£899	£99	10 x £80
E-MU ESI 32	£999	£99	10 x £90

	Total	Deposit	Payments
Korg N364	£999	£99	18 x £50
Korg N264	£1199	£119	18 x £60
Tascam 564	£1099	£199	12 x £70
E-MU E6400	£2519	£269	18 x £125

HARD DISK RECORDING SYSTEMS FOR COMPUTERS

Soundscape SSHDR1
The Soundscape SSHDR-1 is a professional hard disk recording system for the PC. As a stand along system it requires only a low cost PC system (486 DX or Higher) and a internal IDE hard drive. In our opinion Soundscape is the most reliable PC Hard Disk recording system we have sold. no configuration of your pc needed.
Call for a package with hard drive.

Steinberg Cubase VST for Macintosh + Korg 12 12 I/O
Cubase VST for the macintosh is an industry standard and forms a perfect partnership with the Korg 12 12 I/O PCI hard disk recording card
Call for package price

E-Magic Audiowerk 8 Packages with Logic Audio (Mac or PC)
Call for Package Price

New Steinbewrg Rebirth 338

For only £149
Software emulaton of one TR808 and two TB 303

Also in stock:

Passport Master track Pro 6	£99
Steinberg Wavelab 1.6	£CALL
Steinberg Recycle (Mac or PC)	£179
Samplitude Studio PC	£219
Session Software (Mac)	£99

MIDI Interfaces

MOTU MIDI Timepiece AV	£CALL
MOTU MIDI Express	£CALL
MOTU MIDI Flyer	£99
Midiman Portman 2x4	£129
Midiman Winman 4x4	£169
Voyetra V22 PC 2in/2out	£79

SERVING THE MUSICIAN SINCE 1964

ANDERTONS
58 & 59 WOODBRIDGE ROAD
GUILDFORD · SURREY GU1 4RF
01483 456777
01483 456722

ANDERTONS Services

PRICE MATCH
EXPERT STAFF
GUITAR REPAIR SHOP
AFTER SALES SERVICE
0% FINANCE
10 DAY EXCHANGE PLAN
PART EXCHANGE WELCOME
USED GEAR WANTED
6
MAIL ORDER
EXPRESS DELIVERY

FACE VALUE

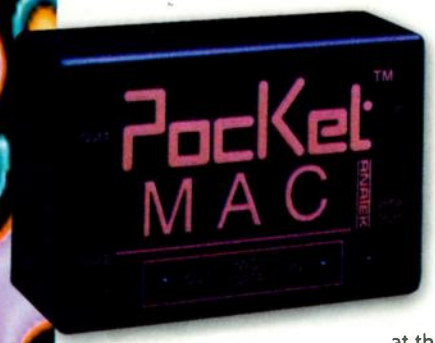
MIDI INTERFACES FOR THE MACINTOSH

When it's time for your Mac to start talking MIDI to the rest of your rig, the technology, like the truth, is out there. But should you spend a few pounds, or a few hundred? MIKE COLLINS has the information you need.

MIDI interfaces for the Macintosh have come a long way since the first simple one In/three Out designs, which have been available since 1984. The first enhancement was to provide for 32 channels of MIDI, by allowing the interface to be connected to both modem and printer ports, with 16 channels through each. Around the same time, SMPTE sync capabilities were developed, and units such as the Opcode Studio 3 became very popular. The next major development came from Mark of the Unicorn with their MIDI Time Piece I, which had eight Ins and eight Outs, each of which could carry 16 MIDI channels separately, making 128 in all. These units could be linked together to support more connections for larger rigs, making this the obvious choice for professional users. Opcode followed suit with their Studio interfaces, all supporting this Mark of the Unicorn multi-port standard — they can even be networked with the MOTU interfaces.

Opcode currently offer the widest range of interfaces for the Macintosh, many of them offering useful MIDI-processing capabilities. The Opcode Studio interfaces are actually good choices for live work as well, as they can be used to reconfigure your entire MIDI rig at the push of a button, to suit each new song.

Those on a budget will probably want to take a look at the Apple, Anatek, Altech and MIDIMan interfaces, which represent good value for money, but check out the budget MOTU units as well, as you may find extra features such MIDI Thru switches well worth the extra cash.



ANATEK

POCKET MAC

This is a neat little interface aimed at those on a budget. It does the trick — and won't cost you an arm and a leg!

- 1 In, 2 Outs.
- Supports 16 MIDI channels.
- LEDs to indicate MIDI activity.
- Self-powered.
- £39 including VAT.

info

A Mail Order, SOS Publications Ltd, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ.
T 01954 789888.
F 01954 789895.

APPLE

APPLE MIDI INTERFACE

Measuring just 1.3 x 2.1 x 2.9 inches, the Apple MIDI Interface has one input and one output — the most basic type of interface you can get.

- 1 In, 1 Out.
- Supports 16 MIDI channels.
- Self-powered.
- Expect to pay around £65-70 including VAT.

info

A Apple Assistance Centre, PO Box 763, Slough, Berkshire SL1 1YQ.
T 01753 615999.
F 01753 537302.

ALTECH

MIDIFACE SX

This is the smallest, simplest MIDI interface available, and, like the Apple interface, only allows you to connect allows you to connect a single keyboard or sound module to your Macintosh.

- 1 In, 1 Out.
- Supports 16 MIDI channels.
- Self-powered.
- MIDI/operating status LED.
- £32.95 including VAT.

MIDIFACE LX

This is one of the simplest designs of self-powered interface available, and it only really provides for the most basic of needs. But it's perfectly adequate

The Altech Midiface SX.

for anyone using just one keyboard with a couple of additional sound modules.

There's just one MIDI In socket, to which you connect your master keyboard, and three MIDI Out sockets to hook up three MIDI modules — or more if you take some MIDI Thrus from these to other devices. This type of interface only provides the standard 16 channels of MIDI, and you can't connect all the outputs of your MIDI devices to the computer using just this interface — so it's not really suitable if you are using a synthesizer patch editor/librarian, for instance.

You can connect the interface to either the modem or printer serial ports of your Macintosh, and you can connect two units if you want to use 32 MIDI channels.

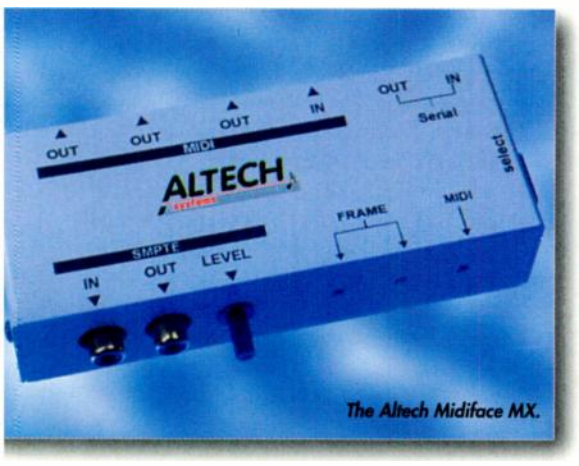
This interface is also sold by various other companies, re-badged for marketing purposes. The relevant specifications of this model and others of similar design are identical.

- 1 In, 3 Outs.
- Supports 16 MIDI channels.
- Self-powered.
- MIDI/operating status LED.
- £39.95 including VAT.

MIDIFACE EX

This basic interface has a Thru switch so that you can have your modem or printer connected through the interface, rather than having to remove the MIDI interface and plug in the modem or printer when you need to use these.

- 1 In, 3 Outs, plus Thru switch.
- Supports 16 MIDI channels.
- Self-powered.
- MIDI/operating status LED.
- £49.95 including VAT.



The Altech Midiface MX.

MIDIFACE MX

The MX interface adds SMPTE and MTC features along with input-message filtering and channel-remapping capabilities.

- 1 In, 3 Outs, plus Thru switch.
- Supports 16 MIDI channels.
- Self-powered.
- MTC (MIDI Time Code) generator — 30, 29.97, 25, 24 fps.
- SMPTE (Reader/Generator/Regenerator) — 30, 29.97, 25, 24 fps.
- Adjustable SMPTE-reader freewheel over dropouts.
- Adjustable SMPTE-reader Stop/Shuttle detection.
- SMPTE to MTC conversion.
- SMPTE output level control (-10 to + 4dB).
- SysEx programmable (Channel Remapping, Message Muting).
- MIDI/operating status LED.
- £129.95 including VAT.

MIDIFACE DX

The DX, suitable for slightly larger MIDI rigs using perhaps a couple of keyboards and three or four additional sound modules, will be released later this year.

- 2 Ins, 6 Outs.
- Supports 32 MIDI channels.
- Self-powered.
- MIDI/operating status LED.
- Price to be confirmed.

info

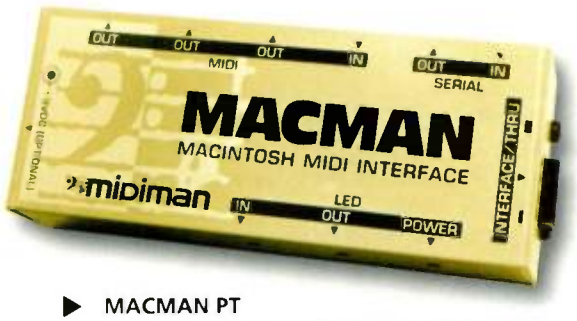
A Arbiter Music Technology, Wilberforce Road, London NW9 6AX.
T 0181 202 1199.
F 0181 202 7076.
E arbiter@cix.compulink.co.uk
W http://www.demon.co.uk/arbiter

MIDIMAN

MINIMACMAN

This tiny 1 by 2.5 by 2.5-inch MIDI interface takes its power from the Mac, to which it connects via the supplied cable. This has to be one of the simplest interfaces available, and would suit a hobbyist with just one MIDI keyboard or sound module.

- 1 In, 1 Out.
- Supports 16 MIDI channels.
- Self-powered.
- £35 including VAT.



MACMAN PT

This is a one In/three Out interface. It takes its power either from a standard Mac via the serial connection or from some models of PowerBooks. A Thru switch is provided so you can switch your Mac through to a modem or printer running off the same serial port.

- 1 In, 3 Outs.
- Supports 16 MIDI channels.
- Serial Thru switch.
- Self-powered.
- £45 including VAT.

MAC SYNCMAN

This is a two In/six Out MIDI interface which includes synchronisation capabilities.

You get both SMPTE-to-MTC and Smart FSK sync, and the SMPTE reader/writer supports 24, 25, 30 drop and 30 non-drop SMPTE formats. Jam-sync and freewheeling are supported, with a high-quality SMPTE regenerator for repairing damaged SMPTE stripes. There is one MIDI In and one MIDI Out on the front panel for easy access, along with two switches to select printer and modem Thru, and LED activity indicators for MIDI In and Out. The Macintosh desk accessory supplied allows you to write any SMPTE formats from any offset directly from your Mac.

"Guaranteed for life"! says the blurb. Wow, does this mean that when I am 95 I will still be hooking up a Mac to MIDI and using one of these? Hope I die before I get that old!

- 2 independent Ins, 6 Outs for 32 channels of MIDI.
- Supports 24, 25, 30 drop and 30 non-drop SMPTE timecode. (Doesn't support 29.97 non-drop format SMPTE.)
- External power supply.
- £169 including VAT.

"MIDI interfaces for the Macintosh have come a long way since the first simple one In/three Out designs..."

info

A MIDIMan, Hubberts Bridge House, Hubberts Bridge, Boston, Lincolnshire PE20 3EU.
T 01205 290680.
F 01205 290671.
E 106133.2372@compuserve.com
W http://www.midifarm.com/midiman

MARK OF THE UNICORN

MOTU have recently revamped their range of MIDI interfaces. Gone are the MTPII and the original Midi Express models for Mac and PC, and in come the MTP AV, MIDI Xpress XT and Micro Express to join the Pocket Express and FastLane products which have been available for some time.

FASTLANE

The FastLane is a basic self-powered one In, three Out MIDI interface with a couple of neat features not found on the Altech or similar units. You get a printer Thru button so you can switch easily between playing MIDI and printing, and there's also a MIDI Thru button that lets you play your MIDI gear when your computer is turned off without having to re-connect any cables. It is worth paying an extra few pounds for this

attractively styled unit — if only for the Thru buttons — and you could find it a better choice than either the Altech or the Opcode units.

- 1 In, 3 Outs.
- Printer Thru and MIDI Thru buttons.
- £59 including VAT.

POCKET EXPRESS (MAC & PC)

The Pocket Express is one feature-packed little gizmo! It is a 2-input, 4-output, 32-channel MIDI interface which works with either a Mac or a Windows PC. It will also read and write SMPTE, supporting virtually all timecode formats — it reads, but does not write, 29.97 frame-rate

SMPTE. It will freewheel across up to four frames of SMPTE dropouts which would otherwise cause loss of sync. It even features front-panel SMPTE controls for fast convenient striping and lockup.

It doesn't feature any MIDI processing, but you can get MIDI Thru with the computer off. Also on the minus side, there is no MMC, no click to MIDI, and no Panic button — and it uses an external power supply. The Pocket Express would suit a small MIDI rig for home use or a small multimedia setup. (For a review using a PC, see December 1996's *SOS*.)

- Compatible with Macintosh and Windows (3.1 and 95).
- 2 Ins, 4 Outs for 32 MIDI channels.
- Supports virtually all timecode formats.

Sound Business 0181 559 0373 Sound Business 0181 559 0373

Sound Business 0181 559 0373 Sound Business 0181 559 0373 Sound Business 0181 559 0373

- Reads 29.97 frame-rate SMPTE.
- £199 including VAT.

MICRO EXPRESS

The Micro Express is a mini version of the MIDI Express XT (described next) with most of the same features, but in a smaller and more affordable package. It is a half-rack unit with four inputs and six outputs — otherwise the specs are as for the MIDI Express XT. The features closely match those

of the Opcode 64LX — although the Micro Express has more patch memories, it lacks the MIDI-processing features available on the Opcode unit.

- 4 Ins, 6 Outs for 96 MIDI channels.
- Other features as the MIDI Express XT.
- £299 including VAT.

MIDI EXPRESS XT

The MIDI Express XT MIDI interface and SMPTE synchroniser is the natural successor to the MIDI Time Piece II and now works with Macintosh- and IBM-compatibles running Windows 3.1 or Windows 95. You get eight inputs, nine outputs,

128 MIDI channels and lots of other features at a relatively affordable price — making it ideal for medium-sized MIDI setups.

The accompanying *Console* software for Mac and PC provides comprehensive routing, merging and muting. The Express XT also converts and stripes all SMPTE formats including both 29.97 drop and non-drop. Adjustable freewheeling over up to 32 SMPTE frames provides dropout-free sync. It supports MMC and a pedal input provides support for a standard momentary foot switch or for audio click-to-MIDI conversion.

Packed with features, this is stiff competition for the Opcode Studio 4. It doesn't offer the advanced MIDI processing capabilities of the Studio 4, but it is programmable from the front panel — a more useful feature for many users — and it works with Mac or PC.

- Compatible with Macintosh and Windows (3.1 and 95).
- Can connect to both Mac and PC at the same time.
- Works without the computer as a stand-alone MIDI patchbay/merger/processor.
- 16 front-panel presets — eight programmable — with battery-backed RAM.
- 8 Ins, 8 Outs with 9 Out ports for 128 MIDI channels.
- Front-panel Panic button, buttons and LEDs for choosing presets, SMPTE stripe button, SMPTE Lock and tach LEDs.
- Status lights for MIDI In/Out and computers.
- Supports all frame rates and MMC.
- Recalls setups via MIDI program change.
- One PC parallel 25-pin 'D' connector.
- Two Mac mini-DIN 8 serial connectors.
- One quarter-inch jack for switch pedal or for click-to-MIDI conversion.
- Two SMPTE quarter-inch line-level jacks.
- Internal Power Supply/IEC power connector.
- £399 including VAT.

MIDI TIMEPIECE AV

The MIDI Timepiece AV is a professional eight-input, eight-output MIDI interface, MIDI patchbay, SMPTE-to-MIDI converter and digital audio/video synchroniser for Macintosh or PC. You can connect this unit to a Macintosh serial port — modem or printer — or to a PC, either via a serial port or parallel port.

The AV can be programmed from either the front-panel LCD or from the *Console* software provided, and you can store your setups in the AV's internal memory locations. Using the software, you can call up and modify any of the preset Base Setups supplied as starting points. Once you have completed your edits, you can store this setup into a preset memory location within the AV. You can also store your setups to disk on your computer, so *Console* is basically an editor/librarian for the AV. Once you've edited and stored your setups, you can use the AV as a stand-alone, customised MIDI processor, with no need for an external computer. On the other hand, if you intend to use the unit with a MIDI sequencer, such as *Performer* or most other popular software, you don't actually need to use *Console*, as you can control the unit directly from within the sequencer.

Anyone with a larger MIDI rig can use the AV's network serial port to connect a second unit, to provide connections 9-16.

You can actually connect up to four MTP devices to your Mac using two on each serial port, modem and printer — a feature not available for Windows. In this case, you'll have a free Mac port on each of the daisy-chained units, as you connect the pairs of MTPs using the network socket. You can use these to hook up a second Mac, which will then have equal access to the complete MIDI system. You can even connect both a Macintosh

the future is here

VS880 V-XPANDED

The VS880 digital multitrack recorder has found a place in many project recording studios around the world. Roland have now taken the VS880 to new heights with the introduction of automated mix features, 3D Sound processing, voice transformer, vocoder, mic simulation, improved effects routing, 3 band EQ at input mix / tape mix and much more.

CALL US NOW FOR PACKAGE PRICES ON THIS GROUNDBREAKING ALL IN ONE STUDIO SOLUTION.

JP-8000

The JP8000 Synthesizer offers analogue modelling and real time sound shaping control and programmability that every serious synthesist and keyboard player dreams of. This synth not only sounds like the analogue monsters we've all loved over the years, but it also looks like one! The 8 voice JP8000 features 2 oscillators, 7 waveforms, pulse width modulation, total real time filter control, portamento, osc. sync, arpeggiator, RPS, delay & chorus effect, EQ controls, motion control, ribbon controller and full midi control!

CALL US TO ARRANGE YOUR DEMONSTRATION - YOU HAVE TO PLAY IT TO BELIEVE IT!

JV-2080

The JV2080 is definitely the MOST EXPANDABLE synth module ever produced. 8 expansion slots provide access to upto 64MB of industry standard synth and acoustic sounds from Roland's SRJV Boards. Plus the JV2080 boasts dedicated chorus and reverb FX busses plus 3 EFX (multi effects) busses for even greater creative possibilities!

SUPERB PRICE! [CALL FOR BEST JV1080 PRICE]

MC303

IN STOCK..

XP50 NEW PRICE

£999 inc. VAT

Carlsbro

ACADEMY OF SOUND

MAIL ORDER 0345 697037

"Those on a budget will probably want to take a look at the Apple, Anatek, Altech and MIDIMan interfaces, which represent good value for money"

and a PC to the AV at the same time.

An ADAT Sync Out port is provided, and the AV features MIDI Machine Control so you can arm your ADAT tracks from within your sequencer software, and control the ADAT via the sequencer's transport controls. If you are working to picture, you can sync the AV to any incoming video signal — a standard video signal or a blackburst video sync signal — to achieve frame-accurate sync however long your video cue is. The AV is also both a SMPTE/MTC timecode converter and a generator.

A front-panel jack, the Pedal B input, lets you connect an Alesis LRC remote controller or any device that emulates the LRC, such as the Fostex Model 8312 controller. And if you want to convert an audio click to MIDI, you can use the Pedal A input. You can also connect a foot pedal or footswitch to Pedal A or B, so, for instance, you can make a pedal act as a tempo source or as a volume controller for various synths in your rig.

The AV also acts as a digital audio synchroniser for Pro Tools, Pro Tools III, Pro Tools Project and Session 8 (for both Mac and Windows) systems, and works with any software that uses Digidesign hardware — such as MOTU *Digital Performer*, Emagic *Logic Audio*, Steinberg *Cubase Audio* or Opcode *Studio Vision*.

This has to be one of the most versatile choices available for the professional MIDI musician or studio owner: it works with either Mac or PC, and lets you hook up both ADAT and Pro Tools systems with audio and video tape recorders — acting at the heart of your system to interface with your computer, providing synchronisation for virtually anything that 'moves', while providing comprehensive MIDI patching and processing facilities. (For a full review, see January 1997's *SOS*.)

- Compatible with Macintosh and Windows (3.1 and 95).
- Can connect to both Mac and PC at the same time.
- Can be used as a stand-alone MIDI patchbay/merger/processor for stage work.
- Fully programmable from the front panel.
- Provides ADAT Sync Out, Word Sync Out and Video Sync In.
- 8 Ins, 8 Outs for 128 MIDI channels.
- Battery-backed memory with eight scenes and 128 patches.
- Recalls setups using MIDI patch changes.
- Two units can be networked for 16 MIDI Ins and Outs and 256 MIDI channels on Mac or Windows with a single serial cable.
- Four units can be networked to a Mac, and the AV can be linked to the MTPI, MTPII or Opcode Studio 4.
- Supports all SMPTE frame rates (24,25,29.97 drop/non-drop, 30 drop/non-drop).
- Converts LTC to MTC, ADAT Sync and word clock (1x or Digidesign 256x 'Superclock').
- Converts MTC to LTC, ADAT Sync and word clock or Superclock. SMPTE Jam-sync and adjustable freewheeling.
- 16 x 2 backlit LCD display.
- Two pedal inputs for continuous pedals or switches.
- Panic button.
- Two SMPTE quarter-inch jacks.
- Internal power supply/IEC power connector.
- £649 including VAT.

info

A Musictrack, 19a High Street, Shefford, Bedfordshire SG17 5DD.
T 01462 812010.
F 01462 814010.
E 100415.2665@compuserve.com
W http://www.motu.com

Opcode's Studio 4, Studio 5, Translator Pro (large white unit), Translator ProSync, and Translator II (small white unit).

OPCODE

MIDI TRANSLATOR II

The MIDI Translator II is a basic 16-channel self-powered MIDI interface. But it goes one better than the standard interfaces such as the Altech LX: you can access peripherals such as modem or printer with a flip of the Thru switch to avoid cable swapping. With its simple, rugged design and great value for money, this makes a good choice for portable applications.

- 1 In, 3 Outs.
- Supports 16 MIDI channels.
- Serial Thru switch.
- Self-powered.
- £57.58 including VAT.

TRANSLATOR PRO

The Translator Pro provides twice the power of the MIDI Translator II, with two Ins and six Outs and 32 MIDI channels. Dual Thru switches select between MIDI and peripherals; status LEDs monitor the MIDI activity for each port. The rugged lightweight design makes this ideal for smaller studios or portable applications.

Recently voted "Best shop for studio's" by Evening Standard Magazine

WAY OUT WEST
MUSIC COMPANY

☎ 0181 744 1040 — Worldwide Mail order — ☎ 0181 744 1050

Authorised E-MU Dealers

£999 Inc VAT **ESI 32**

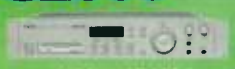
+ Zip + 1 Cartridge + 16 Meg RAM

E6400 £1995 Inc VAT

+ Zip + 1 Cartridge + 16 Meg RAM

Ideal Drum & Bass / Garage Samplers
• Filter Controllers as standard
• SCSI as standard

S2000 AKAI S3000XL



+ 16 Meg of RAM & Analogue Solutions Sample CD £975

+ 16 Meg of RAM & Analogue Solutions Sample CD £1755

digidesign®

Audiomedia III
Sound Designer & Masterlist

TURTLE BEACH

Tropez Plus	£259
Pinacle	£449
Pinacle with Digital I/o	£549
Fiji	£335
Fiji with Digital I/o	£449

YAMAHA

Yamaha DB50 XG	£129
Yamaha SW60 XG	£149

We have a selection of internal organs Call for Details!

Creamw@re

Tripledat V.2	£1175
Tripledat V.2 Plus AES / EBU	£1345

Modules & Samplers

Christy TS4000 SGb Hoo + 12.5 Gb carts S/H	£[illegible]
30 Surround Sound Card (S/H)	£25
E-MV Classic Keys	£349
E-MV Proteus FX (S/H)	£325
Midiman GMan	£175
Oberheim Matrix 1000	£399
Poland JV880 (S/H)	£899
Korg Prophecy (S/H)	£549
Synergy CD3 1210 CD Mixer (S/H)	£89
Yamaha SU10 sampler	£225
Yamaha MU50	£325
Yamaha P50 M	£299
Yamaha V50 (S/H)	£350
Atari Falcon 14M6 (S/H)	£699
SMP 11 2 in/4 out midi 1/f (S/H)	£445
Waldorf Pulse	£499
Kawai K4R (S/H)	£225
Akai DR4 (S/H)	£749
Midiman Sync Pro	£WOW
Yamaha MDF2 Midi data filer	£249

Steinberg

Cubasis AV (8 Tracks Audio) £129
X-Pose (Video Sampler for Mac) £449

Re-cycle £Call • Wavelab £395
Cubase 3 £239 • Cubase Score £295
• Educational Discounts available, call for details

S.P.A.M. The 3.L V 12
with Sequencing Package And Modem
- Fully configured and ready to go -

Pentium 133
16Mb RAM
1.2 Gig HD
1Mb VGA Graphics Card
8 Speed CD ROM
Windows'95
Yamaha CBX K1 XG Controller Kybd
Yamaha SW60XG Soundcard
Cakewalk Express Sequencer
Colour Monitor
Speakers

FREE Modem & 3 Months internet access

All this for an amazing **£1,174** EX-VAT
£1379 inc VAT

Offer lasts until Ferrari win a Grand Prix (or don't - subject to regulations)

Happy 25th Birthday Roland

Roland

V1 TO V2, 128 MORE SOUNDS, 40 MORE BEATS, 28 SONGS CALL NOW!!

MEMORY UPGRADES

30 PIN SIMMS

1 MEG	£16.95
4 MEG	£32.45
16 MEG	£112.25

72 PIN SIMMS

4 MEG	£92.50
16 MEG	£98.00
32 MEG	£125.50
64 MEG	£389.00

ACCESSORIES

Thru Boxes, Merge Boxes, Patchbays, Convertors, Leads, Adaptors, PC or Mac Interfaces & EZ/Zip/Jazz Drives
Call us, we've got the lot!

YAMAHA AN1X

Roland JP8000

YAMAHA CS1-X

Roland XP-10

Mark of the Unicorn

Special Offer! MIDI Express XT
+ 14 MIDI Leads **£399** inc VAT

Red Roaster
24 & 16 Bit Red book quality CD masters on your PC

CD Authoring Software
+10 Blank CD's
24 Bit £699
16 Bit £499

emagic

Audiowerk 8 Digital Interface

Available Now

ANALOGUE SYNTHS: WE'VE GOT ELECTRONIC CONTACTS
101, 202, 303, SH-09, MS10, MS20, JP8, JP6, Jupiter 4, Juno 6, Juno 60, Prophet V, OBX.
We can supply these and others call before you buy anywhere else

8 channel MIDI CV Convertor? Fully Assignable Outputs?
Call for details on the forthcoming
KENTON PRO 2000

Access

47 London Road, Twickenham, Middlesex TW1 3SA
Tel: 0181 744 1040/1050 Fax : 0181 744 1095

VISA

Check our new Pro-Audio advert on page [illegible]

"The Opcode Studio 5LX is probably the most advanced MIDI interface available."

- Supports 32 MIDI channels with 2 independent Ins, 6 Outs.
- Two MIDI Outs accessible from front panel for quick MIDI equipment changes.
- Self-powered.
- £116.33 including VAT.

TRANSLATOR PROSYNC

The Translator ProSync features 32 channels of MIDI, with two independent MIDI Ins and six Outs. Thru switches are provided for both modem and printer.

As its name suggests, the ProSync also reads and writes SMPTE timecode. This is the lowest-priced unit available that supports SMPTE — making it a good choice for the smaller home studio, audio-for-video applications, or multimedia work, where you're not using too many MIDI devices.

- Provides 32 channels of MIDI, 2 independent Ins, 6 Outs.
- Supports 24, 25, 29.97 and 30 non-drop SMPTE timecode. (Doesn't support 29.97 non-drop format SMPTE.)
- External power supply.
- £198.58 including VAT.

STUDIO 64X

Replacing the Studio 3, the 64LX features front-panel control of all MIDI patchbay programs, one-button SMPTE read and write, a Panic button for 'All notes off', and a rugged steel enclosure; it's a good buy for the gigging musician. In the studio, the Thru switch lets you connect to a modem, printer or other peripheral — so you can record MIDI then surf the web at the flick of a switch!

You get four MIDI inputs and six MIDI outputs for a total of 64 separate MIDI channels, and the 64LX will support all formats of SMPTE synchronisation — with adjustable freewheel and regeneration. The integrated MIDI patchbay functions can be programmed in software, stored in the interface, and then accessed directly from the front panel. There are eight program memories, four user and four preset, which are stored in the unit in battery-backed RAM. OMS compatibility allows the setting and routing of MMC to any device on the system and the supplied *Studio Patches* software (Mac only) offers full MIDI mapping and processing, along with creation of Virtual Instruments and Virtual Controllers for use in Opcode sequencers. (For a full review, see May 1997's *SOS*.)

- Macintosh and Windows (3.1 and 95) compatible.
- Auto-detection for Mac or PC without hardware switching.
- 4 Ins, 6 Outs.
- 64 MIDI channels.
- Modem/printer Thru switch for instant access without cable swapping.
- Full SMPTE support — reads and writes all timecode formats.
- Stand-alone patchbay with eight programs.
- Front-panel control of MIDI patchbay programs and SMPTE striping.
- MMC software routing.
- £269.08 including VAT.

STUDIO 4

The Studio 4 is a 1U rackmountable eight-In, 10-Out MIDI interface that reads and writes SMPTE timecode. As your studio grows and your MIDI setup gets larger, you can expand the system to get more MIDI channels by networking multiple Studio 4s together. Two pairs of MIDI Ins and Outs are provided on the front panel so you don't have to go groping around in the back of your rack just to plug in a MIDI instrument.

OMS and patching software provides graphic display of studio setups, patches, virtual controllers and virtual instruments; patches for the Studio 4 let you set up different routings of your master keyboard to the synths in your rack. (For more information about OMS, Opcode's Open Music System, see this month's Soft Focus on Opcode software.) You can also apply various types of MIDI processing to these patches. Virtual Controllers let you set up keyboard splits, velocity scalling, remap controllers, or filter out events such as aftertouch. Virtual Instruments let you group multiple MIDI device destinations and processing into one 'virtual' instrument which then appears ready for you to use alongside the other devices in your OMS setup. This is the standard interface to choose for a medium-sized MIDI setup in a project studio or MIDI room.

- MIDI Interface/Processor/Synchroniser.
- 8 independent Ins, 10 Outs.
- Supports 128 MIDI channels per Studio 4.
- Up to four units can be networked, to give 512 channels.
- Integrate with *Vision* software for creating Virtual Instruments and Controllers.
- Uses host computer's RAM and processor to create and store patches to Filter, Split, Transpose and so forth.
- Reads and writes 24, 25, 29.97 drop/non-drop and 30 non-drop SMPTE formats and handles all MTC conversions.
- MIDI activity LEDs for each MIDI In and Out and SMPTE.
- 8x MIDI communications speed with OMS-compatible applications.
- External power supply.
- £410.08 including VAT.

STUDIO 5LX

The Studio 5LX is probably the most advanced MIDI interface available — and with the 15 independent MIDI Ins and Outs you can work with up to 240 MIDI channels. Besides acting as a MIDI interface, the Studio 5LX also functions as a MIDI patchbay, a MIDI processor and an SMPTE synchroniser. As a MIDI processor, the Studio 5LX adds filtering, channelisation, note range splitting, controller mapping, velocity and control value modification. As a fully functional patchbay, it routes MIDI from any combination of MIDI Ins to any combination of MIDI Outs, stores several setups of routing and processing, and recalls any of them with a single program change.

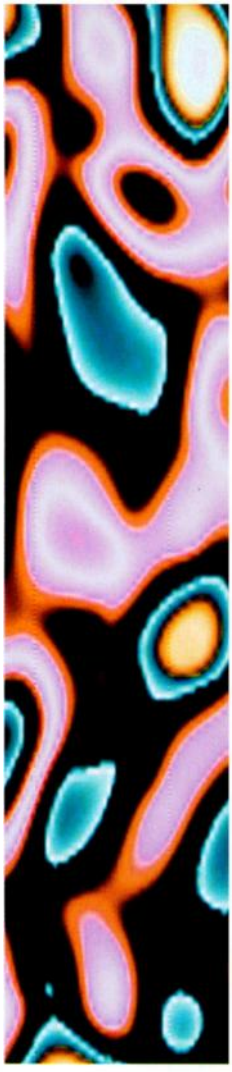
OMS patches are stored in the Studio 5LX RAM, which lets it function as a stand-alone MIDI patchbay/processor without the Mac connected. Great for 'live' situations or in the studio where each setup may be different, this interface is the choice of top industry professionals — who inevitably have the most demanding studio and 'live' performance needs.

- Intelligent Macintosh MIDI Interface/Processor/Synchroniser/Patchbay.
- 15 independent Ins and Outs.
- Supports 240 MIDI channels per Studio 5LX.
- Multiple Studio 5LX interfaces can be networked to give more than 1000 MIDI channels.
- Stores up to 128 MIDI processing patches to Filter, Split, Transpose, Modify, re-Map controllers and more.
- Unlimited virtual controllers and Instruments.
- Digital patch-number display with program change buttons.
- MIDI activity LEDs for each MIDI In and Out, plus a SMPTE LED.
- Two footswitch inputs and one continuous controller input.
- Reads and writes 24, 25, 29.97 drop/non-drop and 30 non-drop SMPTE formats and handles all MTC conversions.
- 8x MIDI communications speed with OMS-compatible applications.
- Internal power supply and detachable power lead.
- £938.83 including VAT.

SOS

info

A SCV London,
6-24 Southgate Road,
London N1 3JJ.
T 0171 923 1892.
F 0171 241 3644.



CONCERT SYSTEMS

HIRE. We have the best **EAW** touring system in the UK. Powered by **Crown** and mixed by **MIDAS.** Recent clients include Alanis Morrisette, Black Grape, The Bluetones, Hootie and the Blowfish, Prodigy and The Lemonheads. Please contact **Kevin Bannerman** for a quotation on your next tour. **0161 927 7700**

SALES. Our vast experience in the professional audio industry ensures you get good advice and excellent backup. We only sell the best value and most reliable equipment available. We don't sell cardboard boxes, we sell service.

Concert Systems are main agents for AKG, Alesis, Allen & Heath, Aphex, Audio Technica, BBE, Behringer, Beyer, BSS, C Audio, Carlsboro, Celestion, Crest, Crown, DBX, Denon, Does anyone read this?, Digitech, DOD, EAW, Fostex, **Fane, Furman Garwood, HH, JBL Jamo,** Klark Teknik, LA Audio, Lexicon, Mackie, Midas, Nady, Neutrik, Nexo, Neuman, QSC, RCF, Samson, Sennheiser, Shure, **Soundcraft, Soundtracs, Spirit, Studiomaster,** TAC, Tascam, Trantec, Turbosound and Yamaha. Please ring, **Gary Jones** or **John Hurst** in sales **0161 927 7700**

INSTALLATIONS. We provide installations for Live Music Venues, **Discos, Conference, Industrial, Schools and Places of Worship.** For a quote call **Geoff Goddard** on **0161 927 7700** or **Fax 0161 927 7722**

OUTBOARD AND EFFECTS

Aphex 104 Aural Exciter with big bottom	£205
Aphex 105 Logic assisted Gate 4ch	£340
Aphex 106 Easyrider Compressor 4ch	£340
Aphex 107 Tubessence Mic preamp 2ch	£464
Aphex 108 Easyrider Compressor 2ch	£205
Aphex 109 Tubessence 4 band parametric EQ 1ch	£339
Alesis Nanoverb Mini stereo digital FX	£149
Alesis Nanocomp Compressor 2ch (Ex demo)	£99
Behringer Dualflex Sound enhancer 2ch	£115
Behringer Multigate Expander gate 4ch	£249
dbx 120XP Sub harmonic synthesizer	£255
dbx 262 Dual Compressor limiter	£150
dbx 266 Compressor expander gate	£199
dbx 266A Microphone processor	£299
Digitec Studiotwin stereo digital multi FX	£211
Digitec Studioquad 4 in 4 out digital multi FX	£450
LA Audio MPX1 Multiprocessor mic preamp comp/EQ 1ch	Call for best Prices
LA Audio GCX2 Autocomp/gate 2ch	
LA Audio MLX2 Mic/Line/DI preamp HPF 2ch	
LA Audio EQX2 3 band parametric EQ 2ch	
Yamaha REV500 New digital multi FX	£call

GREAT PRICES ON CREST, LEXICON & BEHRINGER.
ALL PRICES ARE INCLUSIVE OF VAT

DESKS

Spirit LX7 24 mono/4 stereo 16 direct outs	£call
Mackie 1202 VLZ 4mono/4stereo inputs	£299
Mackie 1402 VLZ 6mono/4stereo inputs	£439
Behringer 1602 Eurorack 4 mono/4+2 stereo inputs	£195

MICS

Audio Technica Pro37 New condenser	£99
AKG C1000S Vocal condenser	£199
Sennheiser MD504 boxed set 4 drum mics/clips	£359

SPECIALS

Shure SM58 dynamic mic while stocks last		£89
AKG D3700 Microphone	List £129 special offer	£65
AKG D3900 Microphone	List £245 special offer	£99
Audio Technica MB1000 Voc/Inst/drum 3 for only		£99

SECOND HAND STOCK

Ibanez DM2000 digital delay	£99
Deltalab Effectron delay flanger	£99
Roland U110 Sound module	£129
Yamaha REV5 Multi FX very good	£899
Yamaha SPX1000 MultiFX Excellent	£799
Sabine FBX900 feedback exterminator	£500

FULL LIST OF USED GEAR ON OUR WEBSITE
Why not ring Carla to be put on the secondhand mailing list?

MasterCard VISA

Unit 4d, Stag Industrial Estate, Atlantic Street, Altrincham, Cheshire
Tel: 0161 927 7700 www.concertsys.co.uk Fax: 0161 927 7722
We are open 10-6 Mon-Fri, Sat 10-4. Mail Order facilities available

SWITCH

OUT NOW!

TAKE A LOOK INSIDE...

Every month SOUND ON STAGE provides the gigging musician with essential advice about all aspects of performing live — choosing and using PA systems; in-depth reviews of guitar and bass combos, microphones, power amps, compressor/limiters, live sound mixers; choosing effects pedals, help with cable wiring and stage presence, *plus plenty more!*

SOUND ON STAGE's in-depth practical tutorials offer no-nonsense advice on crucial topics like getting the most out of your PA system and how to get gigs, plus the hottest instrument/equipment news around and major interviews with top-ranking musicians, who reveal how they tackle their music on-stage. We also take you behind the scenes at top-billing gigs and check out what's hot and what's not in the equipment world. *Have you got your copy?*

PRACTICAL PA: GATES & EXPANDERS

U2 ON TOUR

SOUL COUGHING

MIKING GUITAR AMPS

STRAT VERSUS LES PAUL

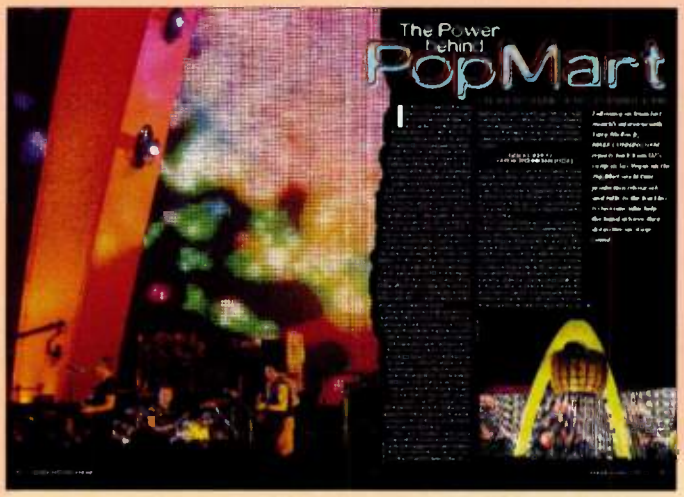
SETTING UP A PA HIRE CO

MANAGERS: WHO NEEDS THEM ?

ISSUE 8 ON SALE NOW

ON SALE AT LEADING NEWSAGENTS OR CALL 0181 861 0690 TO SUBSCRIBE
ASK ABOUT OUR *SPECIAL SUBS OFFER — 15 ISSUES FOR THE PRICE OF ONLY 12*

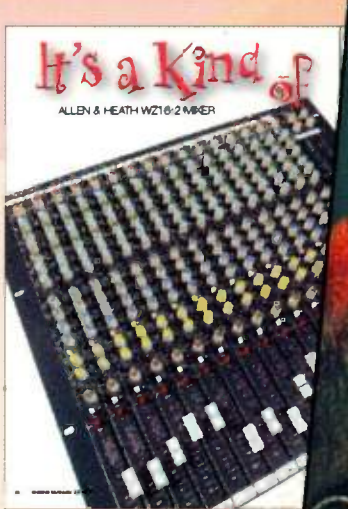
WRH


The Power Behind
PopMart

Neck & Neck

U2
POP

Practical
PA

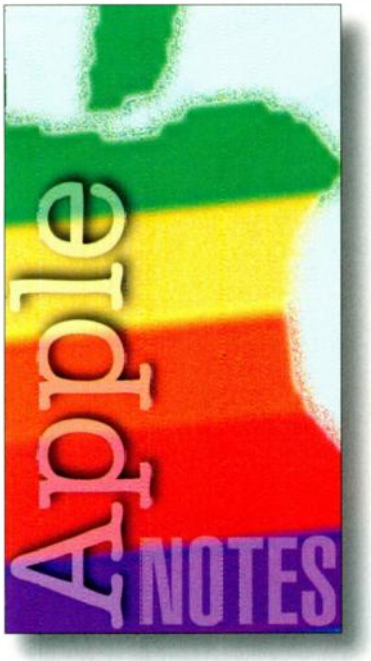

It's a Kind of
ALLEN & HEATH WZ16:2 MIXER

sound on stage
INCORPORATING...
Gigging musician
ISSUE 8 JUNE 1997 £2.00
Pink Floyd Live: The Division Bell
Miking Guitar Amps
Setting Up a PA Hire Company
Soul Coughing
Strat vs Les Paul
Managers: Who Needs Them?
U2 Live
THE POPMART TOUR
WIN
ALLEN & HEATH WZ16:2 MIXER
PLUS Allen & Heath WZ16:2 Mixer • Vox AC15 Top Boost Guitar Amp
AKG Emotion Series Mics • Lovetone Effects Pedals • Music Tans Institute
Behringer Super X Crossover • Sans Amp XXL

a Boost

Listen an
Lear

ying
Support



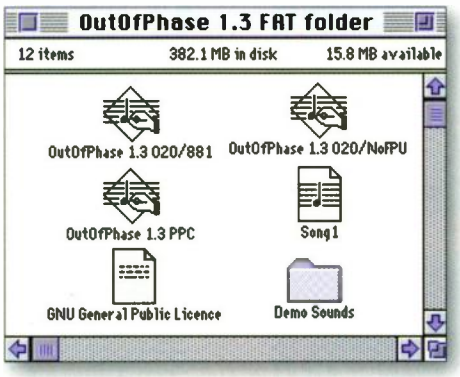
MARTIN RUSS goes all virtual this month — with a freeware software synthesizer, plus more on registering shareware.

The flavour of the moment seems to be software synthesis, and so this month I thought I would present one of my favourite Mac tools for tinkering with sound synthesis. Not for the faint-hearted, unfortunately, but then it makes up for the investment in learning by providing huge possibilities.

But first, a few thoughts on the sudden appearance of a number of software synthesis tools which claim to provide powerful synthesis capabilities at a bargain price. My first observation concerns the price: by the time you've bought a computer fast enough to do the calculations in a reasonable time, how much is the whole package costing you? The second concerns the control mechanism: since many software synthesizers only produce AIFF or WAV files suitable for loading into a sampler, how can they be controlled in real time? And finally, why do the majority seem to concentrate on subtractive synthesis or analogue modelling?

OUT OF PHASE

Out Of Phase is a software synthesizer for the MacOS platform — it will run on 68K machines with or without an FPU (floating point unit), as well as PowerPC-based machines. It was originally called *Synthesizer*, but this eponymous naming apparently clashed with another



program and so it was changed to something rather more mysterious and intriguing. I'll call *Out Of Phase* by the much jollier abbreviation *OOP* in the rest of this text.

OOP describes itself as a wavetable synthesizer, which is slightly inaccurate: it can do wavetable synthesis, but it also does Wave Interpolation, Dynamic Waveshaping, and Wavesequencing — and probably others as well. What seems to be the current version (1.3) was released in 1995, with the usual litany 'Version 1.4 should be out soon...'. It's refreshing to finally find some software that doesn't rush ahead too quickly with new versions every couple of months. *OOP* is freeware — in fact, it comes with the GNU licence, which goes to great pains to ensure that it stays free.

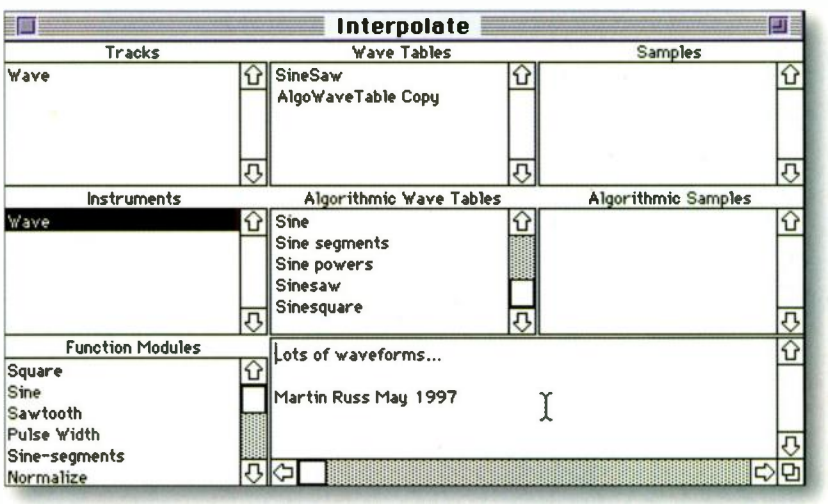
PROGRAMMING

OOP does not have a graphical interface, so you don't merely plug together someone else's pre-prepared blocks. Instead it provides a programming language which you use to build up your own set of virtual instruments; arrange them into your own orchestra; incorporate into your song; and then generate the final song as an audio file (AIFF format). Programming *OOP* requires a clear head, patience, and some programming knowledge. A little bit of mathematics experience might also be useful.

To give some of the flavour of *OOP*, here's a simple project which produces an interpolation from a sine wave to a square wave (see the screen dump below). To achieve this, you need to produce a function which will fill two tables with a sine wave and a square wave; the sine wave and the square wave are themselves produced from basic maths. You then need to define an instrument that will play this interpolated sine-to-square sound.

First, there's the function to produce square waves, as shown in Figure 1 (see page 250). The very similar function to produce sine waves does not have the 'if x >= 0 then set x :=1 else set x := -1;' line in, of course.

In fact, I combined the sine and the square-wave generating functions into one by making that 'if then else' line controlled by the number of the table: table 0 for the sine wave, and table 1 for the square wave. Then you need something to fill the tables with the sine and square — as in Figure 2 (also on page 250).



APPLE NEWS IN BRIEF

• RAW SPEED

We can expect to see clock speeds of 266MHz, 275 and even 300MHz by the end of the year. But, more significantly, the underlying buss speed is also likely to rise: from the current 50MHz maximum to 60MHz, or beyond (perhaps beyond 80MHz by 1998). This means that the overall performance will continue to rise for the foreseeable future.

• WEB TV

Perhaps this belongs on the PC pages, but given the number of MacOS-based AVID video systems (and their associated Digidesign audio systems) that you see in studios these days, this snippet may well be significant. Recently, Microsoft bought a small Californian start-up company for $425 million. Not earth-shaking news, but what is interesting is what the company make: set-top boxes that allow ordinary TVs to display Internet pages. With their foot in this door, Microsoft then went to the NAB exhibition and suddenly seemed to be part of the video industry too — and that finally gives them access to potentially every household, especially those that don't have a computer. Luckily, Microsoft are ramping up their MacOS division at the moment, and so, given the MacOS's multimedia-friendly reputation, who knows where this will lead? Personally, I suspect that it won't be long before the average living room has a Microsoft logo lurking on a piece of black hi-tech equipment.

A1 Music Centre

MANCHESTER
88 Oxford Street & 1 New Wakefield St
(Near Oxford Rd Station/BBC)
0161 236 0340
Fax 0161 236 7775

STOCKPORT
38-40 Lower Hillgate
(opp Robbies Brewery)
0161 429 8777

PRESTON
7-11 Heatley Street
(off Friar Gate)
01772 204567
Fax 01772 203404

TASCAM FOSTEX ALESIS Studiomaster MACKIE BEHRINGER SHURE KURZWEIL
E-MU TIME+SPACE beyerdynamic ensoniq Steinberg novation
AKAI ZOOM YAMAHA dbx KORG AKG emagic SPIRIT lexicon Roland

EX - DEMO SUMMER SALE

Cant remember our sales line
Tel No. DIAL **A1 MUSIC**
on your telephone

Akai - Samplers

S2000 S3000XL S3200XL

S2000 16 Meg £955

A1 Library - FREE

GREAT PRODUCTS - GET A DEMO NOW
S2000 with 16 Meg £955 inc fitting

EX DEMO SALE - MUST GO

RL101	ROLAND	SPD II Drum Pad (DR660 SOUNDS)	£450
RL117	ROLAND	Expander MSE1 (strings)	£199
RL118	ROLAND	Expander MDC1 (orchestral)	£239
RL120	ROLAND	Expander MRC1 (dance)	£239
RL134	ROLAND	Keyboard XP50	£999
RL135	ROLAND	MS-1 Micro Sampler	£399
RL180	ROLAND	GI-10 Guitar - Midi Converter	£369
RL208	ROLAND	VG8 Virtual Guitar Convertor	£1475
RL275	ROLAND	Arranger Keyboard G800	£999
RL303	ROLAND	Drum machine MC303	£475
RL325	ROLAND	Keyboard XP80	£1299
RL326	ROLAND	Keyboard A90-EX	£1499
RL327	ROLAND	Keyboard A90	£1099
RL400	ROLAND	JV35 Expanded Keyboard	£359
RL402	ROLAND	JV90 Expanded Keyboard	£699
	ROLAND	FC7 Pedal for 'E' Series	£29
	ROLAND	TD5 Drum module (808 sounds)	£299
RL438	ROLAND	Expander MBD1 Drum + Bass	£299
RL470	ROLAND	PMA 5 Sequencer / Sound	£315
RL500	ROLAND	RD500 Digital Piano	£1299
RL726	ROLAND	Sampler MS1	£269
RL804	ROLAND	Sampler S760	£899
RL805	ROLAND	Expander PS3 (Piano)	£199
RL806	ROLAND	EXP Board DP760-1	£149
RL827	ROLAND	Keyboard Controller A-30	£299
RL837	ROLAND	Sequencer PR-1	£99
RL865	ROLAND	JV1000 Workstation	£1299
RL889	ROLAND	VS880 Package Expander	£1799
YH103	YAMAHA	Sequencer DY8	£99
YM104	YAMAHA	VL70M Modelling Synth	£99
YM159	YAMAHA	G50 / G1 Guitar / Midi Set	£99
YM220	YAMAHA	Drum Machine RY20	£199
YM221	YAMAHA	CBXK1 Mini Keyboard	£99
YM300	YAMAHA	Sequencer QY300	£399
EMP700	YAMAHA	EMP700	£225
YM571	YAMAHA	Keyboard W5	£949
YM573	YAMAHA	Keyboard VL7	£899
YM578	YAMAHA	Expander VL7M	£799
YM701	YAMAHA	CBX D5 + Cubase Audio (as new)	£699
YM915	YAMAHA	Drum machine RY30	£299
YM916	YAMAHA	Drum machine RY8	£99
YM934	YAMAHA	4 Track MT120S	£349
YM1003	YAMAHA	8 Track MT8X Cass	£699
YM1005	YAMAHA	Keyboard SY35	£499
YM1008	YAMAHA	4 Track MT4X	£419
YM1028	YAMAHA	Expander TB300	£299
YM1044	YAMAHA	Keyboard SY85	£999
YM1073	YAMAHA	4 Track MT50	£249
KG109	KORG	Prophecy New Price	£699
KG110	KORG	Keyboard X5D Korg	£569
KG121	KORG	X3R Demo Special	£549
KG135	KORG	Keyboard X5 Korg	£479
KG748	KORG	Expander 05?RW Rack	£349
KG750	KORG	Expander X5DR Rack	£479
KG788	KORG	Keyboard D1?/Pro Korg	£1549
KW101	KAWAI	Expander Grnega	£299
KW116	KAWAI	Drum machine R50E	£59
SY470	ALESIS	QS6 Keyboard (64 Voice)	£599
CS450	CASIO	Keyboard CTK450	£79
CS500	CASIO	Keyboard CTK500	£95
KW125	CASIO	KB Acc AD5E PSU	£9.29
AT108	FOSTEX	8 Track DMT8	£999
AT180	FOSTEX	D80 8 Track H/D Recordar	£1299
AT220	FOSTEX	RB/612 Package	£1599
AT311	FOSTEX	4 Track 280	£569
AT340	FOSTEX	4 Track X18H	£199
AT342	FOSTEX	4 Track X28H	£279

MUSIC COMPUTERS

PC Computers for music

PC Systems built to spec for digital audio and midi
PLUS FREE ADVICE & SUPPORT

Soundcard and software of your choice fitted and configured

Quality Pentium systems from P133 to P200 and MMX, VX and HX Chipsets

PC's BUILT TO ORDER
Ask For Dale

Hard Drives up to 5 Gb
4, 8 and 12 speed CD ROMS
Fast EDO RAM

Mail Order (Only)
HOT LINE
0161 236 8900

SECONDHAND
AT PRESTON

Fostex Model E-16	£1425
AKG BX-5 Spring Reverb	£125
ALTEC Lanseng MR Compressor	£125
BBE 362 Enhancer	£200
ART DXR Elite	£200
VESTAX Delay	£100
ALESIS MIDIVERB IV	£100
FOSTEX R8	£499
TASCAM 22-2	£150
SOUNDTRACS 16.8.16	£450
PROTEUS 1 (Emu)	£200
EMU ES1 32	£750
AKAI S2000	£700
KORG 01/W Pro	£900
ENSONIQ TS-12	£900
ROLAND JV35	£495
ROLAND JV90	£799
YAMAHA SY85	£749
ROLAND JV1000	£849
ALESIS QS-6	£549
ALESIS QS-7	£749

Cant remember our sales line
Tel No. DIAL **A1 MUSIC**
on your telephone

AKG • Mics • Shure

D3700 ..... Only £69
D3900 ..... Only £99
Shure SM58 ..... £99
Buy 3 for £265

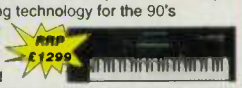
EX DEMO SALE - MUST GO

AK103	AKAI	Sampler CD3000	£899
AK255	AKAI	Expander SG01V Vintage	£229
AK256	AKAI	Expander SG01K GMidi	£229
AK257	AKAI	Expander SG01P Piano	£229
TE184	TEAC TASCAM	Amp Hi-Fi Tascam AX3030	£159
TE277	TEAC TASCAM	CD Player CDP4500	£190
TE842	TEAC TASCAM	Cassette-CD player AD400	£269
TE856	TEAC TASCAM	DAT Recorder DA30 MKII	£999
TE877	TEAC TASCAM	Midi Cont MMC100	£149
RL267	BOSS	EFX Voice Transformer VT-1	£199
RL405	BOSS	Drum Machine DR5	£249
RL832	BOSS	Drum machine DR660	£249
RL853	BOSS	Expander DS330E	£199
SY321	ENSONIQ	MR76 Weighted Workstation	£1699
SY177	C-LAB	S/Ware Exptor M1 C-Lab	£49
PV670	PEAVEY	Expander DPMSX11	£249
PV785	PEAVEY	Expander DPM-BP Peavey	£399
PV790	PEAVEY	Expander DPMSpectrum Bass	£179
HM113	JBL MONITORS	Studio Mons Control1 (Pr) JBL	£149
HM114	JBL MONITORS	Studio Mons Control5 (Pr)	£199
HM115	JBL MONITORS	Studio Mons Control10 (Pr)	£125
HM151	JBL MONITORS	Studio Mons 4208 (ea) JBL	£145
EU114	EMU SYSTEMS	Expander Morpheus	£799
EU115	EMU SYSTEMS	Expander Classic Keys	£399
EU121	EMU SYSTEMS	Expander Proformance 9102	£199
EU124	EMU SYSTEMS	Expander Proteus FX 9026	£399
EU125	EMU SYSTEMS	Expander Proteus Ultra	£699
EU163	EMU SYSTEMS	Expander Proteus 3XR 9043	£499
EU164	EMU SYSTEMS	Expander Vint Keys+9056	£799
EU166	EMU SYSTEMS	Expander Vintage Keys 9045	£499
CH151	CHEETAH	Expander MD16RP Cheetah	£79
CH161	CHEETAH	Keyboard MS800 Cheetah	£179.95
SY360	J L COOPER	MSB+Midi Patchbay	£79
EN145	STEINBERG	M1 ED Steinberg S/ware	£49.95
WA750	KURZWEIL	K2000X V3 Keyboard	£1399
WA753	KURZWEIL	PC88 Keyboard	£1695
AW101	AIWA	XDS1100 Dat Machine	£599
	AKAI	S2000 Sampler	£849
	BEHRINGER	Eurodesk 24 inc Mkt Bridge	£999
	ROLAND	SRV350	£229
	ALESIS	Midiverb 4	£199
	ALESIS	RA100 Amplifier	£189
	ROLAND	PC200 mkII Keyboard	£79
	ART	RXR Elite	£129
	ART	Extreme EFX Pedal	£69
	ART	RXR Dig Reverb	£299
	KORG	IH Harmoniser	£199
	ROLAND	TD5 Drum Module	£299
	KORG	X2 Synth	£899
	YAMAHA	Promix 01	£1450
	TASCAM	S/H 38 + DBX	£699
	STUDIOMASTER	Star system mixer	£599
	STUDIOMASTER	P7-16 Mixer (midi muting)	£999
	ALLEN & HEATH	GS3-16 (Midi muting)	£999
	ALESIS	S/H Adat	£999
	YAMAHA	RX15 Drum machine	£99
	RHODES	S/H 760 Keyboard	£499
	ROLAND	S/H U110	£179
	KAWAI	R50 Drum machine	£59
	BBE	362 Maximiser	£175
	AKAI	S950 Memory Expansion	£75
	ROLAND	RE800 Reverb	£199
	BOSS	RV70 EFX	£159
	ROLAND	PR1 Expandeur	£99
	APHEX	Aural Exciter	£99
	STUDIOMASTER	12.2 R Gold Session Mixer	£499
	STUDIOMASTER	8.2 Session Mixer	£199
	STUDIOMASTER	16.2R Gold Proline Mixer	£499

Roland

JP8000 New Roland Synth with analogue modelling technology for the 90's

RRP £1499



RRP £1299

We have a range of Roland
July Deal Prices XP10 £399 • XP50 £999 • XP80 £1299

HARD DISK RECORDING

Computer Cards & Software
Logic Audio, Turtle Beach etc
2in 8out Digital in/out card for PC or Mac

£499

Audiowerk 8

24 Hour Delivery Service. We buy your secondhand equipment.
We now operate a price match price beater policy.

We have qualified electronic engineers working on the premises at Manchester for rapid diagnosis repairs

Second-Hand • Part Exchange • Sales for Customers • Hire Purchase

All Stock sales and repairs carry the A1 workshop warranty

VISA

Apple NOTES

And finally, an 'instrument' to play the sound, shown in Figure 3. The 'Index' envelope controls the interpolation from the sine wave table (0) to the square wave table (1). As you can see, it takes five seconds to change from sine to square and another five seconds to change back to the sine again. The end result is an instrument that sounds a little like a low-pass filtered square wave being opened and closed, but not exactly — and there's a very interesting halo of digital noise caused by the limited number of interpolated steps. The basic output audio quality is 44.1kHz, 16-bit, although you can lower the sampling rate and degrade the bit resolution if you want (you can use 48kHz as well). If you've never played around with the mathematics behind synthesis, then a little wavetable synthesis can be quite fascinating; and you can end up with some very useful raw samples to load into your sampler and play S+S with.

```
Square

* generate a square wave
func squarearray(data:fixedarray, start:int, freq:int, phase:double,
len:int):fixedarray
    (
        var i:int = 0;
        var x:double = 0;
        while i < len do
            (
                set x:= sin(((phase*2*pi)/360)+(i*2*pi*(freq/len)));
                if x >= 0 then set x :=1 else set x := -1;
                set data[i + start] := fixed(x);
                set i := i + 1;
            );
        data
    );
```

Figure 1.

```
Sinesquare

* frames : integer; tables : integer; data : fixedarray
* phase in degrees!
proto sinesquarearray(data:fixedarray, start:int, freq:int, table:int,
len:int):fixedarray;
var i:int = 0;
while i < tables do
    (
        sinesquarearray(data,i * frames,1,i,frames);
        set i := i + 1;
    );
```

Figure 2.

```
Wave

instrument
    (
        loudness 1.0;
        oscillator s
            (
                samplelist ("Sinesquare" 10000;);
                  type wavetable;
                  loudness 1;
                  loudnessenvelope(points(delay  0 level 0; delay 0.5 level 1;
                                          delay 10 level 1; delay 0.5 level 0;
                                  ););
                  indexenvelope(points   (delay 0 level  0; delay 5 level  1;
                                          delay 5 level  0; delay 0 level  0;
                                ););
                );
    )
```

Figure 3.

You'll find the *Out Of Phase* home page at

- http://www.upl.cs.wisc.edu/cold/code/outofphase.html

and a download location at:

- ftp://yar.cs.wisc.edu/pub/mac/outofphase/

THE NAME'S THE THING

There's a surprisingly good set of shareware utilities available for members of the MacOS family of computers. Many of these have commercially priced alternatives, but you might be surprised at the quality and support that you get from the shareware world. I've recently become involved in a couple of projects that required some automation of common desktop operations (clicks, drags and so on), and so I looked around for something to make it easier.

One thing that I'm always doing is renaming files. The MacOS's Finder is okay for changing one name, but it tends to become a little tiresome for more than a couple of renames, and a major annoyance for more than three files. Now, on a computer with a command line interface (Unix, Linux, DOS, AmigaDOS) this would be relatively easy, although learning about topics like Unix's regular expressions or 'grep' function might be more of a challenge. But the MacOS does not provide anything remotely like a command line — so how do you automate things?

AppleScript might be your first port of call. This enables you to write 'scripts' that use a simple, HyperCard- or HyperTalk-like language to control what the Finder does — or, more frequently, to record what you do with the mouse and then let you edit it and replay it. The trouble is that not all applications support AppleScript, and it can sometimes be tricky to get it to do exactly what you want. It also makes your System bigger, requires yet more precious RAM and makes the machine slower to re-boot. In many cases, AppleScript is a bit over the top.

For my renaming problem, I wanted to remove unwanted text at the end of a large number of files: they were all called variations on 'File nnn copy'. Why? Because when you try to open a file, the order shown is normally related to the sort order as shown on the desktop, and is normally alphabetical. So 'File' and 'File copy' tend to be next to each other, which reduces the number of files you can choose from by half — unless you actually enjoy scrolling down through a list box (there's a way out of that too, but that's another story). So I wanted to change the name to something like '_File' — that 'underscore' character just happens to come after A-Z in sorting order, and so appears at the bottom of list boxes.

On the desktop, this would require quite a bit of clicking, waiting and typing. But a quick wander through my favourite Utility CD-ROM (*BBS in a Box*) produced an application called *Drop•Rename*, which not only allowed me to make the changes on all the files with one 'drag and drop', but it also allowed me to create an applet which did that and nothing else. It also does automatic renumbering and a host of other operations on filenames. And the cost of this marvel? Ten US dollars, which is just over six pounds sterling.

REGISTRATION CLASS

Okay, so I mentioned Kagi software last month, but since I've been registering software with them for some time, I thought that perhaps I ought to let a few other people into the secret. If you've ever declined paying for shareware software in the past, then look at how easy it can be now.

First off, you need to find the shareware. The two major methods are the Internet or a CD-ROM compilation. You then try out the alternatives and pick the one that suits your requirements. If a shareware author uses the Kagi system, then alongside (sometimes built into) the application, there will be a small program called 'Register' — normally blue with a picture of a dollar, yen or other currency symbol on it. You double-click on this and fill in the details: your name, address, email and so on, and then print it out or save it to disk. The application encrypts important details, such as your credit card number, and produces either a barcoded printout, or an email-ready text file. You then send this to Kagi — by email if you are paying by credit card, or by mail if you are enclosing a cheque (the email/credit card method is much easier than posting US dollars).

In my experience, the following day you get an acknowledgement from Kagi to say that they have your email, and this is usually followed (often that same day) by another email which confirms your registration and which tells you how to personalise the copy of the software program that you've just bought. It's very easy, very quick (often quicker than buying from a mail order company) and there are no problems with delivery — you already have the software!

32 BIT REVERB

2 BIT PRICE

Have you ever wondered how those scintillating vocal reverb effects are created on your favourite recordings? Until now there was only one way - a seriously large investment in signal processing.

But all that just changed with the Yamaha REV500.

Using 32-bit technology pioneered in our world beating 02R digital mixer and ProR3 professional reverb, the REV500 delivers state of the art DSP at a run of the mill price.

True stereo processing creates unrivalled realism, while 20-bit A/D and D/A convertors faithfully preserve the integrity of the source signal.

There are 100 user programs and 100 factory presets plus instant, intuitive control over all basic parameters with dedicated front panel knobs.

And a comprehensive array of connections including professional, balanced XLR inputs and outputs.

For a free info pack on the new REV500 call 01908 369269 today.

£399
SSP inc. VAT

YAMAHA

REV500

Yamaha-Kemble (UK) Ltd. Pro Audio Division
http://www.yamaha.co.jp/product/proaudio/homeenglish/index.html

▶ streaming. However, it was the *Native Power Pack* from Waves that really made people sit up and take notice. For the first time, plug-ins originally created for high-end Mac use, with added DSP farms (extra processing modules to take much of the load from the main processor) could run without any additional hardware. A further carrot arrived shortly after this, when Steinberg announced that the next version of *WaveLab* (version 1.6) would also be compatible with ActiveMovie. Cakewalk's *Pro Audio* version 6 was also upgraded in the same way. Once plug-in manufacturers realised that they simultaneously had access to owners of *Sound Forge, WaveLab, Cakewalk* and the forthcoming *Cubase VST* as well, allocating development time to PC versions became much more feasible; with a much bigger potential market, prices could also be more competitive, resulting in even better sales.

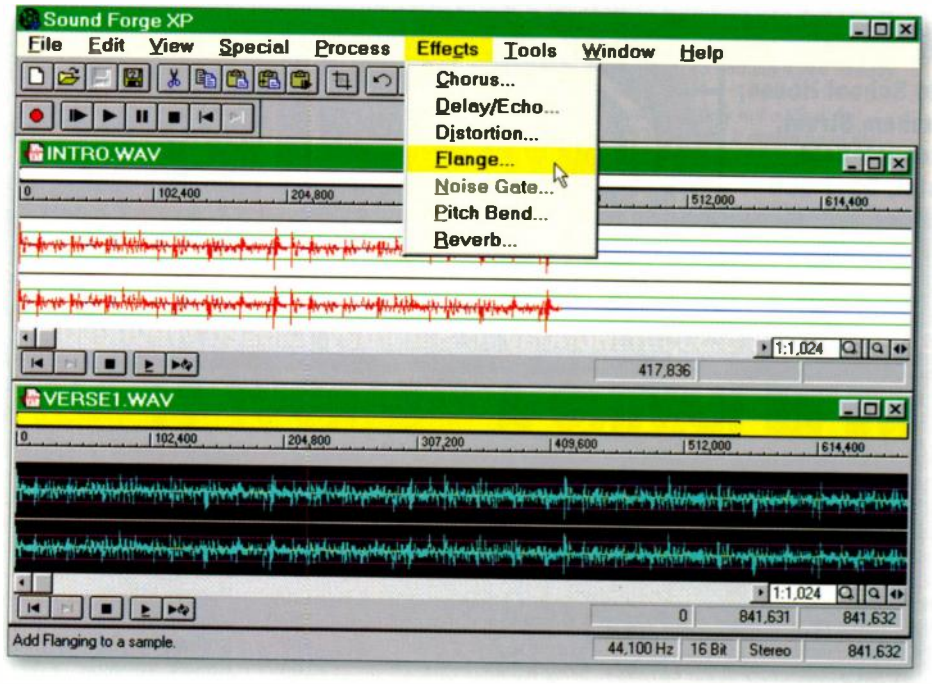


Figure 3: If you like the look of Sound Forge but want a low-cost entry-level version, take a look at the 'Song Construction Kit', which includes Sound Forge XP 3.0 (a cut-down version of the high-end Sound Forge 4.0). Shipping with two CD-ROMs full of ready-mixed musical phrases in various styles, this package is designed as a fun 'cut n' paste' song builder. The best part is the price — RRP is £49.95! Thanks to distributors BCK for sending this one in.

THE DIRECT APPROACH

DirectX technology is something different again. It's primarily a set of application program interfaces (APIs) that sit between hardware and applications. Until its arrival, it was difficult for Windows games to compete with their console equivalents for speed, especially as dedicated drivers needed to be written for each different piece of audio and video hardware. Since there are so many graphics accelerator cards and soundcards in the market, what Microsoft have done is remove the need for each game developer to write individual software drivers. The APIs sit between the hardware and the application, so that all the developer needs to do is use standard calls to the DirectX layer, to send audio or graphic data to any make of hardware that has DirectX drivers. This transparent approach should result in many more sound and graphics cards being fully supported.

There are several components in the DirectX system for graphics, including DirectDraw (for normal 2D graphics), and Direct3D (for fast 3D rendering), but the two components that will be more of interest to musicians are DirectSound and DirectSound3D. DirectSound was written primarily for low-latency mixing of sound, as well as some giving volume, pan, and frequency control, so that multiple channels of sound can be quickly mixed down to emerge as a single stereo channel. Latency is the time delay that occurs between your sending the data and your hearing it through the soundcard; including the DirectX drivers as part of Windows 95 minimises this time delay.

Once again, streaming is involved, and Microsoft estimate that up to 32 simultaneous audio streams can be sent to a DirectSound audio system if it uses the PCI buss, without grabbing too much of its total bandwidth.

Although DirectX 3.0a has been out for some time (see Figure 1 on page 252 to see how you find out whether you already have these drivers installed), Microsoft have since released the spec for the DirectSound3D component, and the actual release of this (as part of DirectX version 5.0) is scheduled for June '97. Again, the benefits of an open standard are that soundcard manufacturers no longer have to re-invent the wheel. Three-dimensional sound positioning is much more likely to appear in mainstream products if software writers know that they don't have to write different drivers to suit each proprietary 3D system. Every soundcard manufacturer is likely to provide DirectSound and DirectSound3D drivers.

Just when people were finally getting their heads around all these new terms, Microsoft got up to their old name-changing tricks. A new *Sound Forge* upgrade to version 4.0b has just been released (see Figure 2 for more details), and this new version incorporates Microsoft's DirectX Media Streaming Services (DMSS), which, Sonic Foundry say, was formerly known as ActiveMovie! Although the further change of name is confusing, it does make sense to move DMSS (the technology formerly known as ActiveMovie) across to become a part of DirectX 5.0, since ActiveX is now primarily associated with the Internet, as opposed to DirectX, which deals with sound and vision for Windows. The crossover seems to be ASF (Active Streaming Format), which is now supported by DirectX, as well as being part of ActiveX. Got that? SOS

ON THE CARDS

As I mentioned in May's PC Notes, the AC97 audio hardware specification should result in a much wider variety of PCI audio solutions, because it provides a standard that all manufacturers can use, rather than each of them having to re-invent the PCI wheel. Creative Labs played a significant role in helping to thrash out this spec, and they have now announced an advanced new PCI audio chip intended for OEM motherboard applications. The EMU8008 is an AC97 digital controller chip, providing 100 percent SoundBlaster 16 compatibility and advanced wavetable synthesis with 64-voice polyphony. Hardware acceleration for DirectSound and DirectSound 3D is built in, and once again (as on the AWE64 soundcard) a full S/PDIF digital output is provided, which will allow direct connection to an external DAT machine or D/A converter. The new chip will be available in production quantities in the third quarter of '97, so expect to see the first motherboards including it starting to appear by Christmas.

I suspect that Creative will be releasing a high-spec soundcard to take advantage of this chip as well — it has significant performance advantages over the EMU8000, which is currently used by both the AWE32 and AWE64 cards. It will be interesting to see what happens to current high-end soundcards, as audio quality soars while prices plummet. However, as always, theoretical specs tend to be compromised by the unreal world inside PCs — we'll have to wait and see what 'typical' performance figures are.

On the subject of the AWE cards, yet another has just joined the range — the AWE64 Value. The main differences between this and the AWE64 are that it comes with only 512K of RAM, and has a smaller software bundle, without *Cubasis Audio*. It is already shipping, and with a retail price of £79 including VAT, it should do extremely well. This new card effectively replaces the AWE32, and so this disappears from the range, leaving the SB16 at the bottom. At the same time, the AWE64 has a new lower retail price of £99, with the AWE64 Gold at £179.99.

over 7000 different! items in stock!

MUSIC INN 32 ALFRETON ROAD,NOTTINGHAM

if its not -we've got it! **TEL:0115-9784403:** if its cool -we've got it!

AKAI 3200XE	3184
AKAI DR16	3639
AKAI DR8D	254.
AKAI REMIX 16	681
AKAI S20	454
AKAI S2000	909.
AKAI S3000XL	1637
AKAI SGO1K	279
AKAI SGO1P	279
AKAI SGO1VIN	279
AKAI V40 RIFO	139.

We hate lists! Just call us on 01159 784403 for ALL your needs!

MPC 2000	1091
DIG MIDIVOCAL	Cheap
DIG QUA V2	489
DIG STUDI400	798.
DIG TSR12	233.
DIGITECH FX7	158.
DIGITECH RP10	Cheap
DIGITECH RP12	Cheap
DIGITECH RP5	228.
DIGITECH RP8	Cheap

WE LOVE OUR CALCULATOR LETS GET NUMBER CRUNCHING

DIGVOCALIST 2	388.
FATAR 610	166
FATAR 610 +	298
FATAR 900	598
STUDIO 49	82
DBX 266 COMP	228
FATAR 1100	828
FATAR 1176	748

FATAR 2001	1098
FATAR STUDIO 900	458.
COMPOSER	190
DUALFEX	106
DUALFEX 11	190
EURORACK MX2802	501
INTELLIGATE	190
ULTRAFEX 11	Cheap
DARWIN JAZZ	3319
E6400 128 POL	722
E6400 32MIDI	143
E6400 8 OUTS	572
E6400 DIG I-O	193
EMU 6400 OPTS	2179
EMU CLASSIC	407
EMU E4X	2729
EMU E4Xt TURBO	3818
EMU E6400 FX	287
EMU ESI32	899
EMU LAUNCH PAD	371
EMU ORBIT	749
EMU PROTE FX	400
EMUMORPHEUS	799
EMUorbit 2 upgrade	71.
EMUplanet phatt	779.
ALLEN&HEA GS1	548.
CUBA V3.0 VST	298.
CUBASE MAC &PC	39
CUBASE SCORE	198.
CUBASE VS 3.0	478.
CUBASV.3 (PC)	298.
KAWAI Z1000	1398

Call today get it tomorrow! 24 hour delivery to your door on all items in stock!

KAWAI5000W	1749
ART EXTREME	68
ART FX1	90
ART FXR	151
ART FXR ELITE	197
ASR 10 RACK	914
DP2	525
DP4	1366
MASS 150	245
MASS250	303
MASS 500	354
RAVEN	1598
RAVO-LATION	598
SC2 COMP	197

TECHNOX	748
KORG i 3	1031
KORGi5 m module	633
KORG 05RW	351
KORG AX30G	198
KORG I5S	763
KORG IX300	1067
KORG N264	1220
KORG N364	1067
KORG NS5r	533.
KORG TRINITY +	1603
KORG X3	938.
KORG X5	458.
KORG X5D	548.
KORG X5DR	458
KORG168RCMIX	249
KORGPROPHECY	840
PANDORA	147
PRO DID I-O	224
PRO HDR	598
PRO SCSI	398
PRO TRI	624
TRIN PLUS PBS	1831
TRIN PRO	2136
TRIN PRO X	2595
JAM MAN	358
LEXICON ALEX	298
LXP15 MK2	858
PCM80	1798
REFLEX	428
VORTEX TURN	198
DMAN PC CARD	248
DMAN +SAMPLITUDE	278
EQ MAN	88
MICRO MIXER 18	199

MIDIMAN GMAN	174
NOVBASS STATION	329
NOVDRUM STATION	419
BOSS DR5	269
JUPITER 8000	1403
ROLAND DM800 +remote digital record	999
ROL HP1300	798
ROLHP135	1067
ROL MC50 MK2	398
ROL P55 MOD	298
ROL VSC 55	60
ROLAND 90-EX	1872
ROLAN PC 200	134
ROLAND 1800E	1194
ROLAND A90	1588
ROLAND E16	341
ROLAND E38	524
ROLAND E96	1296
ROLAND EP7	524

ROLAND EP711	699
ROLAND EP9J	848
ROLAND G800	1599
ROLAND HP330	1744
ROLAND HP530	2198
ROLAND JS30	399
ROLAND MS1	365
ROLAND MT80	468
ROLANDP55	298
ROLAND PC160	114
ROLAND PMA5	378
ROLANDMVS1/ MDC1/MSE1/	398.

THIS IS ONLY A SMALL PROPORTION OF OUR STOCK GIVE US A RING FOR AN UPDATE

ROLAND VS 880p	2207
ROLAND XP10	467
ROLAND XP50	1215
ROLAND XP80	1732
ROLANDKR370	2198
ROLANDKR570	2798
ROLANDMC303	499
ROLANDJV2080	Cheap
ROLJV1080	899
SD35	562
SAMICK KK1L	348
D5 TUR	841
FOSTEXD80	1214
FOSTEX XR3	209
FOSTEX XR5	319
FOSTEX XR7	420
ALESIS12-2 rack	338
ALESIS 32.4.2	904
ALESISAUDIOCARD	488.
ALESISBASS	225
ALE MIDIVERB 4	261
NANO SYNTH	338
NANO PIANO	307
ALESIS QV2	677
WEDGE	391
ALESIS 3630 COMP	224
ALESIS ADAT XT	198
ALESIS MICRO 4	198.
ALESIS QS6	745
ALESIS QS7	1134
ALESIS QS8	1698.
DANCECARD 6,7,8	149
ALESIS SR16	199

IF YOU CANT SEE WHAT YOU WANT IN THIS ADVERT call now we probably have it!

MONITOR 1	199.
MPL2404	450.
SAMDESK1640	299
SAMDESK2240	399
SAMSERVO 150	194.
SAMSERVO 240	229
SAMSERVO 500	339
SAMMIXPAD	189
E MICRO LOGIC	cheap
EMAGic LOGIC PC	cheap
EMAgicLOGIC MAC	529
TASC PORTA 5	166.
TASc PORTA03	179.
LOGICDISCOVERY	249
SOUNDSCAPE8 trk	1999
TASCAM 414	316.
TASCAM 424 MKII	452
TASCAM 564	1065
TASCAM DA 20	699
TASCAM DA 38	2214
TASCAM DA30 1179	
A3000	1180
AN1X	908
CBXK1	285
DB50 XG	119
mu5	168.
mu90r	545
mx124 mixer	336.
QS300	cheap
QY700	cheap
REV 100	199
REV500	349
SU10 SAMPLER	249
SW60XG PC BOARD	139
YAM MU10 XG	cheap

don't forget we buy used equipment for CASH! PART EX Welcome!

YAM VL70M	499
YAMAHA CS1X	525
YAMAHA KX5	cheap
YAMAHA MD4	899
YAMAHA MDF2	249
YAMAHA MT4X	399
YAMAHA MT50	329
YAMAHA MU5	169
YAMAHA MU50	cheap
YAMAHA MU80	cheap
YAMAHA NS10	329
YAMAHA P50M	325
YAMAHA QY22	cheap
YAMAHA RY8	169
YAMAHA TMX	cheap
YAMAHA W7	650

SECOND HAND BITS

TEACX-10	cheap
TEAC22-4	cheap
FOSTEX R8	999
FOSTEXMTC1	199
ALESISSR16	cheap
AKAIS7000	299
ENSoniq MIRAGE	249
CZ 101	
169	

MAIL ORDER HOTLINE 0836 784403 9.00AM-9.00 PM 7 DAYS A WEEK!

CZ1000	249
CZ5000	249
POLY61	250

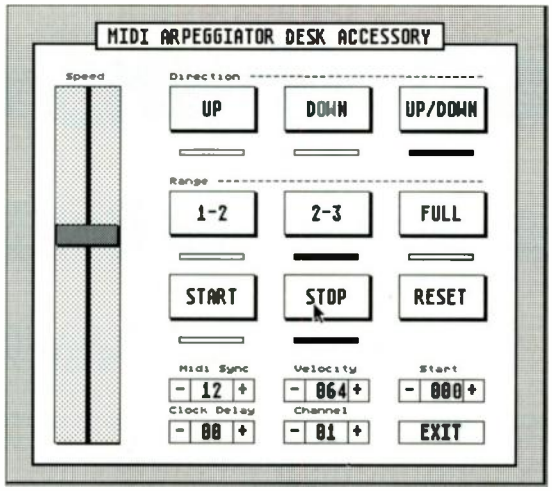
ALWAYS S/H BITS IN STOCK CALL FOR UPDATED LIST

ANALOG STUFF

JUPITER 6	799
CHASEBIT99	369
JX3P+CONTROLLER	cheap
JX3P	329
OBERHEIM DX	199
ROLAND MC202	CALL
OCTAVE KITTEN	229
SIELCRUISE	249
MOOG memorymoog	offers!
MOOG POLYMOOG	CALL

The recent Goodman PDL computer shows proved that music is alive and well in the Atari world. DEREK JOHNSON features a show report, rounds up a bargain shareware collection and generally keeps you up to date with all things Atari.

PD Library Floppyshop have released a six-disk, 51-program pack of Atari MIDI and audio software. Priced at an amazing £8 plus postage (£1.25 UK, £2.25 Europe and £3 rest of the world), *MIDI Programs Volume 1* gathers together sundry useful PD and shareware programs, utilities, desk accessories and MIDI help files, Standard MIDI File players, System Exclusive utilities (including Ben Hall's excellent *Dump It*), algorithmic composers (with *Schoenberg*, offering instant 12-tone compositions from user-defined note rows, a stand-out) and arpeggiators. Martin Russ' *IROS* (Instant Randomising Octave Sequencer) is one of three arpeggiators featured, one of which works as a desk accessory. I've never used Petri Sinisalo's *Real Arp* or the Phonix *MIDI Arpeggiator* before, but they offer plenty of possibilities. Martin Russ is also further represented with his test utilities (*MIDI Rat* and *MIDI Channel Scope*). There are a few delay-time calculators as well, which let you quickly work out the values needed to produce timed delays. All in all, it's a fine collection, but paper documentation is scant, so head to the Read Me files. I may well give some of this software specific coverage in future. Can't wait for *Volume Two*! Just remember that some software in this pack is shareware: if you use it, pay the registration fee.



***Phonix's* MIDI Arpeggiator, *part of Floppyshop's* MIDI Programs Volume 1.**

Incidentally, Floppyshop are also marketing a four-disk MIDI file pack (just £5, plus postage as above), which contains a large and varied collection, including classical, jazz, pop files and more. Because these are SMFs, and the disks are PC-formatted, the collection isn't restricted to ST users: PC and Mac users can also take advantage of it. One last Floppyshop snippet: the library is now on the Internet: point your browser at http://www.netkonect.net/tachyon/flopshop/.

A Floppyshop, PO Box 273, Aberdeen AB15 8GJ.
T 01224 586208.
T Credit card orders 01224 312756.
F 01224 586208.
E sdelaney@steil.wintermute.co.uk

NET GAINS

Wessex Atari Group, whom we featured briefly several months ago, have moved their web site to a new server (http://www.users.zetnet.co.uk/rgoring/wag/). The new site is steadily expanding, and contains loads of info and links for all users of the Atari. As an Internet service provider ZetNet (telephone 01595 696667, fax 01595 696548) offer good value, at £80 a year, or slightly more if you pay in instalments. They've also recently upgraded their hardware (as a ZetNet user myself, I can vouch for the improvements), and quite a few 'Atarians' are on hand to help, via ZetNet Atari-specific newsgroups. Tell 'em I sent you!

SHOWING OUT

Regular readers of this column will know that Goodman's PDL (01782 335650) ran a couple of Atari shows at the end of April; Sunrise Audio Systems' Sol Barnet was actually there, and he files this report.

"The general feeling of the two shows was positive and encouraging, with attendance up on the last event, and we also got proof that plenty of musicians are still using the ST and Falcon for making music. On display was a host of new products and software updates. Titan Designs and Black Scorpion [telephone 0121 693 6669, fax 0121 414 1630, email 100345.2350@compuserve.com], two companies fully behind the Falcon as a platform, showed off two new system accelerators — Nemesis and Afterburner 040 — both working in conjunction with their new screen-resolution enhancer, *Videlity*. Titan also announced that they will be staying with the Falcon platform for the foreseeable future, with forthcoming products including *Apex Audio*, an audio manipulation program with advanced DSP and audio editing and recording.

"Best Electronics are a good company to know, in spite of being based in the USA [telephone 001 408 243 6950, fax 001 408 243 8274]. They had on show every conceivable Atari spare part, and offer a quick and reliable service.

"The biggest stand was manned by System Solutions, and plenty of bargains were on offer, including new STs, packaged with Steinberg's *Cubase Score* and a monochrome monitor. Also on show were software updates for *Zero X*, which now includes hard disk recording, *Audio Master*, *Audio Tracker* and *CD Recorder* from SoundPool, all supporting new colour interfaces, bug fixes and new features. Incidentally, System Solutions' web site is undergoing a revamp; log on to the old address [http://www.ssolutions.com/], and you'll find a forwarding address when the new site is up and running.

"ST music software specialists Electronic Cow [1462 281347] showed off the latest versions of their *MIDI Arpeggiator*, *Sound Chip Synth* and *Snippit Synth*, and we at Sunrise Audio Systems [01379 853845 — note new number] showed our new audio workstation, and provided the music for most of the weekend. We can also now supply the whole of the SoundPool range.

"Last, but not least, The Upgrade Shop [01925 503448], who also had a presence at the show, have designed a new internal IDE adaptor for the ST, which provides a cost-effective way for ST users to access low-cost IDE drives (the difference in price between SCSI and IDE hard drives and CD-ROM drives can be quite staggering) and install them *inside* the STE. Sharing The Upgrade Shop stand were Keychange Music [01925 266120], and apart from touting their service and repair service, they were showing off a very sturdy 19-inch rackmounting case for ST computers. The options are vast here, but the case can accommodate an ST or Falcon motherboard (or two), two 5.25-inch bays (for CD-ROM or extra floppy drives), an IDE interface and a hard drive — the dongle port can even be sited internally. All that's required is to plug in a Mega keyboard."

VS-880

Roland

Roland VS-880 Expanded with V2 Software

The Roland VS-880 has already established itself as a major force in Hard Disk Recording.

The VS-880 offers high quality recording with comprehensive editing, at an affordable price.

Features include:

- Up to 8 tracks of CD quality
- 64 virtual tracks
- 4 tracks simultaneous recording
- 3 band equalisation
- Digital mixer
- Automation of volumes
- Studio quality effects - with the VS8F1
- Master or slave - synchronisation

Includes 1.4 Gig Hard Drive + VS8F1 Effects Board.

Available on Interest Free Credit Call for Special Deal this month

Roland XP-10

New low price
£ 399.00

A Keyboard ideal for beginners yet retains quality and functionality that a serious player would demand.

Specifications:-
61 Velocity Sensitive Keys, 16 Parts Multitimbral, 28 Note Polyphony, Over 600 Sounds. Built In Arpeggiator

Interest Free Credit
Deposit £ 49.00
Balance Payable over 10 Months @ £ 35.00 Per Month

Roland JP-8000

New low price
£ 1499.00

Another classic Roland synthesiser, utilising analogue modelling. Roland have created a worthy heir to the throne, currently held by the Jupiter 8, Juno 106 and other great analogue synths. Countless knobs, buttons and sliders, for endless tonal changes. Powerful internal Arpeggiator.

Interest Free Credit
Deposit £149.00
Balance Payable over 18 Months @ £75.00 Per Month

Roland XP-50

£ 999.00
Lowest price ever

Interest Free Credit
Deposit £ 99.00
Balance Payable over a 12 Months @ £75.00 Per Month

Roland XP-80 £ 1499.00

Interest Free Credit - Deposit £ 149.00
Balance Payable over 18 Months @ £75.00 Per Month

OTHER CREDIT DEALS

	Total Cash Price	Deposit	Payments
Roland JV1080	£ 999.00	£ 99.00	12 x £ 75.00
Roland JV2080	£ 1399.00	£ 229.00	18 x £ 65.00
Roland A90EX	£ 1999.00	£ 199.00	18 x £ 100.00
Roland MC303	£ 565.00	£ 65.00	10 x £ 50.00
Roland PMA5	£ 399.00	£ 49.00	10 x £ 35.00

Access
VISA

ANDERTONS

The Hi-Tech No.1 SuperStore

58-59 WOODBRIDGE ROAD, GUILDFORD. SURREY GU1 4RF

TELEPHONE
01483 456777

FACSIMILE
01483 456722

ACTIVE SOUND ...creative technology

CALL NOW ON:
01923 246282
I 2 LINES
OR FAX ON:
01923 246669

THIS IS JUST A SMALL SELECTION OF THE MANY OTHER PRODUCTS HELD IN STOCK!!!

U E4X
ANNOT BE BEATEN... £136.44 P/M
MU E4K
GAIN, WE CANNOT BE BEATEN...
MU E4XTURBO £159.95 P/M

ROLAND VS880 £106.09
HC F/X AND HARD DRIVE ETC
VS880 M2 UPGRADES AVAILABLE NOW)

YAMAHA 03 £2999.00
INTEREST FREE AVAILABLE AS IS DEFERRED

ALL PRICES INCLUDE VAT AND DELIVERY

GIVE US A CALL AND ARRANGE A VISIT TO OUR NEW SHOP WHERE WE CAN ADVISE YOU WHILST WE DEMONSTRATE, PLEASE NOTE WE ARE THE UK'S ONLY PRO-MAIL ORDER TRACKING COMPANY CAPABLE WITH THE AID OF THE VERY LATEST COMPUTER TECHNOLOGY TO ORGANISE YOUR MAIL ORDER TRANSACTION WITHOUT FAULT.

SAMPLERS AND H/D RECORDING.

AKAI S2000 INC 16 MEG £49.45 P/M
AKAI S3000XL INC 16MEG £88.79 P/M
AKAI S3200XL INC 32 MEG £172.79 P/M
ALESIS ADAT XT
INC 2 TAPES AND LEADS ETC £114.54 P/M
EMU ESI 32
INC SCSI AND 32MEG £46.58 P/M
EMU E6400
INC 32 MEG £108.94 P/M
EMU E4X
CANNOT BE BEATEN.. £136.44 P/M
EMU E4K
AGAIN, WE CANNOT BE BEATEN..
EMU E4XTURBO £159.95 P/M
SOUNDSCAPE VERSION 2. ON DEMO NOW THE ONLY SERIOUS SYSTEM THAT WORKS.

KEYBOARDS, SYNTHS AND PIANOS.

ROLAND RD500
(88 NOTE WEIGHTED) £67.45 P/M
ROLAND XP50
INC ONE EXPANSION CARD £59.95 P/M
ROLAND XP80 £86.59 P/M
ROLAND XP10 £WELL UNDER 499.00
ROLAND P[illegible] £70.00 P/M
ROLAND A[illegible] £94.45 P/M
ROLAND A33 £365.00
ROLAND VK[illegible] £84.95 P/M
KORG TRINITY £76.34 P/M
KORG TRINITY PRO £102.69 P/M
KORG PROPHECY £42.00 P/M
KORG XSD
[illegible] TO BE SOLD OUT!!! CALLING
YAMAHA QS300 £999.00
YAMAHA CS[illegible] £549.00
ENSONIQUE TS10
MEGA LOW PRICE OF £999.00
ALESIS QS6 £699.00
ALESIS QS7 £949.00
ALESIS QS8 £1599.00

FULL RANGE OF STUDIO LOGIC (FATAR) MASTER KEYBOARDS AND CONTROLLERS IN STOCK FROM £279.00

FREE, ANY PURCHASE TOTALLING OVER 1000.00 WILL BE SUPPLIED WITH A COMPLETE HOME HI-FI SYSTEM WORTH £299.00

HOME STUDIO AND PRO AUDIO

ALESIS MEQ 230 £249.00
ALESIS 3630 £209.00
ALESIS NANOPIANO £329.00
ALESIS NANOBASS £229.00
ALESIS NANOVERB £159.00
ALESIS NANOCOMP £159.00
ALESIS MICROVERB 4 £219.00
ALESIS WEDGE £429.00
BOSS SX700 £399.00
BOSS GX700 £419.00
BOSS VT1 £259.00
DIGITECK STUDIO 400 £37.45 P/M
DIGITECK GSP 2101 ARTIST £UK LOWEST
DIGITECK VTP1 £UK LOWEST
DIGITECH XP100 AND 200 BOTH £179.00
ROLAND VG8 INC EVERY OPTION
ROLAND SRV330 £35.94 P/M (UK LOWEST)
ROLAND AF70
COMES WITH 5 FREE MIDI LEADS £299.00
ROLAND AD5 £299.00
COMES WITH FREE MICROPHONE
ROLAND GI10P £27.45 P/M
ROLAND GP100 £37.45 P/M
WE STOCK MOST BOSS EQUIPMENT (TO MUCH TO LIST)
BOSS GT5 £32.95 P/M
INC FREE HOME HI/FI SYSTEM WORTH £299.00

TASCAM DA20
INC 10 JACK TO JACK LEADS £34.95 P/M
TASCAM DA30 £59.95 P/M
TASCAM DA38 £126.69 P/M
(GIVE UP SMOKING AND IT'S FREE.UK LOWEST)
TASCAM 564
WE STOCK THE WHOLE RANGE OF TASCAM MULTITRACK'S PLEASE CALL
YAMAHA SPX1000 £1199.00
YAMAHA D5000 £1249.00
YAMAHA SPX990 £749.00
YAMAHA REV 100 £CALL FOR SPECIAL
YAMAHA MD4 £39.95 P/M
FULL RANGE OF YAMAHA MULTITRACKS IN STOCK NOW.
SPIRIT ABSOUTE 0'S £189.00
SPIRIT ABSOLUTE 2'S £249.00
SPIRIT ABSOLUTE 4P'S £CALL URGENTLY
ALESIS MONITOR 1'S £299.00
ALESIS MONITOR 2'S £549.00
ALL PRICED PER PAIR, ALL INC SPEAKER CABLE
ALESIS POINT 7'S £239.00
YAMAHA NS10 M'S £359.00
GENELEC (THE RANGE) £SORRY, NO PRICE
PLEASE CALL, WE'LL MAKE YOUR DAY.

SOUND MODULES/DRUM MACH NES AND TONE GENERATORS.

ALESIS S4PLUS £PAY IN 6 MONTHS
EMU DRUM KIT
(EXCELLENT PRODUCT, PHONE FOR INFO)
EMU ORBIT V.2 (SEE DEAL OPPOSITE) £699.00
EMU CARNIVAL £869.00
EMU PLANET PHAT £849.00
EMU PROTEUS FX £399.00
NOVATION BASS STATION RACK £349.00
NOVATION DRUM STATION £329.00
ENSONIQUE MR RACK £999.00
CANNOT BE BEATEN ON PRICE ON THIS PRODUCT
LATEST NOVATION UNITS AVAILABLE SOON
ROLAND JV1080 £49.95 P/M
ROLAND MGS64 £549.00
ROLAND MBD1 £399.00
ROLAND PMA5 £429.00
ROLAND SC88 PRO £649.00
ROLAND SD35 £619.00
ROLAND MDC1 £329.00
WALDORF PULSE PLUS £UK LOWEST
YAMAHA MU5 £229.00
YAMAHA MU50 £419.00
YAMAHA MU80 £529.00
YAMAHA P50M £339.00
YAMAHA RY 20 £369.00
YAMAHA RY8 £229.00
YAMAHA QY700 £PAY 99.99 NOW
BALANCE IN SIX MONTHS
YAMAHA SU10 (POCKET SAMPLER) £279.00
ROLAND MS1 (PORTABLE SAMPLER) £299.00
MUTRONICS MUTATOR
£COME DOWN FOR A DEMO/PAY DEPOSIT NOW/BALANCE 6 MONTHS

MIXERS/MICROPHONES AND PA.

SAMSON MIXPAD 9 £159.00
SAMSON MIXPAD 12 £249.00
SAMSON MPL1502 £299.00
(INCLUDES FREE S1 1 MIC WORTH 89.00)
SAMSON MPL1640 £499.00
(INCLUDES FREE S12 MIC WORTH 129.00)
SAMSON MPL2242 £LOW PRICE
KORG 168RC DESK £1799.00
YAMAHA PRO MIX 01 £PAY SMALL DEPOSIT NOW, NOTHING MORE FOR SIX MONTHS
YAMAHA 03 £2999.00
INTEREST FREE AVAILABLE AS IS DEFERRED
YAMAHA 02R
IN STOCK, ON DEMO NOW!!!!!
TC FINALIZER
£DISCUSS THIS PRODUCT WITH OUR SPECIALIST
TC WIZARD
£AS ABOVE,TOO SERIOUS TO SIMPLY MAIL ORDER
SPIRIT FOLIO NOTEPAD £199.00
SPIRIT FOLIO 12:2 £499.00
INC 10 JACK TO JACK LEADS
SPIRIT FOLIO FT 14:2 £379.00
INC 10 JACK TO JACK LEADS
SPIRIT FOLIO FT 16:2 £449.00
INC 10 JACK TO JACK LEADS
SPIRIT FOLIO SX 2 £619.00
INC 20 JACK TO JACK LEADS
STUDIOMASTER DIAMOND CLUB £299.00
ALESIS X2 24-8.2 MIDI CONTROLLABLE
RRP WAS £10,000.00, OUR PRICE £3995.00
EV SX200 PA PER PAIR
£WILL NOT BE UNDERCUT, CALL US.

JBL,TURBO SOUND,TOA,DYNAMIX, ETC ALL IN STOCK AND AVAILABLE NOW.
GENELEC 1029A AND 1091A AVAILABLE NOW.
AKG, SHURE, AUDIO TECHNICA, RODE AGAIN WE SUPPLY EVERY MODEL OF MIC. PLEASE CALL FOR INDIVIDUAL LOW PRICES.

AUDIO-DIGITAL SOUND CARDS

AUDIOWERKS 8 2IN,8OUT PC £499.00
AWE 64 £169.00
DMAN DIGITAL AUDIO CARD (FULL DUPLEX) £239.00
CARDD PLUS £575.00
DIGITAL ONLY CARDD £297.00
MAXISOUND 64 (FULL DUPLEX) £189.00
MULTIWAV DIGITAL I/O £439.00
MULTIWAV PRO 18 I/O £539.00
ROLAND ATW-10 (RAP-10) £99.00
TRIPPLEDAT V2 CARD
INC SOFTWARE £1220.00
TURTLE BEACH - TBS2000 £148.00
TURTLE BEACH - TROPEZ PLUS £259.00
TURTLE BEACH - FIJI £349.00
TURTLE BEACH - PINNACLE £459.00
YAMAHA DB50XG £115.00
YAMAHA SW60XG £139.00
YAMAHA MU10XG £195.00

MIDI ADAPTORS & INTERFACES

WINMAN INTERNAL 1 X 1 £45.00
WINMAN INTERNAL 2 X 2 £69.00
WINMAN INTERNAL 4 X 4 + SMPTE £199.00
WINMAN SYNCMAN £99.00
WINMAN SYNCMAN PRO £69.00
WINMAN SMARTSYNC £79.00
WINMAN PARALLEL OR SERIAL 1 X 1 £79.00
OPCODE STUDIO 64X £256.00
MARK OF THE UNICORN MIDI EXPRESS £362.00
MARK OF THE UNICORN MIDI TIME PIEC £639.00
MIDI QUEST 2 PORT SE £182.00
MIDI QUEST 8 PORT SE £389.00
MIDI QUEST MIDI ENGINE £95.00
MAC MIDI ADAPTERS 1 X 1 £32.00
MAC MIDI ADAPTERS 1 X 3 £41.00
MIDI EDGE 1 X 1 INC WAVE CONN £56.00
MIDI EDGE 1 X 4 INC WAVE CONN £119.00
SOUND CARD MIDI ADAPTOR £25.00
FULL SELECTION OF MIDI ADAPTERS, LEADS, CONNECTORS

SOFTWARE

AUTOSCORE (MAC) £129.00
BAND IN A BOX (PC, MAC, ATARI) £89.00
CAKEWALK HOME STUDIO £99.00
CAKEWALK PROFESSIONAL V5 £189.00
CAKEWALK PRO-AUDIO V5 £299.00
CAKEWALK PRO-AUDIO DELUX V5 £369.00
CODA FINALE £490.00
MUSICATOR MUSICATOR AUDIO £299.00
MUSICWARE PIANO COURSE 1-2 OR 3 £89.00
MUSICWARE PIANO DISCOVERY £69.00
MUSICWARE PIANO DISCOVERY SYSTEM £189.00
MUSICWARE SOUND2MIDI £95.00
SOUNDTREK JAMMER PRO V2.0 £139.00
STEINBERG CUBASIS PC £125.00
STEINBERG CUBASIS AUDIO PC £238.00
STEINBERG CUBASE V3.0 £319.00
STEINBERG CUBASE SCORE £489.00
STEINBERG CUBASE AUDIO £649.00
STEINBERG WAVE LAB V1.5 £389.00
STEINBERG CUBASE V3 - VST (MAC) £319.00
SION SOFTWARE QUICKSCORE ELITE V5.1 £69.00
SION SOFTWARE QUICKSCORE ELITE V5.1 LEVEL 2 £149.00
SION SOFTWARE NIGHTINGALE NOTATION £385.00

CALL FOR FURTHER SELECTION OF SOFTWARE TITLES

GEAR TO CLEAR

CASIO HT 3000 KEYBOARD £299.00
YAMAHA YS212 SPEAKER (PAIR) £199.00
MOJO MC22 £249.00
MOJO MH4 £249.00
MOJO MQ302 £309.00
SAMSON MODEL E30 EQ UNIT £179.00
ALESIS SR16 DRUM MACHINE £179.00
ART MR1 REVERB £80.00
EON POWER 10 SPEAKERS
£SO LOW CAN'T PRINT
KURZWEIL PC88 WEIGHTED PIANO £1599.00

IMPORTANT NOTE,WE HAPPEN TO HAVE OPENED OUR NEW HI-TECH / PRO AUDIO STORE NEXT DOOR TO **GUITARLAND** WHO KEEP IN STOCK OVER 100 GUITARS AND CARRY IN STOCK THE RANGE OF MARSHALL, PEAVY, FENDER PA ETC. LET GUITARLAND LOOK AFTER YOU WHILST WE DO THE SAME ALL IN ONE GO!

TEL: (01923) 246282 / (01923) 444599 FAX: (01923) 246669 WEBSITE: http://www.active-sound.co.uk
OPEN MONDAY TO FRIDAY 10AM-6:00PM (SATURDAY 11AM-5:30PM).

WRH

CALL NOW ON:
01923 444599
I 2 LINES
OR FAX ON:
01923 246669

..creative technology

ACTIVE SOUND

MAIL ORDER SPECIALIST

ALWAYS COMPETATIVE IN PRICE. NEVER BEATEN IN SERVICE

Hard Disk Recording & Multi-Media Systems:

1 Pentium 133

16 Mb System RAM - 256 Cache
3.5" Floppy - 1.2 Gb Fast IDE Hard Disk
8 Speed CD ROM
14" Monitor - 1Mb Video Adapter
Maxisound 64 Full Duplex Sound Card
Win/95 Keyboard - Mouse - Win/95
Desktop or Mini Tower Case - Active Speakers
49Key Master Keyboard inc Notation
& Sequencing Software
£54.00 per month

2 Pentium 133

16 Mb System RAM - 256 Cache
3.5" Floppy - 1.2 Gb Fast IDE Hard Disk
8 Speed CD ROM
15" OSD Digital Monitor - 1Mb Video Adapter
Turtle Beach Fiji Hard Disk Recording Card
Win/95 Keyboard - Mouse - Win/95
Desktop or Mini Tower Case - Active Speakers
£58.33 per month

3 Pentium P200

32 Mb System RAM - 512 Cache
3.5" Floppy - 2.0 Gb Fast IDE Hard Disk
4 X 6 Writeable CD ROM Drive
15" OSD Digital Monitor - 1Mb Video Adapter
Turtle Beach Pinnacle Hard Disk Recording Card
Win/95 Keyboard - Mouse - Win/95
Desktop or Mini Tower Case - Active Speakers
£106.82 per month

Studio Packages:

1

Folio F1 16/2	£452.00
Alesis RA100	£349.00
Monitor Ones	£325.00
AT4033	£499.00
Alesis 3630	£225.00
Midiverb 4	£329.00
Tascam DA20	£799.00

£111.66 per month

2

Yamaha Pro mix 1	£1999.00
AT4033	£499.00
Alesis RA100	£349.00
Alesis Montior Ones	£349.00
Quadraverb 2	£699.00
Joe Meek VC1	£599.00
Tascam DA20	£799.00

£198.33 per month

3

Folio F1 16/2	£452.00
Samson S12	£150.00
Alesis RA100	£349.00
Alesis Monitor Ones	£325.00
Alesis Nanoverb	£169.00
Alesis Nanocomp	£149.00

£59.91 per month

4

Yamaha 03D	£2999.00
Alesis Adat	£2100.00

£191.25 per month

All Credit Cards accepted

WHY YOU SHOULD BUY FROM US:

We offer same day next day delivery service

Payment on delivery (selected areas)

Tailor designing systems to suit your requirements

Authorised service centre

Educational discounts

Installation and training

Part exchange welcome

Demo suite Try before you buy

Viewing by appointments only

Account customers welcome

Payment by:
Access/Visa/Switch
Amex/Cash/Postal
Order/Transfer
Instant Cheque
Clearing

0% INTEREST FREE FINANCE OVER £500

9-12 MONTH DEFERRED PAYMENTS

ACTIVE SOUND (UK) LTD., 84 QUEENS ROAD, WATFORD, HERTS WD1 2LA - 2 MINUTES WALK FROM WATFORD JUNCTION
OPEN MONDAY TO FRIDAY 10AM-6:00PM (SATURDAY 11AM-5:30PM).

demo DOCTOR

STUART PENNINGTON

Recording Venue: Home.
Recording Equipment: Aiwa ADF450 cassette deck, Brother PDC100 sequencer, Panasonic RPHT96 headphones, Roland XP10 synthesizer.

Proving once again that you don't need a room full of equipment to produce a good recording, Stuart's tape has clarity and a good instrumental balance. You could argue that he doesn't have a lot to deal with, because there are no vocals or acoustic instruments — simply a sequencer and one multitimbral synth! Yet he's still got to choose sounds that fit together well and get the balance right — all without the aid of outboard effects, too.

Aiming at the 'Incidental Music for Documentaries' market, the music, with its clear ethnic flavour, is favouring the wildlife kind of documentary, I'd say. Although a lone piano often takes the theme, much of the backing is held together by percussion patterns looped on the sequencer. It actually makes a nice change to hear the congas right up front in the mix. Stuart has also used some interesting fast modulated effects on the reverb, which work in tempo with the pattern on at least one track.

My main criticism of the tape would be that it doesn't show enough variety. Piano and percussion on every track don't really show the variety in style that a potential patron is going to require for incidental music. Another problem is the end of the compositions: they just — well... stop. The lack of a tasteful fade-out or definite ending makes them sound a little unprofessional. Otherwise, for a first attempt, the recording is very good and I loved the sub-bass, which was amply reproduced over my new monitoring system! ❑

QUICKIES

THE NEXUS EFFECT: Featuring music that's a mix of Latin, bluegrass and jazz, The Nexus Effect live up to their band name! The instrumentals

are cunningly put together using a Pentium running *Cubasis* and several synthesized sound sources: there are no 'real' instruments. Despite this, they've come up with a passable impersonation of someone playing bluegrass banjo on the first composition, which is lacking only in the dynamics department. The second instrumental introduces a Latino flavour with brass that is mixed a tad low to give the required impact, but a well-programmed percussion section featuring most of the tried and tested favourites such as timbale, wood block and congas. Again, the mix sounds a little restrained — Latino should be bubbling with an energy that's barely contained, so the occasional accented timbale placed higher in the mix would add to the vibrancy.

SQUISH: The electronic dance music of Squish won the Top Tape award some time back. Here Darren Cleare, Squish's main man, returns with an offering that begins in an understated, ambient sort of way but doesn't really go far from there. It's interesting that he chooses to play the first mix off a loud, soft kick drum and keep the congas and log drum way down in the mix. The unusual pulse is quite hypnotic, and around it a string and bell mix weave and loop while the other instrumentation changes. Sounds like hand claps are added, as is the occasional synthesized whistle melody, and the percussion comes up in level as the mix progresses, but there's precious little really developing in an over-long track. Sub-bass accenting is one of Squish's strong points, and there's a nice little rhythm going on in the more techno-orientated second composition. This track features more changes and breaks than the opener, but would probably be more suitable for the clubs, given a tighter kick-drum sound to weld the bass end into a form that makes more sense of the sub-bass.

GRAEME MONTGOMERY: Graeme's tape was recorded some time ago, but he's had a little difficulty getting his hands on the master tape for one reason or another. Eventually a copy finds its way to these pages — and it's not at all bad. The cassette copy sounds slightly dull, but a little HF shelving tweak of a few decibels brought out the presence. Basically the recording holds together in a very radio-friendly way, with a tight, compressed mix that would translate well to the airwaves. The playing is also good, with tasty guitar and keyboard solos — the latter running into a sax break which duels with the synth on the fade-out. Township-style backing vocals lend the song a world-meets-rock-and-pop flavour somewhat reminiscent of Johnny Clegg; over it all, Ali Cut gives a fine vocal performance. Graeme hopes to get a release on this track now he's relocated the master tapes, but things have moved along in the last 10 years and what may have been ground-breaking then is almost par for the course now.

DRIFTING SUN started this tape as a studio-orientated project, but have found that record companies are interested in their brand of fairly technical rock. The recording was done at various studios in Surrey and Middlesex, and has a clean sound that's obviously been heavily compressed for maximum impact on a variety of systems. My feeling is that the drums, and in particular the snare drum, have been given a bit too much high-frequency EQ, but this does mean that they cut through well in the mix. In fact, it's the snare that suffers more than anything else: it plays such an important part in rock production that I'd like to have heard more weight in the sound, and also less tight noise-gating on the snare. However, I can't fault the playing of drummer John Lyngwood, or of any other members of the band. Leaving the songs open for interpretation as videos is a good move, and songs such as 'Jamie Was A Vampire' certainly have all the ingredients for today's teen market, particularly in America or Europe — which is where the band should aim their demos if they want to get on.

TRACE: Showing my age, I remember that there was a prog rock band called Trace in the '70s, which featured the ex-drummer of Focus and his brother on keyboards. How ironic that the new Trace are indeed a prog rock band with all the trimmings — portamento synth breaks, big orchestrated sound and complex arrangements. There's even

the classic rasping bass sound, Chris Squire-style, but it does lack a bit of bottom end — as does the whole mix. Sonically, there's also too much going on in the upper mid-range, where the hard sounds of digital drums fight for space with some buzzy keys and guitar. Here the whole clarity thing needs sorting out and there are a number of ways to do it: panning, use of more effect on one of the sounds to give it a different place in the mix, or, preferably, a little more attention given to the sounds at source. For example, in the second song there are two lead guitars playing at the same time in the lead break, some pad keyboards with a lot of mid which are fighting for space with the guitars, and a Hammond organ sound which is actually louder than both guitars! Technically, it's a bit of a mess, but the energy in the playing really comes across well, and the keyboard player's technique is very good. It makes a nice change to hear keyboards that haven't been quantised. Now it's just a question of a little discipline. For instance, the third track, 'Fishbury Meadows', has a clear mix because there's less going on, and that leaves space for the sounds to breathe. ❑

Alchemea Sucks
you into a world where technology and creativity combine to give you the best possible audio education
Creativity has no limits.
24/7 is more than a number.
No other college offers you so much individual practical time.
Alchemea – one college – creating the next generation of
audio professionals
REGIONAL WINNER
1993
Alchemea
Perfectum opus emptores invenit
2-18 Britannia Row
The Angel
Islington
London N1 8QH
Tel: 0171 359 4035
Fax: 0171 359 4027
Via Stendhal
47 Milano
20144 Italia
Tel: 02 42 86 42
Fax: 02 42 35 651
E-mail: info. Alchemea @ demon.co.uk

Roland D50

LA SYNTHESIZER

Roland's D50 became the sound of the late '80s. Does it still have a place in the late '90s? PAUL WARD takes a trip around LA...

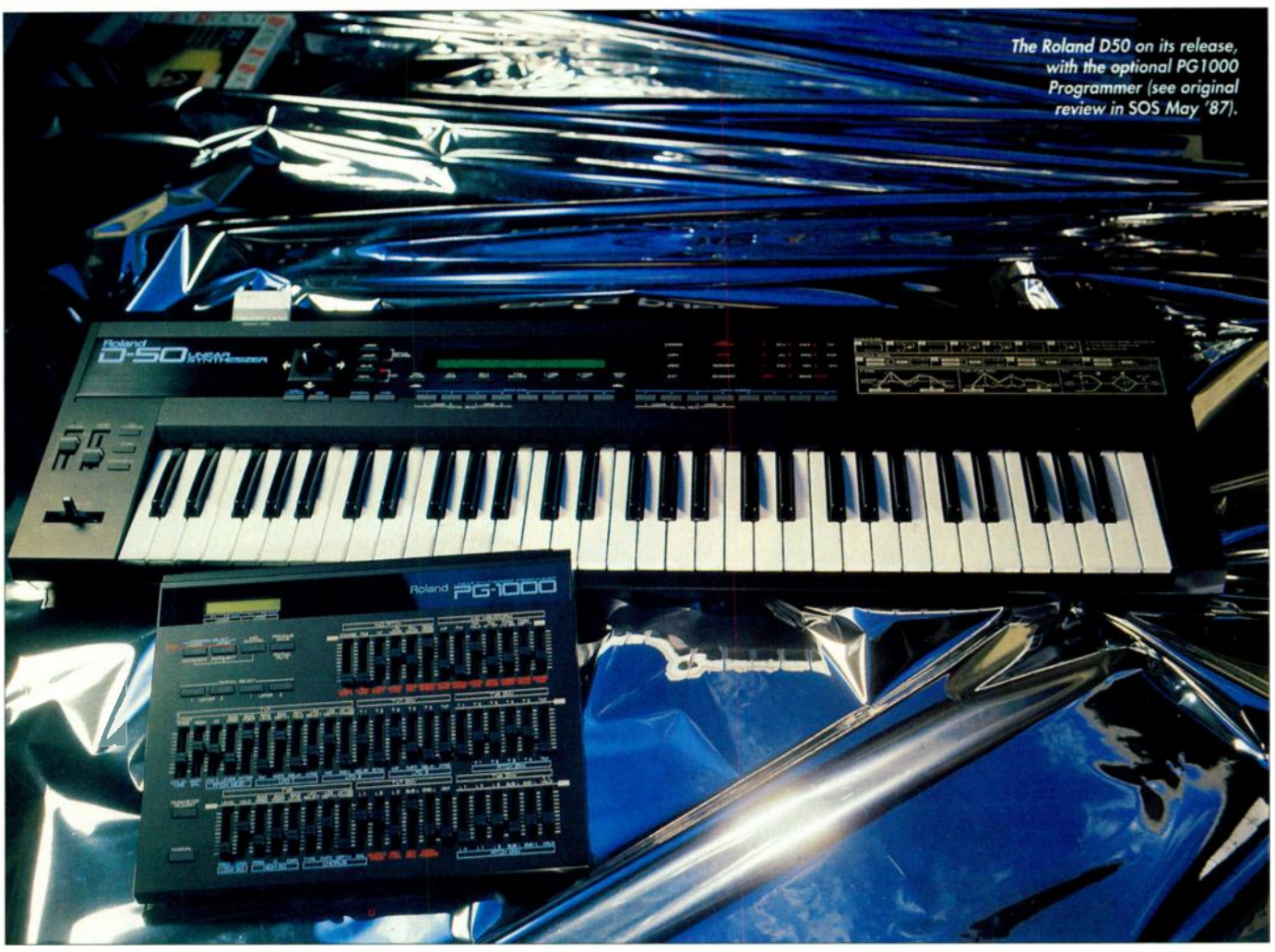
My first couple of chords on a D50 back in 1987 convinced me that I was witnessing something special. Those lush strings, the mind-blowing (and, subsequently, mind-numbing through overuse) 'Digital Native Dance', and the swirls and swooshes of countless choir, string, and blown-bottle pads came as a revelation to ears jaded by years of analogue bleeps and FM clangs.

OOH LA LA

Roland proudly labelled their new technology 'Linear Arithmetic' synthesis — or LA for short. Despite the swish name, the internal architecture of the D50 is not particularly exciting by today's standards, and does little to convey the reason for the machine's lasting appeal. LA synthesis was essentially the first of the Sample+Synthesis (S+S) instruments, which have dominated music technology for the last 10 years — only now being overtaken by the new wave of physical modelling synthesizers. At a time when we were all fed up of not being able to program our FM synthesisers, it came as something of a pleasant surprise to find that Roland had essentially stuck to the analogue terminology with which most synthesists were familiar. OK, the VCA and VCF of old had become the TVA and TVF in the D50, but they worked in pretty much the same way.

A D50 'Patch' is the standard unit of currency, consisting of a pair of 'Tones', designated Upper and Lower. Within each Tone are a pair of 'Partials', each of which can be thought of as a single-oscillator synth. A number of 'Structures' specify whether each partial is to produce a standard synth waveform (sawtooth or square, with adjustable pulse width), or make use of one of the 100 PCM samples. With memory costs at a premium at the time of the D50's release, Roland had to work hard to make the most of the available space. Whereas the short attack samples, such as trumpet spits and flute chiffs, are generally good, some of the looped sounds are questionable. Of the 100 samples, 47 are attack portions, 29 are static looped waveforms, and 24 are actually loops that scan across several of the D50's shorter ROM samples to create some strange rhythmic effects — 'Digital Native Dance' being a prime example.

But what the D50 lacked in refined sample material it certainly made up for in the synthesis department. PCM partials have a relatively easy life of it, being subjected to LFO and envelope pitch modulation before being routed through the Time Variant Amplifier (TVA). Synthesizer waveforms enjoy the added pleasure of being mangled by the Time Variant Filter (TVF). This resonant filter is one aspect of the D50 that holds much of the machine's lasting appeal, I'm sure. It doesn't have the slurpy resonance of an analogue synth, admittedly, but it has plenty of warmth and character to keep you coming back for more. ▶



The Roland D50 on its release, with the optional PG1000 Programmer (see original review in SOS May '87).

SOS PROFESSIONAL CABLES

MICROPHONE CABLES

INSTRUMENT CABLES

SPEAKER CABLES

MIDI CABLES

Please **add** your cable colour code R (red), B (blue), Y (yellow), G (green) or K (Black) at end of *each* Order Code to specify cable colours required when ordering. Example: **INS-03JJ-Y** means a *3 metre Jack-to-Jack Instrument cable in Yellow.*

Length / Type	*Price*	*Order Code*
MICROPHONE CABLES		
1 metre XLR-to-XLR	£7.95	MIC-01XX
2 metre XLR-to-XLR	£9.50	MIC-02XX
3 metre XLR-to-XLR	£10.50	MIC-03XX
5 metre XLR-to-XLR	£11.75	MIC-05XX
6 metre XLR-to-XLR	£12.75	MIC-06XX
10 metre XLR-to-XLR	£17.50	MIC-10XX
20 metre XLR-to-XLR	£28.00	MIC-20XX
1 metre XLR-to-Jack	£7.95	MIC-01XJ
2 metre XLR-to-Jack	£9.50	MIC-02XJ
3 metre XLR-to-Jack	£10.50	MIC-03XJ
5 metre XLR-to-Jack	£11.75	MIC-05XJ
6 metre XLR-to-Jack	£12.75	MIC-06XJ
10 metre XLR-to-Jack	£17.50	MIC-10XJ
20 metre XLR-to-Jack	£28.00	MIC-20XJ
1 metre XLR-to-Rightangle Jack	£7.95	MIC-01XRJ
2 metre XLR-to-Rightangle Jack	£9.50	MIC-02XRJ
3 metre XLR-to-Rightangle Jack	£10.50	MIC-03XRJ
5 metre XLR-to-Rightangle Jack	£11.75	MIC-05XRJ
6 metre XLR-to-Rightangle Jack	£12.75	MIC-06XRJ
10 metre XLR-to-Rightangle Jack	£17.50	MIC-10XRJ
20 metre XLR-to-Rightangle Jack	£28.00	MIC-20XRJ
QUAD MICROPHONE CABLES		
5 metre Quad XLR-XLR	£14.00	QMIC-05XX
10 metre Quad XLR-XLR	£19.95	QMIC-10XX
20 metre Quad XLR-XLR	£30.00	QMIC-20XX
MIDI CABLES		
With pro Neutrik 'crush-proof' metal DIN plugs.		
1 metre	£6.50	MID-01
2 metre	£7.50	MID-02
3 metre	£8.50	MID-03
5 metre	£9.50	MID-05
INSTRUMENT CABLES		
1 metre Jack-to-Jack	£7.95	INS-01JJ
2 metre Jack-to-Jack	£9.50	INS-02JJ
3 metre Jack-to-Jack	£10.50	INS-03JJ
5 metre Jack-to-Jack	£11.75	INS-05JJ
6 metre Jack-to-Jack	£12.75	INS-06JJ
10 metre Jack-to-Jack	£17.50	INS-10JJ
20 metre Jack-to-Jack	£28.00	INS-20JJ
1 metre Jack-to-Rightangle Jack	£7.95	INS-01JRJ
2 metre Jack-to-Rightangle Jack	£9.50	INS-02JRJ
3 metre Jack-to-Rightangle Jack	£10.50	INS-03JRJ
5 metre Jack-to-Rightangle Jack	£11.75	INS-05JRJ
6 metre Jack-to-Rightangle Jack	£12.75	INS-06JRJ
10 metre Jack-to-Rightangle Jack	£17.50	INS-10JRJ
20 metre Jack-to-Rightangle Jack	£28.00	INS-20JRJ
SPEAKER CABLES		
3 metre Jack-to-Jack	£10.00	SPK-03JJ
6 metre Jack-to-Jack	£12.75	SPK-06JJ
10 metre Jack-to-Jack	£17.50	SPK-10JJ
3 metre Speakon-to-Jack	£11.75	SPK-03SJ
3 metre Speakon-to-XLR	£11.75	SPK-03SX
6 metre Speakon-to-Jack	£14.00	SPK-06SJ
6 metre Speakon-to-XLR	£14.00	SPK-06SX
10 metre Speakon-to-Jack	£18.75	SPK-10SJ
10 metre Speakon-to-XLR	£18.75	SPK-10SX
3 metre Speakon-to-Speakon (2.5mm)	£19.95	SPK-03SS
6 metre Speakon-to-Speakon (2.5mm)	£28.00	SPK-06SS
10 metre Speakon-to-Speakon (2.5mm)	£38.75	SPK-10SS

ALL PRICES INCLUDE VAT

Some of the most important, but most often overlooked, elements in the signal path are your audio and MIDI cables. Why sacrifice signal quality when you can rely on Piranha cables — *available now direct from SOS Mail Order.*

WHY CHOOSE PIRANHA CABLES ?

- *Piranha cables are designed for professional use and manufactured to the very highest quality.*
- *Piranha cables use top quality connectors from Neutrik, the industry leaders.*
- *Piranha cables are manufactured to combat any external interference.*
- *Piranha cables use braided shields to counteract AC interference whilst allowing maximum 'bendability'.*
- *Piranha cables are designed to minimise ground loops.*
- *Piranha cables use fibre fillers to pack out the jacket, maintaining dimensions and mechanical stability in all stage and studio conditions.*
- *Piranha cables are exceptionally soft, whilst offering unsurpassed flexibility and durability.*
- *All Piranha cables come with a Lifetime Guarantee.*

MICROPHONE CABLE - Twin Core oxygen-free copper cable made to the highest specification, using high density spiral braided shield to provide superior performance and rejection of hum and noise. Special supersoft Polymer jacket makes this probably the most flexible cable available, giving the ultimate in protection against mechanical interference noise. Overall cable diameter: 6.5mm.

QUAD MIC CABLE - Our Piranha supersoft mic cable is now available in a Quad version, offering further protection against susceptibility to outside interference. If you think of your cable as being 'double balanced', it is not difficult to understand the dramatic improvements in noise rejection that this cable affords. Overall cable diameter: 6.7mm.

INSTRUMENT CABLE - Single Core oxygen-free copper cable, as above spec. Cable diameter: 6.2mm.

MIDI CABLE - Fitted with professional Neutrik metal "crush-proof" DIN plugs.

Tel: 01954 789 888 **Fax: 01954 789 895**

or complete the Order Coupon on the SOS Mail Order page at the back of this magazine

Please add postage per cable UK £1 75 Europe £3 50 R O W £5 25

Three assignable LFOs are available, and pitch, filter and amp each have their own dedicated multi-stage envelope generators, making a very flexible set of sound-producing tools. The range of modulation options is quite sophisticated, with the ability to use positive or negative phases of the LFOs, and to adjust the key-follow curve based on a bias level and keyboard-split point. Several of the Structures include a ring modulator, which is capable of some excellent effects when patched between a pair of PCM samples.

THE EIGHTH DIMENSION

Tone parameters include the three LFO waveforms' delays and speeds, pitch-envelope and chorus settings, and there's also a very useful high/low EQ section with variable frequency and gain. The high EQ even has adjustable Q (frequency bandwidth). The chorus is typically Roland and typically good, with eight different types of chorus including flangers, tremolo and Roland's hugely desirable 'Dimension' chorus effect.

"It doesn't have the slurpy resonance of an analogue synth, admittedly, but it has plenty of warmth and character to keep you coming back for more."

Two Tones do a Patch make, and here it is that reverb or delay is added, key modes are set, and split points are defined. Usefully, each Patch can be set to transmit on a different MIDI channel and to send a program number between 1 and 100, which makes it a good master keyboard for live situations. Another aspect worthy of note is the 'Chase' play option. Chase can essentially be thought of as similar to the MIDI delay processors found in many software sequencers, but the D50 switches between the Upper and Lower Tones between repeats. This is a very inspiring feature, which has helped my creativity along on more than one occasion. If only Roland had added an arpeggiator into the bargain!

The D50 can be used as a bi-timbral instrument if you specify a second channel to which the Upper Tone can be assigned.

The D50's keyboard is quite smooth and pleasant to play, making it a good master keyboard, provided that a weighted action is not a priority. Much less successful is the bender/modulation lever, which is far from ideal. For pitch-bending, I am more than happy with Roland's device, but as a modulation source it has too short a travel to be much more than an on/off switch! The onboard joystick can be used in editing and also pressed into service as a performance device for fading between the Upper and Lower Tones and also between the Partials of either of the Tones. This is a neat feature, but don't expect to go recording the results into your sequencer, because the joystick doesn't transmit any MIDI data. External storage is possible via MIDI System Exclusive, although a card slot is available.

The times, they have been a-changing, and the D50 has much less impact on ears well used to the complexity of sound offered by later instruments. Those lush strings now have some dubious loop points and there's a whole lot of nasty aliasing noise going on in the higher octaves; the rhythmic loops that sounded so inspiring are now annoyingly dated, and there's no way of changing them. But there are still sounds of which only the D50 seems capable. The ethereal 'Glass Voices' is still the mainstay of much new age and electronic music, and the gritty Hammond organ emulations are among the best of their kind.

OF LUSH, MUSH AND CHEESE

If the D50 has an Achilles heel it is that although many of its sounds are extremely lush and sexy when heard in isolation, they tend to turn into an unpleasant mush when placed in a mix. A lot of the blame for this must be placed at the door of the effects section, which is often overused (especially in the factory presets) to make up for the short loops and gritty samples. With a few judicious edits, things can get a whole lot better — I've known many players who turn off the D50's internal reverbs altogether. Although the results may be thinner and less impressive on their own, the same sound in a mix is much more comfortable. Don't expect any realistic instrument emulations, and forget the piano patches (unless you're looking for a piano that sounds as if it was made for the Early Learning Centre!). But marvel at the powerful strings, the breathy, tinkly pads and the cheesy organs — and if you ever get hold of the 'Star Trek Voices' patch then you'll be one step closer to becoming a film-soundtrack writer, perhaps...

"Many players turn off the D50's internal reverbs altogether."

Korg's M1 was arguably the synth most responsible for deposing the D50. Capable of a similar style of sounds, aided and abetted by a considerably more powerful effects processor, and — most importantly — multitimbral, the M1 stole the D50's glory and went on to become a milestone itself. Many LA synthesis spin-offs were to see the light of day following the D50's release, the best known of which is likely to be the multitimbral D110. Roland were also later to release the D70, which was based on the same LA synthesis technology pioneered by the D50. But whereas the D50 was fairly easy to get to grips with, the D70 proved to be more difficult to master, and somehow never had the sound texture of the earlier machine.

So is a D50 worth tracking down? Well, as always, that is essentially down to the individual. If you're after the aggressive bite of FM sounds, then the D50 is not going to satisfy. Similarly, if you want the squelch and immediacy of an analogue synth, then the D50 will probably disappoint. But I would defy anyone not to be impressed by the power and depth of many of the D50's pad-type sounds — they swirl and swoosh in a most appealing manner, which few synths since have been able to emulate. It can't be denied that there is a definite late-'80s edge to the D50's sound, but that has much to do with the fact that the D50 *was* the late '80s sound! SOS

BUG ALERT

The rackmounting D550 is a good option, given that the D50 itself doesn't lend itself particularly well to on-the-fly editing. The D550 has a slightly better MIDI specification, making life easier for librarian software to get Patches and reverb settings. Several operating-system upgrades were made available by third-party companies. The Musitronics M-EX is probably the best known, and gives the D50 multitimbrality among a host of other useful features. Early versions of the M-EX were reportedly troubled by some unpleasant bugs, so try to check things out thoroughly before buying a machine with any such options added. Aim to find a machine that still has the factory ROM card and at least one RAM card too, if possible, as this effectively doubles the number of Patches available. And watch out for broken D550 joysticks — they stick out from the front panel and are particularly prone to damage.

SUBSCRIBE & WIN

Prize kindly donated by TEAC UK Ltd. Tel: 01923 819630

TASCAM 564

Digital Portastudio

Subscribe to *Sound On Sound*, enter this wonderful competition, and you could be the proud owner of a stunningly versatile Tascam 564 Digital Portastudio, worth over £1,000!

The 564 offers 37 minutes recording time across four tracks (with a maximum of five separate song recordings per disk), and no waiting around for the tape to rewind! The system has built in MIDI timecode and MIDI clock facilities, so there's no need to sacrifice a track for timecode. The MiniDisc transport permits very fast track access, making it possible to replay isolated sections of digitally recorded audio in any order you choose. It's even possible to copy, move and insert sections to create a new physical recording of the complete song elsewhere on the same MiniDisc. This 'Bounce Forward' feature makes the 564 truly powerful, allowing you to build up a 12-track recording without leaving the confines of the 564. Naturally, the sound quality of the MD system is streets ahead of any analogue cassette multitracker.

Other welcome features include: sweepable Mid EQ (250Hz - 5kHz); two auxiliary sends; versatile automatic punch-in system allowing up to five takes to be recorded for later comparison; trimming and naming of index marks so that each section of a song can be identified accurately, with completely non-destructive copy and move functions. MIDI-wise, the 564 allows full tempo-map editing, with up to 32 signature changes per song! It also understands MIDI Machine Control for fully remote operation.

In his December 96 review, *SOS* author Hugh Robjohns described the 564 as "the Portastudio for the '90s, with some very clever features and facilities. The leading machine in the MD format at present. Easy to integrate into a MIDI setup and works well as a MTC system controller. Excellent sound quality with superb editing facilities, safe overdubbing mode and convenient format." What more need we say? To enter, all you have to do is subscribe (or renew) to *Sound On Sound*, answer the tie-breaker question, fill in the form below and return it by the closing date of 30 September 1997.

Existing subscriptions expiring within the competition eligibility period are also entitled to enter. When you receive your Renewal Notice, just attach your answer to the competition question on a separate piece of paper, or use the application form below.

Subscription Rates — 12 Issues: UK £ 35 Europe £ 55 World £ 65

What name would you give to an 8-bus Tascam digital mixing desk?

.....

Name.....

Address.....

.....

Postcode ..... (UK subscribers must include their full postcode)

Signature.....

Daytime Tel No.....

Please send a Cheque or Postal Order made payable to 'Sound On Sound Ltd' or pay by Visa/Mastercard/Switch/Delta/AmEx.

All overseas payments must be in Pounds Sterling drawn on a British bank.

Card No:

Card Start Date: ..... Card Expiry Date: .....

Switch Issue No: .....

RULES: 1. Only one entry per subscriber is permitted. 2. Employees of TEAC UK Ltd and Sound On Sound Ltd are ineligible for entry. 3. No cash alternative is available in lieu of prizes. 4. The competition organisers reserve the right to change the specification of the prize offered. 5. The judges' decision is final and legally binding, and no correspondence will be entered into. E&OE

Closing Date for entries 30 September 1997

As a valued SOS subscriber you not only save on postage but are also entitled to a 10% discount on all SOS Mail Order books.

SOUND ON SOUND

Post to: SOS Subs, c/o Demograffix Ltd, 4 Admiral House, Cardinal Way, Wealdstone, Middlesex, HA3 5SQ, UK.

YOU MAY PHOTOCOPY THIS FORM

KEYBOARDS

ALESIS QUADRASYNTH Plus piano, 76-note keyboard, very powerful, 900 sounds, huge screen, Mac software, boxed as new, £650, no offers. ☎ 0181 672 8076.

ALESIS QUADRASYNTH Plus piano, excellent condition £650 ono; Bass Station rack, excellent condition £250 ono; Cubasis software for Apple Mac, boxed with manuals £60 ono. ☎ 01207 509550.

ARP ODYSSEY analogue synth, a rare and fine example of '70s technology, black and orange model, just serviced, gate and CV in/out £680 ovno. ☎ Dave 01684 567799.

CASIO CZ1 synth with case and RAM card £150; Carlsbro 65W keyboard amp, two channels £120; might consider p/ex mics or interesting outboard WHY?. ☎ Peter 01803 864286.

CASIO CZ1000 digital synth, 49 full-size keys £110; Yamaha QY10 pocket sequencer £80; Vestax MR300 4-track tape recorder £80. All perfect working order. ☎ 01449 498386.

CASIO CZ1000 128 sound patches, boxed with manual, vgc £110 or swap for DX100. ☎ Matt 01296 436486.

CASIO VZ1 iPD Synthesiser, great analogue, PPG FM imitator, perfect master keyboard, manual, ROM card, immaculate £240 or swap Ensoniq SQ80; Wanted TAndy PZM. ☎ 01702 312748.

CONTROL SYNTHESIS DEEP BASS 9 303 emulator with MIDI £250 ono or swap for Bass Station rack. ☎ Craig 01203 598368.

DANEMAN PIANO Plus stool, mahogany three-quarter grand £850 ono. ☎ Gordon 01935 426502.

DEEP BASS NINE Boxed, manual £210. ☎ 01273 728966.

EMAX 1000 Sampling, good filters £300; Ell, manual, disk, with flightcase £625; Alesis MMT8 black manual, PSU, £145; Octave Cat, manual, £400. ☎ 01626 775297.

EMU II Sampling keyboard, perfect manual, disk, flightcase £625; Alesis MMT8 black version, manual, PSU £145; Octave Cat, manual £400. ☎ 01626 775297.

EMU MORPHEUS Z-Plane synthesizer, 32-note polyphonic multitimbral, home use only, fully boxed with manuals and guarantee, excellent condition £720 ono. ☎ Nick 0973 432942.

EMU MPS £330: Korg SR rack £410; 03/RW £390; Roland D20 £295; D550 £295; R8M £1995; Yamaha SY55 £295; Vocalist II £290; more — phone for list. ☎ 01261 815707.

EMU ORBIT Dance Planet synth module, one month old, virtually unused, boxed with manuals £550 ono. ☎ Pete 0191 230 3505.

EMU PROTEUS 3 World sound module, 16-part multitimbral, mint condition with manual and Atari editing software £400. ☎ 01535 645233.

ENSONIQ ESQ1 With card, bargain at £279 ono. Studiomaster Sessionmix 16:2 desk, mint condition £279 ono; Quasimidi Quasar, mint with box and manuals £599. ☎ 0116 267 1715.

ENSONIQ MR76 Workstation, 64 voices, 76-key weighted action, onboard sequencer and drum machine. Complete with Unisyn/Ensoniq editing software for PC, still under warranty £1699. ☎ Nick 0121 354 3695.

FARFISA PROFESSIONAL 110 Electric organ, double keyboard, portable with carrying cases, organ seat, rythym unit, drums unit, drawbars, pedals, with 815 Leslie cabinet on rollers, maker's manual £1800. ☎ 01597 823674.

FATAR CMS61 Keyboard, PC style with recess for mouse plus 5-octave touch-sensitive keyboard £120. ☎ Dan 01276 682075.

GEM S2R Turbo module, 500 sounds, huge screen, disk drive, 16-track sequencer, loads of Akai samples, 6 outputs etc. Vgc, bargain £530. ☎ Martin 01244 376446.

GEM S2.R 250,000-note sequencer, 6 outputs, resonant filters, dual FX, sample playback, 6 months old, powerful synth £550 or swap WHY?. ☎ 0141 569 7315.

GOLDSTAR GMK49 Controller keyboard, full-size keys, many features, mint £60. ☎ 01225 483808.

KAWAI K1 Condition as new, complete with manuals £200. ☎ Rick 01274 580067.

KAWAI K1 Synth, ST disk with extra sounds £170; Roland U110, two sound cards £150. ☎ 0181 690 0978.

KAWAI K1 Excellent condition, boxed with manual, one ROM card £250 or part exchange for Roland MKS70. ☎ Bryan 0141 423 5599.

KAWAI K1R Rack module, fully programmable with manuals £170 ono; Cakewalk home audio, 4 audio tracks with manuals £70 ono. ☎ Brian 0161 483 2065.

KAWAI K4 Keyboard, velocity and aftertouch on keys, resonant filters, built-in effects, manual, PSU, with PC editor software £350. ☎ 01509 267926.

KAWAI K4 Synth, excellent condition, 4 ROM cards, manuals, boxed, bargain £400. ☎ Shane 01823 276602.

KAWAI MDK61 II Studio master keyboard, programmable wheels, velocity zones, full five octaves £170 vgc. ☎ Paul 01536 761014.

KORG I3 With £379 memory upgrade, immaculate condition, never gigged, flightcase, manuals, style disks £1000. ☎ Ross 01482 494261 or 01903 770376.

KORG I3 New, still in box with manuals £975; Carlsbro keyboard amp 100W £225 ono. ☎ 01604 39942.

KORG 01/W workstation synth, extra sounds on RAM, perfect condition, boxed with manuals £720 ono; Roland R8M with extra Jazz/Brush card £300. ☎ 01475 630181.

KORG 01/W PRO Excellent 76-note workstation, boxed, in excellent condition with all manuals, includes flightcase worth £100, will sell for £1000 ono. ☎ David 01387 257906.

KORG 01/W PRO 76-note keyboard, 1000 sounds, big sequencer, disk drive, full MIDI, extra disks, flightcase, manual, mint condition £1000 ono. ☎ 01225 763226.

KORG BX3 Dual-manual organ, collector's item, good condition including free smelly road-hammered flightcase! £849 ono; Yamaha VL7, brand new, £649 ono. ☎ Andy 01278 794110.

KORG CX3 ORGAN Drawbars, rotary, overdrive, hard case, good condition, with Kenton MIDI £600; 10-unit rack case, very deep. ☎ 0181 840 3249.

KORG M1 vgc £495; Roland D50 £385; La Fleur tenor sax vgc £400; Midiverb 3 £150; Midiverb 2 £100; Studiomaster 16-channel MIDI-mute boxes £135. ☎ 01273 382694.

KORG M1 Good condition £490; Roland JP8000, one week old, mint £1200; Korg Trinity, one week old, mint £1250, selling to pay unexpected bill. ☎ Sim 0181 401 6970.

KORG M1 Immaculate, boxed as new £500; Roland JV30, boxed as new £350 both home use. ☎ Andy 01612861874.

KORG M3R £300; Roland D110 £250; Roland P330 £275; Roland S220 £200; Yamaha TX81Z £150; Ensoniq ESQ1 £300; Alesis SR16 £125, buyer collects. ☎ Ian 01482 708863 Hull.

KORG 05R/W Synthesis module, as new £180; Roland AX1, MIDI keyboard with flightcase £150; Samson mixing desk MPL2242 £300; Trantec radio mic £80. ☎ Ian 0121 351 1734.

KORG POLY 61 with Kenton MIDI retrofit £350 ovno. ☎ 0151 630 0898.

KORG POLY SIX Excellent condition £250 ono; Roland TR707, excellent condition £125 ono. May be able to deliver. ☎ Kev 0191 2530974.

KORG POLY 800 £90; Yamaha TX812 £125; Vestafire Flanger £20; Echotec delay £20; Yamaha DD12 drum machine with 8 pads £80. All immaculate. ☎ Mark 01872 863966.

KORG PROPHECY Mint condition, unused, boxed £600. ☎ Andrew 01647 432202.

KORG PROPHECY Synth £675 ono. ☎ 01372 372345.

KORG T2 Workstation £675; Kurzweil Micropiano £325; Roland A30 master keys £225. ☎ Graeme 01494 461117.

KORG TRINITY PRO X as new £1800 ono; Samson Servo 150W power amp and pair Absolute Zero moitors £250 ono. The lot £1950, genuine sale. ☎ Terry 0181 255 6671.

KORG TRINITY PRO For less than the price of a normal Trinity, two months old, sealed in box as new, 76 keys, Prophecy card, version 2 software £1699. ☎ Mark 01375 641526.

KORG TRINITY PRO mint, flightcase £1650; Emu Vintage Keys+ £500; Allen & Heath GS3V 16:8:2 £1000; Yamaha TX7, two, £90 each. ☎ Les 01207 520044.

KORG WAVESTATION vgc £395; Roland JV880 boxed with manual £345. ☎ 01922 53585.

KORG WAVESTATION A/D analogue inputs, Vocoder effects, wave-sequence, etc, excellent condition, boxed, manuals £795. ☎ Shaun 01273 690064.

KORG WAVESTATION Plus piano sample and three performance cards, pro case, manuals, will pay for delivery, great condition £600 ono. ☎ Lee 0191 201 5228 day 0191 416 5631 night.

KORG WAVESTATION A/D boxed, perfect £770. ☎ Martin 01453 833245.

KORG WAVESTATION A/D rack, analogue inputs, as new, manuals, two extra ROM/RAM cards £800 ono. ☎ 0115 950 7033.

KORG WAVESTATION Excellent, with card and manuals, one key sticks £550; Akai S01 expanded to 32S £400; Yamaha MDF2 MIDI data filer £150; Boss DR660, 808 and 909 sounds. ☎ 01954 613490.

KORG WAVESTATION Keyboard, two cards, excellent condition £550; Roland MKS70 analogue rackmount, excellent MIDI, vgc £500; Jen Synx-508 5-voice analogue polysynth, extremely rare, offers invited. ☎ Adam 01352 712937.

KORG X3R Rack module, immaculate with manuals etc £525 ono; Roland U220 rack module with extra acoustic sample card, manuals etc £295 ono. ☎ Kev 01703 320190.

KORG X5DR Sound module, 336 programs, 200 big combinations, 2000 sounds on disk, 47 effects, drums etc, excellent condition with manual, PSU £310. ☎ 01933 678608.

KORG X5 Still boxed with Atari/PC soundbank disk, Atari 1040STFM with mouse and various disks, Breakthru plus Atari sequencer, Roland TR505 drum machine, all vgc £600. ☎ 01480 464823.

KURZWEIL PC88 Master keyboard, home use only, mint condition £1200. ☎ Steve 01405 762699.

KURZWEIL PC88 Performance controller master keyboard, 32-note polyphony, superb piano sounds plus others, mint condition £995. ☎ George 01243 376905.

KURZWEIL KZ500R V.A.S.T. synthesizer, latest version, as new £2175; Marshall Time Modulator 500ZA, mint with manuals £650; Symetrix 421M gain leveller £300; Korg A1 £550. ☎ Oscar 34 4 411 4039 Bilbao, Spain.

KURZWEIL K2000R V3 Immaculate condition, only 6 months old, boxed with manuals and discs £1250 ono. ☎ Mike 01666 503827 after 6pm.

MELLOTRON 400S Offers; Roland JX3P with flightcase £250, Roland D110 £190; Oberheim Matrix 1000 £250; Emax 1 with flightcase and library £425. ☎ 01489 891815.

MOOG MULTIMOOG With ribbon controller, great condition, velocity sensitive keyboard £500. ☎ 01535 645233.

MOOG MINIMOOG In great condition, best offer secures. ☎ 01535 645233.

MOOG PRODIGY 2-oscillator monosynth, one LFO plus sync, CV/gate jacks, good condition, reluctant sale £300 ono. ☎ Paul 01287 638018.

MOOG PRODIGY £300; Drawmer Dual Gate DS201 £200; buyer must collect. ☎ 0171 834 2361.

NOVATION BASS STATION keyboard, £200; Mackie MS1202 £200; Yamaha DX21 £150; boxes, manuals, all offers considered. ☎ Benedict 01258 820597.

NOVATION BASS STATION keyboard with adaptor and manual £250. ☎ Sam 01767 315817.

OBERHEIM OBXA With DSX sequencer, both vgc £750 ono; Roland MKS70, mint with manual £495, ARP 1623 sequencer, mint £440; Yamaha DX7, vgc, 1 RAM 2 ROM £265. ☎ 0116 283 5455.

OCTAVE CAT analogue synth £300; Yamaha DX7 £225; both home use only. ☎ Andy 01904 430620.

PPG 2.3 Plus waveterm 'B', comes with library of samples and sounds, keyboard requires £200 repair hence price, reluctant sale offers around £2000. ☎ 01246 855486.

QUASIMIDI QUASAR The original dance rack: 808, 909, 303, with TRE expansion worth £200, 1280 single, 400 multi sounds, vgc £700. ☎ 01244 382815.

QUASIMIDI TECHNOX Dance/Rave sound module, vgc £350; DOD Reverb FX unit, hardly used £115. ☎ Matt 01296 436486.

QUASIMIDI TECHNOX SYNTH Module, perfect condition £475 ono; Atari 520STFM plus lots of games £65 ono. ☎ John 01266 861978/0411 020047.

ROLAND A30 MIDI controller plus Roland MV30 synth/sequencer module, both boxed with manuals £699. ☎ 01892 835736.

ROLAND A80 88-note master keyboard £1100; Emu Proformance £200; Proteus II £400; Atari 4Mb STE £150; 14-inch monitor £70; Cubase score, dongle, manual £150, all perfect condition and ono. ☎ 01883 380978.

ROLAND D5 Multitimbral synth, fully programmable sounds, excellent MIDI spec, excellent condition, manuals, PSU £200. ☎ Andy 0115982 0680.

ROLAND D50 Mint condition £350; PG1000 Prorammer £80; five sound cards £20 each, will split. ☎ 0116 2863999.

ROLAND D50 Synth, excellent condition £425 ovno with two ROM cards, home use, Phillips DCC170, portable DCC recorder £175 ono. ☎ 0151 475 8468/0958 661506.

ROLAND D50 A bit tatty, good working order, manuals £325 or swap for 486 PC system, Yamaha SY55 workstation with manuals etc £350. ☎ Paul 01229 466238.

SOUND ON SOUND FREE ADS

HOW TO BOOK YOUR FREE ADS

Fill in the form below, up to 28 words (one per box) and post to:

Free Ads, Sound On Sound, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ

Your ad will appear in the next available issue after receipt.

PLEASE NOTE

We are inundated with Free Ads, and whilst we endeavour to publish ads in the next available edition of the magazine, space restrictions mean that this is not always possible, and there may be a one or two month delay. Therefore, if you wish to *guarantee* that your advert appears in the next available issue, may we suggest that you call our Classified Dept on 01954 789888 and use your credit card to book yourself a Classified Lineage advert — your ad will then appear in the Classified Ad pages, and not in these Free Ads. This costs a mere 85 pence per word (inc. VAT), and the minimum number of words is 12 (£10.20 in total).

☎ **01954 789888** (office hours)

Fill in the form below
(up to 28 words, one per box) and send to:
Free Ads, Sound On Sound, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ.

WARNING: Always check when buying secondhand music software that you are not buying a pirate copy; ensure that all disks and manuals are included. We reserve the right to refuse or amend ads, especially if we believe they offer pirated software, pirated MIDI files or pirated sounds. We accept no responsibility for typographical errors or losses arising from the use of this service. *Trade Ads will not be accepted.*

SOUND ON SOUND

PLEASE NOTE

Please tick which one classification you would like your ad to appear in.

❑ KEYBOARDS ❑ SAMPLERS ❑ DRUM MACHINES ❑ WANTED ❑ MISCELLANEOUS
❑ SEQUENCERS ❑ RECORDING ❑ PERSONNEL ❑ COMPUTERS/SOFTWARE

NAME _____ ADDRESS _____

_____

_____ POSTCODE _____

SOS Free Ads will only be accepted if your name and address details are completed.

ROLAND D70 Synth, multitimbral with 72 keys, velocity and aftertouch, excellent sounds, excellent condition £700. ☎ 0191 263 9581.

ROLAND D110 As new with memory card and manuals £175. ☎ 01306 886124.

ROLAND D110 Multitimbral sound module £150. ☎ Andy 01992 560341.

ROLAND D110 Boxed as new £180; Roland DEP5 multi-effects £180; Roland A880 MIDI patchbay, boxed as new £135. ☎ 0181 390 2700.

ROLAND D110 With loads of extra sounds £210; Yamaha TG100 £140; Atari 1040STE 2Mb plus monitor £200; Alesis Midiverb £120; Peavey 12.2 mixer £220; all home use only. ☎ 01604 460906.

ROLAND 1080 £800; SH1 £400; DJ70 £750 ono; Atari 1040 STF etc £100; Phonic 8.2 £100 H & H Performer £175, part exchange for Emu E64, £6400 considered. ☎ Mat 01392 211079.

ROLAND FP8 Digital piano, 88-key weighted keyboard, high-quality sounds, includes manual, stand, flightcase; immaculate condition £895. ☎ 01992 558138.

ROLAND JD800 Home use only, one careful owner, immaculate. The supersynth to have £1295 ☎ Chris 01480 466274 Cambs.

ROLAND JUNO 6 In hard case with original user's manual, one owner, new wife forces sale, currently occupies under-bed space, perfect working order, great nick £200. ☎ 01294 218355.

ROLAND JUNO 60 JSQ 60 Sequencer DCB Din/Sync, flightcased, excellent condition £340, Boss DR660, 32 drum kits, 255 sounds, 808/809 kits, two stereo outs £220. ☎ John 01964 624067.

ROLAND JUNO 102 Analogue synth with velocity keyboard, superb bass sounds, ideal for dance music. Manual, excellent condition £395 for quick sale. ☎ Ros 01803 559959.

ROLAND JUNO 106 plus stand £450; Korg M1, two ROMs plus stand £600; Atari STE, 2Mb, plus SM124 monitor £300. ☎ Matt 01691 831427.

ROLAND JUNO 106 Analogue synth, excellent condition, one owner since new, hardly ever used, new memory battery, includes manual £395. ☎ Rob 0402 224727.

ROLAND JUNO 106 Perfect condition with semi flightcase £450 ono. ☎ 0116 240 4256 Leicester.

ROLAND JUNO 106 Perfect working order with case, manual and Atari editor librarian £450; Roland SH101 modulation grip £35. ☎ 0141 638 6687.

ROLAND JUPITER 6 Top analogue synth in excellent condition, full MIDI upgrade from Roland £750. ☎ 01274 878626/0802 853020.

ROLAND JD800 Perfect condition, home use only, all manuals, boxed, will deliver £995. ☎ James 01480 52255 day, 01480 860656 eves and w/ends.

ROLAND JD800 With flightcase £1200; Roland JX3P, slight problem £150; Yamaha TG500 with two RAM cards £550; Emu Proteus 3 £300; Zoom 1202 £100. ☎ 0151 709 8811.

ROLAND JD800 £995. Prophet 5 v3.3 with flightcase £875; Prophet 600 MIDI £475; Sequential Pro 1 £345; Spirit Folio 12.2 £190; all excellent condition. Exchanges considered. ☎ 0181 845 4979.

ROLAND JD800 Excellent condition with manuals, home use only. ☎ 01985 846084.

ROLAND JD800 £1150, Alesis SR16 £130; AKG C1000s £90, Kawai MX8 £90, Soundtech ST200d £50; Sony TCDD3 £330, Soundcraft 8.8.2 desk, needs attention hence £70. ☎ Dave 01273 220047.

ROLAND JD990 Sound module, monster sounds including JD800 presets, Roland's best yet, as new £780. ☎ Graham 01234 306346.

ROLAND JUPITER 6 Mint with MIDI upgrade £750; Prodigy £175; JX3P £225; Korg PW600 £150; Bass Station keyboard, mint £220; TR626 £125; Quadraverb £185; ADAT version 4.3 with box and flightcase. ☎ 0131 552 4668.

ROLAND JX8P Synth £350; Roland SRV2000 reverb £250; Joemeek VC3 £170; Old semi-acoustic Eko guitar £25; 3 studio type chairs, £10, £20, £40. ☎ Steve 01482 644203.

ROLAND JV80 Mint condition, expansion board and manual £495. ☎ 0468 213561.

ROLAND JV80 Excellent condition, boxed with manual, including additional blank RAM card and Film Texture sound card, can be expanded with any SRJV expansion board £500. ☎ 01255 425396.

ROLAND JV1000 Music workstation, boxed with manuals £900. ☎ 0131 665 4433.

ROLAND JX8P Flightcase, stand £350; Roland R5 drum machine, boxed, manuals £150; Roland MT32 module, boxed, manuals £90; Yamaha FB01 module, boxed, manuals £50. ☎ John 01422 886509.

ROLAND JX10 plus PG800 plus M64 data cartridge, mint condition, re-advertised due to time-wasters, a bargain at £750 ono, with flightcase and manual. ☎ 0113 289 9622.

ROLAND MKS70 JX10 in module, mint condition £550; Proteus 1 keyboard module, six outputs, mint £235; Korg DRV3000, digital effects, remote control £300. ☎ 01273 324995/561023.

ROLAND RD300s Digital piano, 88-note weighted action, MIDI, immaculate condition, strong flightcase included £595 ono. ☎ David 01949 20060 Nottingham.

ROLAND SC33 Sound Canvas plus manual, good condition £200. ☎ Graham 01934 820256.

ROLAND SC33 Sound Canvas GM and GS sound module, boxed with manual £170 ono. ☎ Keith 0161 747 5372.

ROLAND SC55 Sound Canvas with remote control, boxed as new, mint condition with manuals, can demo £295. ☎ 0181 933 3248.

ROLAND SC55 Sound Canvas, superb general MIDI module, cost £450, 16-part multitimbral, over 300 sounds, sell for £220. ☎ 01702 470588.

ROLAND SUPER JX Needs a little attention, mostly cosmetic, £400, will exchange for MKS70. ☎ Bryan 0141 423 5599.

ROLAND SK50 Sound Canvas in a keyboard! Built-in speakers, reverb, chorus, multitimbral, hundreds of sounds, GM/GS, boxed as new £425 ono. ☎ 01763 838722.

ROLAND SYSTEM 100M Modular synth, 10 modules mint, £1600; TR808, mint, boxed, £450; ARP Odessey £450; MKS50 with PG300 £300. ☎ Australia 612 9318 1170, Email: Systems@WR. All buyers pay shipping.

ROLAND U20 Synthesizer, 5 octave, 30-note polyphonic, PCM sample sounds, mint condition £395; Roland PK5 MIDI pedals, one octave velocity sensitive, mint condition £245. ☎ George 01243 376905.

ROLAND U20 £350 ono; 12 DCC tapes £40; Akai S1000 10Mb digital I/O, CD-ROM drive £1150; Studiomaster Series 5 16.8.2 mixing desk £650; 24-track hard disk recorder £2000. ☎ Andy 0171 351 0075.

ROLAND U110 sound module, two cards £150; Kawai K1 synth with extra sounds on ST Disk £170. ☎ 0181 690 0978.

ROLAND XP10 Synthesizer, 338 sounds, 128 performances, excellent arpeggiator, MIDI transmittable, 16-part multitimbral, drums, inc 808/909, FX, GS etc, as new £375. ☎ 01933 678608.

ROLAND XP50 Plus 'Pop' expansion board and flightcase £895, Sony TLDD7 Portable DAT recorder £275, both mint condition. ☎ Geoff 0115 933 5656 or 0402 167469.

ROLAND XP50 Four months old, parts and labour guarantee until Jan 1998 £895, discontinued Dance expansion board, £180, both boxed, manuals, receipts, immaculate. ☎ Steve 01978 361392.

ROLAND XP50 Mint with dance card and stand, latest operating system update £995. ☎ Philip 0113 275 9000, work 0113 255 7931.

SEQUENTIAL PROPHET 5 v3, non MIDI, home use only £825. ☎ 01268 548204.

SEQUENTIAL PROPHET 5 3.2, classic analogue polyphonic synthesizer with manual and data cassette, full MIDI implementation, mint condition, a superb instrument, offers. ☎ 01535 645233.

SEQUENTIAL PROPHET 600 analogue, polyphonic, 12 oscillators, full MIDI sequencer, arpeggiator transmit and clock from MIDI, great condition, a classic £600. ☎ 01535 645233.

TECHNICS WSA1 Acoustic modelling synth workstation, 64-note poly, see review SOS December 95. Original RRP £2499 mint, boxed, manuals, bargain at £620. ☎ Martin 01244 376446.

WALDORF MICROWAVE Original version synth module with analogue filters. Now discontinued, instant classic, £600 ono. ☎ 0171 275 9624.

WALDORF PULSE £350; Technics WSA1 acoustic modelling synth £500 or p/x for TB303 and TR808 with cash adjustment. ☎ Darren 01204 701674.

WALDORF PULSE New, boxed £390; Fostex DMT8, full spec, light home use only £890; Sony HRMP5 £290; Casio DA7 £390. ☎ James 01523 172676.

YAMAHA C55 Organ, two keyboards, all different sounds and rhythms, complete with stool, nice piece of furniture, excellent condition, cost over £2000, owner emigrated, bargain £350. ☎ 01932 881652.

YAMAHA CS1X Control synthesiser with manuals, power supply, 256 great performance patches, 6 control knobs, effects, drums, arpeggiator, XG, and it's blue! £430. ☎ 01933 678608.

YAMAHA CS1X £450, MC303 £450, Phillips DCC730, remote, £150; Digitech Studio Quad £350; Emu Vintage Keys Plus £600; Promix 01 £1150. ☎ 01252 372940.

YAMAHA CS1X With stand, brand new, unwanted Xmas present £500 ono. Atari Mega STE4, monitor, various software etc £300 ono. ☎ 01223 834103.

YAMAHA CS1X Real-time controls, great arpeggiator, GM compatible, Mac/PC interface, effects, manuals, as new £480. ☎ Jon 01227 462059.

YAMAHA CS1X Immaculate condition £500 ono or swap for SY85 or Korg Wavestation A/D plus cash. ☎ Wayne 01782 205842.

YAMAHA DX7S Classic digital synth, excellent condition £290; Casio RZ1 digital sampling drum machine £70. ☎ Andy 0116 269 2673.

YAMAHA DX7 IIFD Disk and cartridge storage, excellent condition, home use only £400. ☎ 01322 861502.

YAMAHA DX27 Good condition, no flightcase £250 ono. ☎ 01222 460757.

YAMAHA PFP100 Digital piano, 88 weighted keys, built-in speakers, home use only £1250 ono. ☎ 0171 254 8384.

YAMAHA QS300 'Dance machine' workstation, over 1000 sounds, 16-track sequencer, large LCD screen, disk drive, lots of software and more £750. ☎ Andy 01509 813474.

YAMAHA QS300 Keyboard workstation, only 6 months old, 16-track sequencer, perfect dance music studio, easy to use, still boxed with manuals £750 ono. ☎ Graham 01530 414834.

YAMAHA SY77 16-track workstation, digital samples, FM-programmable synth, fully polyphonic, superb, occasional home use only, mint, with manual £670 ono. ☎ 0181 670 0965.

YAMAHA SY85 1Mb RAM, six Voice disks, 100 sample disks, flightcase and stand £750. ☎ Dave 01384 827077.

YAMAHA TG77 Multitimbral rack sound module, 12 outputs and Steinberg Synthworks editor/librarian £795. ☎ 0181 883 4329 or 0956 339577.

YAMAHA TG300 With manuals, home use only £250, no offers; Micro Logic sequencer for Mac with interface £80 ono. ☎ 01925 226005.

YAMAHA TX802 £320; Roland D70 £650, See January SOS for TX802 retro. ☎ Les 01785 814732 or les@btinternet.com.uk.

YAMAHA SY85 Ambient/techno, vintage, house, rave discs 2.5 sample RAM £600; Alesis MMT8 sequencer £120; Alesis Datadisk £175; Technics SVDA10 DAT, remote analogue/digital £275. ☎ 0115 958 1216.

YAMAHA TX81Z Classic synth £165; Yamaha DB50XG PC daughterboard, boxed as new £90. ☎ 01702 616961.

YAMAHA TX81Z FM multitimbral rackmounted module, excellent condition with manual £160 ovno. ☎ Steve 01703 550913.

YAMAHA W7 workstation fitted with analogue expansion board, TS sound disks £600, home use only. ☎ Neil 01268 750236 eves, 0956 408414 days.

RECORDING

AKAI MG1212 12-track recorder/mixer combination plus two sync tracks, excellent condition, 9 tapes, service manual etc. £1000, no offers. Roland E660 digital EQ, excellent condition £350. ☎ Gordon 01670 523363.

AKAI MPX820 8.2 mixer, MIDI programmable £300; Akai ME255 MIDI Zone mapper £90; Roland A880 programmable Thru/Merge £200, buyer collects, Ian 01482 708863 (Hull).

AKG C1000s Capacitor mic £130; Boom stand with pop shield and cradle £70, all mint condition. ☎ Michael 0181 761 6890.

ALESIS ADAT digital recorders, two plus BRC master remote controller, 16 tracks, genuine ex/demo, very low hours, mint, may split ADATs £1300 each; BRC £795 or £3200 complete. ☎ 01690 710231.

ALESIS ADAT v4.03, perfect condition £1200; Tascam DA30 MK11, less than two hours' use, boxed in mint condition, still under guarantee £950. ☎ John 0181 742 8738.

ALESIS MIDIVERB III Boxed as new £150, or may swap Atari w/h Cubase. ☎ Darryl 01494 771036/0468 997522.

ALESIS RA100 £225; Alesis Midiverb 4 £225; Korg 05RW £275. ☎ 0121 753 0171.

ALESIS QUADRAVERB £200; BBE Sonic Maximizer 322 £200; Yamaha SPX90 £175, Seck 1282 mixing desk £425, all very good condition. ☎ John 01203 361795 or 334409.

ALLEN & HEATH 2421 24.2 desk, PSU, flightcase, manual, 19-inch XLR patchbay, 20 metre multi cores with stage boxes, 26 Neutrik XLR, jack leads £600. ☎ Oliver 0115 932 7947.

ALLEN & HEATH SABER 32.16.24 Pro console, six aux, MIDI muting, meter bridge and stand, 60 inputs on mix, good condition £3700. ☎ Luke 01252 710244 Farnham.

AUDIO TECHNICA AT822 Stereo condenser mic, as new in box, with camera mount attachment, lead and windshield £150. ☎ 01206 384143.

AUDIO TECHNOLOGY 3312 studio monitors, 150W, £800 a pair ono, Series 3311 125W, £700 pair ono, both as new. ☎ Jane 0171 434 4342.

BEHRINGER COMPOSER Compressor £140, Behringer Ultrafex II Sound Enhancer £130, both hardly used and boxed with manuals as new. ☎ Damien 0181 808 2031/0956

Why buy secondhand when new could be as cheap?

Our entire advertisement can now be seen from pages 22 to 33.

Many secondhand and ex-demo bargains also featured.

turnkey

EUROPE'S LOWEST PRICES GUARANTEED*

*We will beat any genuine quote from a UK or European dealer. We must be able to substantiate the quote and the goods must be available and in stock.

126629.

BEHRINGER DUALFEX II Special enhancer, 9 months old, boxed £85 ono. ☎ 01873 853574.

BOOM MIC STAND K & M, fitted with pop shield and AKG H30 elastic cradle, for mics 15-33mm diameter, 10m OFC lead, Neutrik XLRs, all in mint condition £70. ☎ Michael 0181 761 6890.

DDA M-SERIES Mixers 8:4:2, 16:4:2, 4-band EQ, 4-aux XLR, in/out puts £600 £900 Otari MX5050-3 1/2 inch 8-track flat transport upright udus remote Lec little use vgc £1500. ☎ 0181 211 7240.

DRAWMER DS301 Programmable MIDI gate, two gates for sale, mint condition, all cables £400. ☎ 01535 645233.

EV N/DYM 157B SM58 equivalent, two available, only used once, boxed £75 each, £140 pair. ☎ Andrew 0181 255 4294.

FOSTEX 450 MIXER Immaculate condition £350 ☎ 01509 269590.

FOSTEX 812 Three years old, excellent condition, 4 aux, 3-band EQ, two swept, never gigged and bought from new £700 ono. ☎ Chris 01273 323683.

FOSTEX 12:8:2 Excellent condition £475 ono; eight Pro Audio Technica Mics, still boxed, desperate to sell £750 ono. ☎ Tom 0121 449 7229.

FOSTEX A8 8-track, reel to reel £400; Yamaha MSS1 MIDI/SMPTE synchroniser £150. ☎ 0191 230 0047.

FOSTEX B16 Bargain, excellent condition, fully serviced with 4050 autolocator and 8040 remote, B16 service manual, many free extras £950 ovno. ☎ Keith 01252 727292.

FOSTEX D80 Hard disk recorder with manual, perfect condition £1050 or part exchange for ADAT, Yamaha QX3 sequencer £250, Korg DS8 £350; Roland D110 £220; Sony DTC790 DAT player, still guaranteed £500 ono. ☎ 01274 817317.

FOSTEX E16 Remote/loom £1700; Seck 18:8:2 £600; Quadraverb £225; Drawmer LX20 £150; BBE422A £180, Isopatch 44 patchbay £50; Mixer stand/bridge £150; Soundtracs PC-MIDI-24 desk £2200; Drawmer DL221 £225 ☎ 01223 236108/0402 453519.

FOSTEX M80 Professional 8-track recorder, excellent condition, excellent sound quality codes, with manual, demagnetiser, one tape and loom/cable with gold-plated RCA connectors £410, no offers. ☎ 0171 720 3702.

FOSTEX M80 8-track recorder with remote and footswitches £475; RAM Micro 16:8:4:2 mixer £300. ☎ 0181 693 6141.

FOSTEX MTC1 Excellent condition with manual £60. ☎ 01386 832391.

FOSTEX XR5 Multitrack recorder, less than 10 hours' use £270 ono. ☎ Craig 01203 598368 Coventry.

FOSTEX XR7 Multitrack, boxed as new £225 ono; JL Cooper MIDI sync, smart FSK etc, cost £130 will accept £60; Yamaha TG300, mint £250 ono. ☎ Ian 01904 656573.

FOSTEX X26 4-track machine, max 12 hours' use, A1 condition £125; Smartsync MIDI/timecode unit £70. ☎ 01869 249995.

FOSTEX XR5 Still boxed, unused £275. ☎ Malcolm 01424 213755.

FOSTEX B16 £900, Kawai K5 £375; Roland JV880 £360; Lexicon LXP1 £230; Alesis D4 £165, Cubase Audio Falcon £350. ☎ Steve 01455 844534.

FOSTEX 280 Quality 4-track with 8-channel mixer £300, XR300 MIDI-sync £120, both £400. As new, 18 months old, boxed, manuals. ☎ 01647 277578 or 01392 410759 Mike (Devon).

FOSTEX 380S Multitracker, as new, home use only £500. ☎ 0121 353 9729.

GPO PATCHBAYS 2 x 316, B-Gauge, 2-row, 20 sockets per row, excellent condition £60 each, 1 x 316, B-Gauge, 2-row 26 sockets, good condition £40 each, 20 x 316 patchcards £4 each. ☎ Mick 0181 667 0108.

JBL 4401 Control monitors, excellent sound and build £300; Tascam 464 4-track with built-in 12-channel mixer £380, upgrade forces sale. ☎ 01933 270930 Dave.

LEXICON LXP1 LXP5 and LXP15 effects processors for sale, they sound superb but I'm upgrading. ☎ 01535 645233.

MACKIE 8-BUSS 32-channel mixer, immaculate and as new, hardly used, complete with original packing and manuals, £3250 ☎ 01482 448767.

MACKIE CR1604VLZ Vgc £675, Mackie CR1604 £515; Lexicon LXP1 £250; Lexicon Reflex £250; SPL Vitaliser £200; Tascam PE40 £185; 8U trolley, adjustable height £50; Quadraverb £185. ☎ 01273 382694.

MACKIE CR1604 £650; Alesis Quadraverb+ £200, plus more equipment. ☎ Mat 01691 831427.

MACKIE CR1604 desk, £500; Atari 1040 and hi-res monitor with Cubase £150; both vgc. ☎ Liam 0161 882 0977.

MACKIE LM3204 Line mixer, 32 channels, 4 aux sends, quality 3-band EQs, boxed as new; Ensoniq DP/4+ £849; Gem S3 Turbo plus case £849. ☎ Ben 0161 8617761.

MARK OF THE UNICORN 7S Automated mixer, 8 stereo channels, full fader and EQ automation by Atari/Mac and PC software, included, £350. ☎ 01535 645233.

MXR FLANGER/DOUBLER Vintage analogue studio FX, 19-inch rackmount £250; MXR dual 15-band graphic £125; Denon 3-head pro cassette M/C £125. ☎ 01865 776587.

PEAVEY QFX 4X4 Four independent multi-effects processors, programmable with MIDI, 8 inputs and outputs, original RRP over £900, sell £250. ☎ 0141 638 6687.

PHILLIPS DCC170 Digital portable recorder £175 ono or swap for DAT and cash, Pro Rack 20 unit, offers over £150. Wanted: PA amp for charity. ☎ 0151 475 8468/0958 661506.

QUAD 520F Twin-channel, professional power amp, 100W per channel, excellent condition, a real gem £500. ☎ 0151 653 8104.

ROLAND 201 Space Echo, good condition, perfect order £350; Zoom 9050s, top of range multi-effects processor, used twice, as new, manual and box, cost £525, bargain £375. ☎ 01482 448767.

ROLAND VS880 Expanded version 2, digital recorder, 810Mb hard drive plus effects board, cost £2100 accept £1600; JP8000 £1200; TB303 £800; Juno 106 £400; Moog Prodigy £280, mint. ☎ 0114 248 4440.

SAMSON MPL 1640 16:4:2 rackmount mixer, full EQ, 3 aux, brand new, boxed, unused, warranty £375. ☎ 0181 933 3248.

SANSUI MR6 & MX12 6-track cassette and 12:6:2 desk, manuals and loom, Atari 1040STE, Tatung hi-res B&W monitor, external floppy, Steinberg Pro24 software, boxed, manuals. ☎ 01438 365511.

SECK 18:8:2 mixer £500; KRK KROK monitors £230, Yamaha EMT10 piano module £50. ☎ 0181 882 3251.

SONY DTC1000ES With mic input and 48V mod £350, Spirit Folio, RacPpac mixer, boxed vgc £400, TC2290 effect processor vgc £950, Drawmer M500 £325; Yamaha Rev5 £250. ☎ 0121 449 2461.

SONY TCD D7 Rec-play DAT Walkman, hardly ever used, in original packing £325; Sony CM909 stereo microphone, virtually unused £80; Sony DTC60S DAT machine, as new £550. ☎ 01494 792347.

SONY TCD D3 Portable DAT, includes mains/battery pack plus optical lead and case £295, Sony DTC1000 Pro DAT £325. ☎ 01977 557560.

SOUNDCRAFT 2400 8-foot console, 28:24 frame, 16 inputs, 16 returns, automation fitted, no brain, bantam p/b, meter bridge, 4 EDACs, 30+ Bantam leads. ☎ 01246 855486.

SOUNDCRAFT 380 classic analogue 8-track 1-inch recorder, desktop, lovely sound, vgc, well maintained with looms, noise reduction, stand, remote £1250. ☎ 01968 660752.

SPIRIT FOLIO 10:2 mixer, 3 months old, £180; Spirit 12:2 £200; Behringer Ultrafex 2 enhancer £130. ☎ Martin 01424 221756.

SPIRIT FOLIO 12:2 excellent condition, 2-band, 2-band EQ with sweepable mid, two aux sends, superb sound quality for the price £225. ☎ Mark 01952 273862.

SPIRIT FOLIO SX 16:4:2, 20 inputs, 100mm faders, 3 aux, 12 insert points, 3-band EQ, unwrapped, perfect, unwanted gift £410 ono or swap for Tascam DA20. ☎ 01277 653937.

SPIRIT FOLIO LITE 12:2 Mixer £170; Korg DW8000 £250; MMT8 £150; Amiga 600 with music accessories £50. ☎ Imran 0121 604 8109.

STUDIO MAGNETICS AR2400 24-track, 2-inch recorder, immaculate, hardly used, manufactured 1990, highest quality, similar size/specification to Otari MX80, 9 memory, remote £4500, consider px multi-effects/guitars. ☎ 01482 448767.

STUDIOMASTER SERIES III 26:8:16:2 mixing console, 6 aux sends, excellent warm EQ, vgc, studio use only, plus full flightcase £1000 ono. ☎ Lee/Jon 01255 220571/430063.

TASCAM 38 Half-inch 8-track with 5 tapes, loom and remote, two 4-channel Tascam DBX units, Tascam M30 8:4:2 mixer all vgc £900 or split. ☎ Steve 0114 2463393.

TASCAM 424 portastudio with manual, one input intermittent, otherwise perfect condition £300. ☎ Mark 0114 26478109.

TASCAM 424 MKII 4-track recorder, 4-band EQ section, adjustable tape speed, DBX noise reduction, logic-controlled tape position, only two months old, current model, excellent condition £395. ☎ Andy 01509 813474.

TASCAM 424 Portastudio, home use, box, manuals £350 as new; Zoom 1202 studio effects, S12 programs £95. ☎ John 01604 259186.

TASCAM DA20 Rackmount DAT recorder, home use only, boxed with manual and remote control £600. ☎ 01392 426014.

TASCAM DA30 £550; Teac DAP21 Pro portable DAT £375; Emu Vintage Keys £375; Yamaha REV7 £350; Quadraverb GT £245, Korg DRU3000 Dual remote effects, all excellent condition. ☎ 01226 790541.

TASCAM MM1 Excellent condition, home use only with manual, 20-channel mixer, 4 aux, 4 output, MIDI mute, great for home and live recording mixer £399. ☎ Pascal 0181 368 1877.

TASCAM MM1 16-track mixing desk rackmount, MIDI muting on each channel, 4 stereo and 12 mono channels, home use only £250. ☎ 01784 740820.

TASCAM M2600 24 inputs, 8-buss desk, six months old, boxed, mint, can deliver. ☎ Andy 0117 975 4107.

TASCAM 488 8-track, 12-channel portastudio, vgc £450 ono; Atari 1040STE with monitor, sampling cartridge and software £140 ono. ☎ 01789 773247.

TASCAM 644 MIDI Studio, perfect condition £390; Fostex DCM100 MIDI-controlled mixer — 8 stereo channels controlled from your sequencer £150: Casio CSM10P piano module £50. ☎ 01256 468208.

TASCAM 688 8-track, MIDI mute, MTC 20-channel mixer £1200; Rainbow VX100 monitors £250; Linear phase speakers £200, all in excellent condition. ☎ Steve 0410 549521/0113 2568663.

TASCAM 688 Midi Studio, 20-input mixer, MIDI sync, MIDI mute, 8-track tape, sweep EQ. Gone digital so £700 quick sale. ☎ Rob 0115 947 4007.

TASCAM 688 20 inputs, two aux sends, EQ with sweep mid, timecode, MIDI mutes and electronic patch bay, home use only, used 99% as mixer only, vgc £900 ono. ☎ 0181 743 2573.

TASCAM TSR8 8-track recorder with rack fixings, excellent condition, very little use, boxed as new £1150 ono; Seck 18:8:2 Mk2 £550 ono, postage included. ☎ 01624 627213.

TASCAM TSR8 Excellent condition, sounds gorgeous, reluctant sale, complete with optional RC408 hard wired remote and £300 of Ampex 456 and 3M 966 £1200 ono. ☎ Jon 0121 449 6603.

TC ELECTRONICS 2290 Digital delay/effects control processor and sampler, 64-second memory and sampling cards fitted, excellent condition, boxed, manuals £2000 ono. ☎ Michael 01159 674203.

TEAC 16-TRACK 1-inch recorder with tapes, Soundtracs PC MIDI mixer, 24-track patchbay looms, stand, shelves, both well maintained with manuals, any serious offer considered. ☎ 01268 784599/786090.

TEAC A3340 4-track reel to reel in working order £195 ovno. ☎ Martin 0181 220 4350.

TEAC V200 Cassette decks 16 off, plus 6' 19-inch rack and distribution amp. Ideal duplication surte, used twice £850 ono. ☎ 01904 653518.

TOA MR8T 8-track cassette recorder, £550; Roland RA90 £525. ☎ 0181 684 0585/0181 688 5067.

UREI 829 superb pro monitors, time aligned, £950. ☎ 0181 691 1900 daytime.

YAMAHA DMP7 Mint condition, latest ROM update, superb 8-channel fully automated mixer £500. ☎ Tony 01784 481871.

YAMAHA MT120S 4-track, boxed, manuals, mint, hardly used, graphic EQ, twin speed, DBX, 40Hz-18KHz, 4-track simultaneous recording £150. ☎ Dave 0191 372 2621.

YAMAHA NS10M Studio monitors, little use, vgc £195. ☎ 01977 557560.

YAMAHA 02R Digital automated desk £4300; Akai S3000XL sampler £1300; Roland JV2080 £1195; all ono, all as new. ☎ 0181 800 9944/0181 800 1040.

YAMAHA PROMIX 01 Digital mixer, three compressors, two effects, parametric EQ, hardly used, boxed with manuals and loom £1300; Kawai MDK61 MkII master keyboard £200 ono. ☎ Paul 01536 761014.

YAMAHA PROMIX 1 As new, 6 months old, sale due to purchase of 02R, cost £1600, sell £1150 plus many unbalanced jack-to-jack looms. ☎ Mark 01952 273862.

YAMAHA PROMIX 01 As new, fully automated digital console, home use only, quick sale hence £950. ☎ 0181 989 6820.

YAMAHA RM800 16-channel, 8-buss mixer, 3-band EQ mid sweep, 5 months old £650 or swap for Yamaha CS1X keyboard plus £100. ☎ 01757 700863.

SAMPLERS

AKAI IB303T SMPTE/Timecode generator for Akai 3000 series sampler, never fitted so never been out of box! £120; Kawai MDK61 II master keyboard £200 ono. ☎ Paul 01536 761014.

AKAI SO1 18-bit sampler with library £350; Korg 05RW £250; Emu Proformance dedicated piano module, superb sound £200, all boxed, manuals, PSUs. ☎ Neil 01703 557290.

AKAI SO1 With 2Mb RAM, never gigged, manual, system disks, boxed £350. ☎ Ross 01482 494261 or 01903 770376.

AKAI SO1 Mint condition with manual and sound library disks, fully upgraded, retail price £595, genuine sale at £445 ono. ☎ Nik 01226 731941.

AKAI SO1 Boxed, expanded £350; R2D2 rackmount stand £40; Aluminium 3-tier keyboard stand £40. ☎ Kevin 01268 565188.

AKAI S950 Expanded plus Library £700, Viscount RD70 MIDIfile player £150; ☎ 01691 831427.

AKAI S1000 6Mb £850, Seck 18:8:2 £450; LXPS £200; DTC 1000ES DAT £400; Soundtracs PC MIDI 24 £1300; Korg M1 £500; Roland Classic Keys £280, Genelec S30s £1300. ☎ 01923 267733.

AKAI S1100 EX Expander unit £350, Yamaha TX802 £250; Yamaha REV5 £250; Sony Umatic video £50; Sony DTC1000 £5; DAT machine £350, TC2290 effects, vgc £950. ☎ Adrian 0121 444 8326.

AKAI S2000 10Mb, immaculate Wavestation SR, plus Atari, patches from cards, Korg X5DR module, Fostex 8-track. Decent offers considered. ☎ David 01403 262566.

AKAI S2000 Sampler, 10Mb with Syquest 135 EZ drive plus two cartridges, both very little use £1200, may swap for 8-track and mixing console. ☎ Dave 01933 270930.

AKAI S3000XL EB16FX, boxed £1500, Mackie VLZ1202 £225; CZ101 flightcase £100, Mac LC475 20Mb ,15-inch monitor, CD-ROM, Stylewriter, MIDI interface, Cubase Recycle £425. ☎ 0181 980 3444.

AKAI S3000XL 10Mb, EB16 effects board, IB304F 2nd filter bank, mint, plus Zip drive and 200Mb Akai library sounds £2100. ☎ 01729 824216.

AKAI S3200 With cartridge drive £2040; Ensoniq VFX SD with ROM cartridge £445; Roland SC88 £375; Atari 1040ST with Cubase, no monitor £330. All excellent condition. ☎ 01489 790596.

CASIO FZ1 Expanded sampler, excellent condition, studio use only, manual £500. ☎ 0171 624 6338.

CASIO FZ1 16-bit sampling keyboard £525; Soundtracs Topaz 32:8 studio board, as new, used twice only, excellent value £2300. ☎ 01323 736017 or 0402 333570.

CASIO FZ1 Eight outputs, Rez filters, 16-bit large LCD screen displays, waveforms, complete with manual, 150+ disks £500. ☎ Simon 0161 737 4483.

CASIO FZ1 Expanded, excellent condition £550. Boss pedals, heavy metal, overdrive, chorus, stereo volume, DOD stereo phaser, frontline Wah Wah, £15 each, as new. ☎ 01732 361442 Kent.

CASIO FZ1 16-bit keyboard sampler expanded to 2Mb, includes two sample CDs and 60 disks, mint, boxed, manual, bargain £450. ☎ Martin 01244 376446.

CASIO FZ1 16-bit sampler, eight outputs, resonant filters, large LCD shows waveforms £500; 150+ disk library with manual, Yamaha TG33 and DX11. ☎ 0161 737 4483.

CASIO FZ10 Sampler, 2Mb, 8 outputs and library £400 ono; Roland D110 sound module and ROM card £170 ono. ☎ Kevin 0171 381 0046 or 0973 892 3647.

CASIO FZ10M Very good sampler, 8 individual outputs, analogue filter rack version 3 £600 ono. ☎ Fred 0410 488445.

EMU EIII Sampler, 8Mb plus CD-ROM player £950, Yamaha CS70M Mega synth, 12 UCOs, very rare £700 ono; Roland U110 plus one card £170; Korg Prophecy, three months old £650; Peavey DPM U3 plus two cards £300. ☎ 0181 905 5917.

EMU EMAX II £750; Studiomaster 16:2 club mixer £275; Atari 1040STE and SM124 monitor £250, Fostex X28H multitrack £275, all vgc, private use £1450 the lot. ☎ Mike 0118 944 0688.

EMU E4K Keyboard sampler, 64Mb, 540Mb HD, FX board, three weeks old £3100 ono; JP6 MIDI update £625 ono. ☎ Andy 01291 430704.

EMU E64 Only a few months old, v2.5 software, 40Mb RAM, internal SCSI, hard disk and external Zip drive with seven cartridges £1850 no offers. ☎ Julian 0115 914 2433.

EMU E64 16Mb RAM, A1 condition, SCSI AES/EBU, digital I/O, incredible machine, perfect for dance and drum bass. Selling to buy E41 £1750 ono. ☎ Ian 0113 292 6184.

EMUE4 Superior sampler, 2Gb hard disk, home use only £3000; Fostex D80 digital 8-track, only one time used £900, free delivery to your door. ☎ (31) 402532029 Holland.

ENSONIQ ASR10 Keyboard, SCSI interface fitted, built-in effects, reads Akai and Roland libraries, boxed, manuals £980. ☎ Steve 01429 222517.

ENSONIQ EPS16+ Sampler sequencer synthesiser plus effects manual, box and stand £550. ☎ Chris 01490 412595.

ENSONIQ EPS16+ Keyboard workstation, memory expander, Ensoniq library, 808, JD800 sounds over 250 disks, bargain £670 ono. ☎ 01228 45982.

KURZWEIL K2500R VAST synthesizer, latest version £2150; Oberheim OBMX 4 voices, expanded £1300; TL Audio C1 valve compressor, mint £795; Roland SDX330 £350. ☎ Oscar 34 4 4114039.

KURZWEIL K2500 Rack sampler, 32Mb expanded to 128Mb, 1Gb Jaz drive, mega spec £2300. Don't ring if you can't afford it! ☎ 0402 302321.

PEAVEY SP Sample playback rackmount module, 4Mb, expandable to 32Mb, SCSI, 16-note polyphonic add a Peavey SX for sampling, as new, £260. ☎ 01933 678608.

ROLAND COLOUR MONITOR 14-inch display with special RGB cable, suitable for samplers S770/S760/S550 etc. Good condition, can despatch if required £85. ☎ 0181 668 6077.

ROLAND DJ70 Sampling workstation, 4Mb memory, 45 seconds at 44.1khz, 8-track sequencer, filters, graphic, editing, boxed in mint condition with manual, new £1695, sell £750 ovno. ☎ 01202 698804.

ROLAND MS1 Sampler £190, Alesis SR16 drum machine £130; Yamaha DSR1000 keyboard £90, excellent condition, includes adaptors and manuals. ☎ David 01772 614485.

ROLAND S550 £450 ono, Soundcraft Series 16-channel desk. ☎ Alex 01608 737951.

ROLAND S760 Sampler with OP1 expansion, complete with Philips 8833MK2 monitor, all as brand new condition, hardly used, boxed £1195. ☎ 01684 565217 Tony.

ROLAND S760 Sampler, 18Mb memory, digital in/out, hi-res colour monitor, mouse, manual £1500, Roland D550 manual, excellent condition £480, Oberheim Matrix 6R, small service needed hence price £400. ☎ 01825 724093.

ROLAND W30 Sampling workstation, home used only with 45-disk Roland sound library, Atari sample editor and manuals £700. ☎ 01306 886124.

ROLAND W30 Sampling workstation, manual, Roland sample library, home use only, hence mint condition £640. ☎ Tom 0117 904 6016.

ROLAND W30 Sampling workstation, 16-track sequencer, 8 outs, manual, flightcase, home use only, hence mint condition £700. ☎ 01785 840774.

ROLAND W30 Sampler workstation, built-in 16-track sequencer, eight output, manual, large library with flightcase, good condition £750 ono. ☎ Steve 01752 361745.

ROLAND W30 sampling workstation, vgc £700; Spirit Folio 12:2, boxed/manual, £220; Digitech DSP16, 20-bit FX £120; Kawai PH50-pop keyboard £80. ☎ 01226 217658.

ROLAND W30 Workstation, complete sampling and 16-track sequencing keyboard. I have two and need to sell one, a bargain at £575, no time-wasters please. ☎ 01384 850021.

DRUM MACHINES

AKAI MPC 3000 10Mb memory, SMPTE option, flightcase, library £2000. ☎ 0171 254 8384.

AKAI XE8 Drum module, two cards, manual, eight outputs £95, Yamaha powered monitors, MS2025 £100, MS20S £80. ☎ Jez 0171 642 5642 or 0802 418949.

AKAI XE8 Drum sample player, 8 outputs, SL801R card, manual £120 ono, keyboard stand £15. ☎ Adam 01937 842602.

BOSS DR660 Drum machine, hardly used, boxed, full instructions as new £200. ☎ Graham 01422 344510.

BOSS DR660 Boxed, manual, immaculate condition £200. ☎ Chris 0121 308 0769.

BOSS DR660 New and unused £259. ☎ Malcolm 0191 565 4334.

ROLAND PD5 Drum pads, boxed £70. ☎ 01684 773053.

CHEETAH MD16R As recent *SOS* retro, bargain at £130, Yamaha RX8, no manual hence £70; Yamaha PSS51 MIDI keyboard £100 Any interesting swaps considered. ☎ Robin 01305 785675.

EMU SP12 TURBO Sampling drums, 8 assignable outputs, many sync options, excellent real-time editing, manual, turbo upgrade, a classic piece of hip-hop machinery in excellent condition £850. ☎ 01432 760613.

EMU PROCUSSION Module, as new, over 100 kits, 500+ sounds, manuals £325 ono. ☎ Dave 0115 950 7033.

KORG S3 Rhythm workstation with dance card £190, full MIDI plus multi-effects. ☎ 01243 830697.

ROLAND R8M Total percussion sound module, boxed, manual and 808 and 909 cards, £375 ono. ☎ Gary 01560 484787.

ROLAND R8 drum machine and 7 ROM cards, mint condition, will sell cards separately ☎ 01535 645233.

ROLAND R70 Drum machine, built-in effects, velocity- and aftertouch-sensitive drum pads, hardly used, mint condition £295. ☎ George 01243 376905.

ROLAND SPD11 Plus Kat Minikick plus Premier 252 bass drum pedal plus Roland hi-hat control pedal £500, Kat DK10 drum pad £250. ☎ Les 01207 520044.

ROLAND SPD11 Total percussion pad, with two extra pads, bass drum trigger and rack £650 ono, may split. ☎ Craig 01203 598368 Coventry.

ROLAND TR909 £700; TB303 £500; MKS80 £700; Jupiter 8 £650; Oberheim Xpander £750; Matrix 12 £1200, OB8 MIDI £650, Matrix 6R £375, Minimoog £800. Everything

excellent condition. ☎ Renato 0181 405 0188.

ROLAND TR909 £750, Emu SP1200 £850, Oberheim Xpander £800, Matrix 12 £1500, Sequential A440 £650, Roland SH5 £400, Lexicon PCH70 £850, swaps considered, can deliver anywhere. ☎ Renato 0181 771 4720.

YAMAHA RM50 Rackmount drum module, 580 voices, 64 preset keys, 4 expansion slots, 8 outputs, 133 waveforms, includes RSC3001 percussion card, all as new, boxed with manuals. 'Quality Unit' £370. ☎ 0181 902 9784.

YAMAHA RY30 Good condition, fully editable quality sounds, wave card facility, user friendly, manual and power supply £250 ono. ☎ Damian 01482 472618.

SEQUENCERS

AKAI ASQ10 Hardware sequencer, superb condition, boxed, manual's £450 ono, Atari 1040STE 1Mb, no monitor, hence £95. ☎ Kris 0151 523 8110 after 6pm.

ALESIS MMT8 MIDI Sequencer £70 ono, will post, Atari SM124 hi-res monitor £60 ono. ☎ 01159 728799 Notts area.

ALESIS MMT8 Vgc, home use only, fully boxed with manuals, easy to use sequencer £120. ☎ Kathy 01582 565025.

ALESIS MMT8 8-track sequencer £100. ☎ Andy 01992 560341.

KORG SQD8 8-track MIDI sequencer, with PSU and disks, good condition, £90 ono. ☎ 01813 557098.

ROLAND MC50 Sequencer with SMF converter, boxed £275. ☎ 01375 673411.

ROLAND MC202 and TR606 for sale £300 pair. ☎ 0151 653 0839.

ROLAND MC303 £420, will pay postage. ☎ 0121 236 6616 day, 0121 421 3700 eve.

ROLAND MC303 Excellent condition, class 808, 909, 303 sounds, boxed with manual £399 ono, Korg 05/RW, excellent condition, boxed with manual. ☎ Mark after 6pm 01628 472222.

ROLAND MC303 Does everything, cool retro sounds, boxed as new, still under guarantee, yours for £465 ono. ☎ Adam 0973 686546 Brighton.

ROLAND MC303 £450, Texas Instruments Speak & Spell £75, Stylophone £75. Both collectors' items, in good condition. Wanted: 5 quarter-inch Ricoh optical disks ROD5062F. ☎ Gerald 01266 44480.

ROLAND MT120S Sound module and sequencer including disk drive, brilliant backing for solo artists or duos, excellent condition and only £600. ☎ Dave 01922 445635.

ROLAND TB303 With CV/gate mod, plus case £549, Sequential Pro One mono synth £340, R8 MkII, 909/808 sounds, 10 outputs £450, TX7 module £100. ☎ 0151 353 0394.

ROLAND TB303 With manual, excellent condition, home use only, CV upgrade by Kenton for MIDI control £900 ono. ☎ 01273 205437.

ROLAND TB303 With original box and carry case, fitted with inputs for CV/gate/filter/accent/slide £650, Atari 1040 STF and monitor £200. ☎ Dale 0161 872 9064.

YAMAHA QY20 £200, Drawmer compressor LX20 £140, Drawmer LX20 £140, Roland CP40 £100, Roland TR626 £100, no offers. Wanted: Korg M1, KAM850 CD. ☎ 01427 811434.

YAMAHA QY22 Portable sequencer, 128 GM-compatible voices, 8 drum kits, 100 preset and 100 user patterns, excellent capabilities, manual and video manual included £250. ☎ 0191 272 2142.

COMPUTERS/SOFTWARE

486 DX/2 66PC 16Mb RAM, AWE32 2Mb, Cubasis Audio with dongle and manuals, 1Mb graphics, quad CD-ROM, modem, music software £450. ☎ 01392 426014.

APPLE MAC LCIII Unused £395 ono, Opcode Overture Prospec music notation programme £295 ono, Behringer Intelligate, boxed as new £275 ono, Lexicon Reflex, boxed new £300 ono, MXR mini limiter £100 ono. ☎ Terry 0191 386 2896.

APPLE MAC LCIII 4/80, Apple colour monitor £250, Cubase v2.5 for Mac with Opcode MIDI interface £110, Fatar 610+ master keyboard £100. ☎ 01376 344807.

APPLE POWERMAC 71/66 32/350 256K L2 cache, 15-inch monitor and extended keyboard, Audiomedia II card, excellent condition £1100 ono. ☎ Andy 0116 233 1591.

APPLE RAM SIMMS 3x8Mb, 72 pin £20 each, 2x2Mb, 30-pin £10 each, 2x1Mb, 30 pin £5 each. All in perfect working condition. ☎ Mick 0181 667 0108.

ATARI 1040STE with 14-inch mono monitor, under guarantee, £240 ono. ☎ Craig 01203 598368 Coventry.

ATARI FALCON 4Mb, 65Mb hard drive, video adaptor and loads of software £300 ono. ☎ Andy 01223 276311.

ATARI RESOLUTION EMULATOR Converts any TV or monitor into high resolution, complete with instructions £15. ☎ George 0181 785 9862.

ATARI SM124 Hi-res monitor, good condition £70. ☎ Dave 0181 656 0434.

ATARI STE Plus monitor £200, Cubase v3 with manuals £170. ☎ 01246 207530.

ATARI ST Computer with 1Mb memory and monitor, includes leads, manuals and software £150. ☎ James 01484 865137.

ATARI 2Mb STE Hi-res monitor, Twiddly Bits dance/techno disk £275, Roland MCS1 analogue synth £225, prices include insured delivery. ☎ Steve 01553 674076.

ATARI 520STE With Hollis Research Trackman v2.2A, boxed, loads of accessories and extras, 14-inch colour TV thrown in as monitor, complete sequencer package! £150. ☎ Chris 0181 464 0158 eves.

ATARI 104ST Plus accessories £200, Yamaha YPP55 £400, XRi300 Synchroniser £200, JBL Control 1s £150, EVS1 £50, Digitech Studio Quad £300, Westone Fretless Bass £100. ☎ 01324 622530.

ATARI 1040STE 4Mb upgrade, SM124 monitor, £250. ☎ 01386 832391.

ATARI 1040STE 4Mb, hi-res monitor, NVDI v2.5, 270Mb hard drive, Soundpool M04, four MIDI outputs, expander, all boxed with manuals £550 ono. ☎ Keith 0161 747 5372.

ATARI 1040STF £100, 60Mb hard drive £80, SC1224 colour monitor £80, 520STFM £80, 24-pin printer £50, Yamaha PSS580 keyboard £35, all include relevant leads and software. ☎ Dan 01737 219083.

ATARI STFM 1040 SM124 monitor, external floppy drive, 48KHz replay professional ampler, Steinberg Pro12 sequencer, Quartet, all originals with manuals, accessories £280, can split. ☎ 01342 713422.

ATARI 520 STFM With 1Mb upgrade, SM125 monitor, manual, dongle etc. ☎ Ian 0171 266 3906.

ATARI 520 STFM With virtually brand new hi-res monitor, 1Mb installed £250, Roland MDC1 module boxed with manual, as new £200. ☎ Mat 0115 969 3574.

ATARI 520STE 4Mb RAM, SM124 hi-res monitor plus colour monitor, 100Mb hard disk, Cubase v3.0 with manuals, disks, Steinberg Midas plus complete system, hardly used £400. ☎ 0181 393 2738.

ATARI 1040 STE 14-inch mono monitor and external 3.5-inch drive for sale £160. ☎ Chris 0161 950 6642.

ATARI HI-RES MONITORS Suitable for Cubase/Notator, two monitors for sale, 14-inch screen with sound, as new condition with original cartons, can despatch £90 each or two for £80 each. ☎ 0181 668 6077.

ATARI MEGA ST 4Mb, high-resolution monitor, mouse and 50 disks £265, Casio CZ1000 with data cartridge £100, Korg DW6000 £180. ☎ 0115 938 2468 Notts.

ATARI ST Floppy drives/printer cable/joystick £25, Atari platform Emagic Editor for all Yamaha keys and module £50. ☎ 01865 776587.

ATARI STE Full system, 2Mb, two monitors, hard drive, sampler, many boxed original games, utilities, cover disks, mags, the lot for £500 ono, may split. ☎ 0114 2214727.

ATARI STE 4Mb with high-density drive reading both DD and HD floppies with hi-res b/w Atari SM146 monitor, 14-inch, Falcon compatible £350. ☎ 0181 933 3248.

AUDIOMEDIA II Card for all Nubus Mac computers and Sound Designer II software £230, Formac Proritron 24-bit graphic card for monitors up to 21-inch £75. ☎ 01332 776244.

CUBASE AUDIO 16 V2.06 for Atari Falcon, all manuals, clock and dongle complete, open to serious offers around £375. ☎ Duncan 0141 401 1720.

CUBASE AUDIO 16 Version 2.06 for Atari Falcon, boxed with dongle, manuals, 44.1Khz clock £250. ☎ 0113 225 3087.

CUBASE 3 With Audio tracks for PC, new, still boxed with dongle and MIDI lead £210. ☎ 0181 520 8370.

CUBASE V3 Official Atari version plus dongle £250, Gasteiner external 540Mb HD £200, Midex M.DI expander £180, Award Mb10 DI box £60, DMA to SCSI lead £60, Scsnex 44 patchbay £60, Cakewalk Express sequencer £25, as as new with manuals. ☎ 0181 902 9784.

DIGIDESIGN SAMPLE CELL PC Boxed £650, Mark Of The Unicorn MIDI Express £200, Steinberg Midex £190, all cheap, any serious offer considered. ☎ 01438 833222.

EMAGIC LOGIC For PC version 2.57 £150. ☎ 0121 605 0508.

FALCON 14Mb 32Mhz accelerator, CPU clocked for audio recording, 250Mb drive, Cubase Audio 16, FD1 FA8, 8 outputs, plus other software £1000, may split. ☎ Tim 01474 703304.

HARD DISK Recording and editing software for Atari Falcon 4TFXX/D2D, cost £300 will accept £50. ☎ Chris 01509 507188 East Midlands.

LOGIC AUDIO PC V2.5 Unregistered £270, Atari STE 2Mb, B/W monitor £220, JL Cooper MSB Rev2 8X8 MIDI p/b £140, Yamaha TG55 module £250, Emagic Notator v3.2 £200, Yamaha RX21L drum machine £40, Akai XE8 drum module £110, Casio CZ1 £300, Kawai K1m, £180, Peavey PA speakers £150, all ono. ☎ Nick 01548 531334.

LOGIC AUDIO Ver 2.5.3 for PC £240, Custom-built guitar, exotic woods, two octave, full access neck, vintage Les Paul pickups, case, swap or sell value £1000. ☎ 01733 371773.

MOTU MAC MIDI INTERFACE rack mount, 96-channel, full SMPTE, as new with manual and software £280. ☎ Phil 01707 323864.

MPC MIDI CARD For PC. New sealed in box, full warranty £35. ☎ 0181 691 1900.

NOTATOR UNITOR SL Boxed as new £220 ono, Atari 1040STE boxed with hi-res monitor sequencing, editing, games, software and joystick £250 ono. ☎ Paul 0468 165230.

PRO TOOLS III £3500. 8821/0 £550, Nuverb plus TDM £1100, Quadra 800 plus 21-inch monitor £925, 2Gb AV-drive £400, lots of extras, offers. ☎ Andy 0121 449 8024.

QUADRA 650 48Mb RAM, Digital Performer version 2.0 included with CD-ROM and manuals, Lexicon PCM70 £900 each or £1700 for both. ☎ 0468 254252.

SOUND FORGE Cakewalk Pro Audio, Koan Pro, PC, 120Mhz, 16Mb RAM all bullocks, Roland MKS70, Casio VZ10M, Roland R8+ cards, 808,909, Korg SR, Yamaha SY35. ☎ 0181 698 7447.

STEINBERG CUBASE V3.0 PC, includes registration card, all manuals as new package, must sell due to new Apple-based studio £240 ono. ☎ 01473 617961.

STEINBERG MIDEX+ MIDI/SMPTE interface for the ST £160, Steinberg Cubase 3.0 for the ST, with manuals and dongle, fully featured and legal £150, excellent condition, home use only. ☎ 0181 670 6578.

STEINBERG SMP24 SMPTE/MIDI processor which adds 64 extra MIDI channels on Cubase with SMPTE or MTC sync for multitrack machines £495 ono. ☎ 0181 883 4329 or 0956 339577.

WESTERN DIGITAL 1.2Gb HD, ideal for PC Audio MIDI software, 6 months old £120 ono. ☎ 01332 775693.

ZERO X digital sound processing software for the Atari, excellent for drum and bass programming, brand new in box with manual, reluctant sale £120 ono. ☎ 01604 401096. @xhead.MISCELLANEOUS

AKAI EW1100 Wind MIDI controller and module, very good condition, boxed with manual, offers. ☎ Steve 01748 812477 answerphone, 0370 650834 eves.

ANATEK MIDI FILTER and Pocket Sync filter ideal for omni mode synths, £40 each. ☎ Simon 0181 599 4668.

BEYER HM560 Headband/hands-free microphone, omni-directional dynamic, fully adjustable, perfect for keyboard player, very good condition £85 ono. ☎ Mick 0181 6670108.

BOOKS FOR SALE 'An Introduction To Digital Audio' by John Watkinson, 'Success In Electronics' by Tom Duncan, 'Sound and Recording' and some others, reasonable offers accepted. No dealers! ☎ 0171 720 3702.

BOOSEY SOPRANO SAX with case, solid silver Selmer 'C' lay mouthpiece, Link ebonite mouthpiece, good playing condition £275. ☎ 0191 372 2621.

BOSE AND JBL PA systems for sale, give me a call for the details. ☎ 01535 645233.

BOSS CE2 Chorus footpedal, good condition, perfect working order £30 inc P+P. ☎ 01480 353306.

C-AUDIO RA3001 1250W amp, £625 ono, CP cases EMS500 9U modular rack, £135 ono, Four Shure SM48 mics, castles and three stands £250 ono, all in vgc. ☎ 0181 244 4476.

DYNAMIX Sound mixing system, 12-channel £95 ono. ☎ 01503 230653.

FLIGHT CASE 12U with lids and casters £60, Atari STE1040 and SM124 hi-res monitor £175, buyer collects. ☎ Ian 01482 708863.

GRUNDIG GRD280 280 channel satellite receiver, boxed, manual, remote, one year old, great condition, with two LNB ins, three SCARTs, LNB and 60cm dish, £150. ☎ 01354 695239.

HI-WATT STACK Vintage, recently serviced 100W head plus matching 4x12 cabinet with heavy duty Fane speakers, very good condition, on casters too! Very reluctant sale £650. ☎ 0181 809 0145.

MIDIMAN SYNC BOX As new, boxed £70, Ari Pro II left-handed guitar, never played, cost £170 sell for £130 ono. ☎ Ed 01597 840287.

PAIR OF 265W JAMO SPEAKERS With 12-inch woofers for sale, top condition £200. ☎ 0161 950 6642.

ROLAND PG800 Programmer for JX8P, JX10, MKS70, excellent condition £250. ☎ 01403 272098.

ROLAND VINTAGE SYNTH Expansion board, JD/JV dance drums PCM set, offers. Notator Logic Mac v2.0 £125 ono, Anatek Pocket Plus Mac merger/MIDI interface £40. ☎ Clive 0181 265 1980.

YAMAHA MCD32 RAM card, suitable for SY or TG synths £25, RAM 4 cartridge £15, Alesis MMT8 for spares £40, Carlsbro Colt 45 keyboard speaker £50. ☎ Duncan 0121 444 2681.

YAMAHA PZ500 Power amp, 350W per channel, 700W bridged, ideal for studio or PA use, as new £300. ☎ Jason 01483 272543 Surrey.

PERSONNEL

ADVERTISING NEEDS MUSIC If you can make short interesting tracks and live in the London area. ☎ Steve 0958 631407. I'll call you straight back.

DJS/PRODUCERS Wanted, any style of dance music. Send mix tapes/demos to Xenon Promotions, 111 Moore Street, Gateshead NE8 3PN or ☎ 0589 351228/0589 638353.

FEMALE SINGER REQUIRED By established band, original songs and style, gigs waiting in London. ☎ 0171 252 3158.

FIREWALL RECORDS Urgently require original material from up and coming performers, send demos/DATs to A&R Manager at 17 Greenfields Avenue, Bromborough, Wirral, Merseyside L62 6DB.

HELP! I am into hardbeat, drum + bass. I am looking for people in the Wellingborough/Kettering area to help me get to grips with Cubase v3, Score v3 and Audio XT v3 on PC. ☎ 01933 227034.

IYUNX PRODUCTIONS Requires quality electronic compositions, abstract drum'n'bass, electro techno, house, nondescript electronica. Send demos to Iyunx Productions, 41 Stanhope Road, Bowdon, Cheshire WA14 3JU.

LENNON SEEKS MCCARTNEY For co-writing partnership and lady singer needed for pop songs (influences Beatles, Queen, E Costello). I'm 23 with group plus gear. Write: Paperback Writer, 31 avenue Armand Guillebaud, 92160 Antony, France.

MANAGER WANTED For house material, must be exp for 20%, send details C.V. to RJC, 29 Harmer Street, Gravesend, Kent DA12 2AR.

MIDI ZONE Fanzine needs demos to review, also if you would like a copy write to: Mark Nobes, Newholme, Aston Road, Chipping Camden, Glos GL55 6HR.

NEW LABEL Interested in electronic, techno etc. Bands with guts and attitude. Tapes to: RIPT Skin Records, PO Box 3945, Brentwood CM13 1LS.

PLEASE SIGN ME! I am a 15-year-old male who wants to enter into the dance music scene, if you want to hear more contact 'Appocalips'. ☎01505 634402.

PRODUCER/SONGWRITER Required to collaborate in making pop/dance music. I own a pretty good studio. Send demos to: 41 The Fairway, Fixby, Huddersfield HD2 2HU. ☎ 01484 513961.

SINGER/SONGWRITER Looking to collaborate and form a group, must be professionally minded and have that extra to bring music above the rest, varied music tastes. ☎ Seb 01452 307663.

SINGER/SONGWRITER Who seeks the big time, requires good female vocalist with creative input to form duo for the '90s, transport an advantage. ☎ Jamie 01287 660946.

TRANCEMISSION RECORDS Requires trance/techno tracks for upcoming release, submit your demo and info to: Trancemission Records, PO Box 4314, 6202VA Maastricht, Netherlands. (Please enclose an international reply coupon for sure reply.)

TRULY TASTY RECORDINGS LTD Require demos, trance, house, techno, chemical style, hip-hop. 20 Rennies Court, Aberdeen AB11 6NZ.

VERY WELL CONNECTED Drum and Bass label seeking quality new talent, your demos will not disappear. ☎ Leo 0181 341 0382.

WANTED Björk. Write to: Paperback Writer, 31 avenue Armand Guillebaud, 92160 Antony, France.

WANTED Bass player and drummer/junk percussionist — any gender — for original music which is simple and different. ☎ Rog 01803 211167.

WOMEN WANTED! Are any female engineers, at whatever level, willing to be interviewed for a college project? ☎ Lisa 01954 789888.

WANTED

AKAI MPC60 MKII Drum machine required, cash waiting. ☎ 0181 883 4329 or 0956 339577.

AKAI S1100 Expander with 10Mb, clean and tidy £550. ☎ Bobby 01703 493441.

AKAI S2000 With eight output expander fitted. ☎ 0141 638 6687.

AKAI S2800 With some expansion, must be in vgc with manual, will pay £600, Technics SL1210s, SL1200s, will pay £200 each. ☎ Jim 01494 442983.

AKAI S3000XL Or Emu E64/E6400, must be in good condition, cash waiting, best offer. ☎ Andy 01633 613342.

AKAI VX600 Synth. ☎ Danny 01582 41923.

ALESIS ADAT Or similar 8-track, preferably digital, might consider 4-track, GM module and synth, effects unit and sampler, plus non-GM synth. ☎ 01869 347167.

ALLEN & HEATH GS3 8-channel desk extension to upgrade 16- to 24-track, will consider purchasing 24-track GS3. ☎ 01223 560379.

AMS RMX16 Reverb, Eventide DSP4000 harmoniser, Drawmer M500 dynamics, TC2290 digital delay, Roland SDE330 delay, Dolby 740 and BSS DPR 402/404. ☎ 01535 645233.

APPLE MAC 7100 or similar with 17-inch monitor, Session 8 system with 882 interface for Nubus Mac, cash waiting for best offer. ☎ Andy 01633 613342.

BOSS SE70 EFFECTS, Sequential Circuits Pro 1, Roland Space Echo. ☎ Tom 0161 860 5028.

CAN ANYONE HELP? I urgently need the circuit diagrams for a Puitec EQ1A equaliser. ☎ 01535 645233.

CASIO DIGITAL HORN DH100 or DH200, will pay up to £100 based on condition. ☎ 01344 368066.

CUBASE V3 Upwards, official Atari complete with full manual and dongle, cash waiting. ☎ 0114 255 7707.

EMAGIC NOTATOR SL v3 with Unitor, £100 or Logic £150, both for Atari. Cash waiting. Any Edinburgh labels seeking a D'n'B artist? ☎ Tom 01438 880470.

EMU ORBIT Rave-O-Lution and Marion Pro-Synth, analogue mono synths, especially Warp Special. ☎ 01243 830697.

ENSONIQ SQ80 Writable sound cartridge. ☎ Tony 0181 941 8998.

HAMMOND XB2 ORGAN Must be in full working order. ☎ Michael 01438 220457.

HELP WANTED Prophet 5 manual/tech service manual, photocopies or originals, also any info on service centres/clubs. ☎ Alan 01232 797759.

KORG MS10 In good condition, I will travel to UK to collect. ☎ Ken 353 4549941 Ireland.

KORG MS50 Sought with manual, preferably good condition etc, looking for Effectron effects box. ☎ John 0181 995 1208.

KORG MS50 Semi-modular expander, preferably with manual, will pay good price. ☎ 0181 995 1208.

KORG PROPHECY Preferably with Analogue and Vintage card, cash waiting. ☎ Dave 01745 590336.

KORG X3 Workstation with large sound library, mint condition, swap for Ensoniq TS10 or TS12 plus cash adjustment. ☎ John 01903 501337/501094.

LOGIC AUDIO Software for Power Macintosh, Digidesign Audiomedia II, Nubus card, MIDI interface 1 in 3 out. ☎ 0161 881 1613.

MAC COLOUR MONITOR and extended keyboard wanted cheap. ☎ 01354 695239.

MOOG PHASER Moog EQs, Alesis A11. ☎ 0131 552 4668.

NOTATOR For Atari wanted. Version 3.1 upwards complete with dongle. ☎ John 0181 398 3164.

NOVATION BASS STATION £200, Drum Station £225, TLA Indigo voice processor VP2051 £225, Aphex 109 valve EQ £225, Emu Planet Phatt £500, Technics SL1200 MkII £200, must be in excellent condition. ☎ 0181 902 9784.

REX 50 GUITAR Effects pedal, keen buyer☎ 01934 820256.

ROLAND DA400 Convertor for S760. ☎ Nick 01132 751267.

ROLAND JD1080 With expansion cards, must be in good condition, cash waiting for best offer. ☎ Andy 01633 613342.

ROLAND JV/XP Expansion cards wanted, cash waiting. ☎ Simon 01803 882772.

ROLAND TR727 Latin Rhythm composer wanted, full working order and in good condition, around £75 paid dependent on condition/appearance. Elka Rhapsody Strings. ☎ 01952 260064.

SEQUENTIAL CIRCUITS PROPHET 5 Revision 3.3 or 2, preferably with MIDI, must be vgc, cash waiting. TG55/SY55 sound cards wanted. Write to: Dave, 44 Naseby Road, Kettering NN16 0LQ.

TEAC RC70 Remote control unit for A3440. ☎ 0181 568 1019.

TECHNICS C300 Portable MIDI organ in good condition wanted. ☎ Dave 01482 472470.

TECHNICS EX10, EX20, EX30 Organ in OK condition wanted. ☎ Dave 01482 472470.

WANTED Session 8 882 or 888 audio interface for Mac Nubus, must have original cards/disks and manuals, will pay £800-£1000. ☎ 01636 611899.

WANTED Roland TR909, able to pay £500, TB303 pay £450, Jupiter 8 £650, Jupiter 6 £450, Oscar £450, Wasp £100, Moog Source £250, SH101 £150, others considered. ☎ 0114 248 2760.

WANTED Items to build home studio, Roland TR909, TB303, JD800, Mixer, sampler, FX, dual analogue etc. Anything considered for immediate purchase, Emu, Korg, Roland, Yamaha etc. ☎ 01252 655283.

WANTED Morpheus Cards. ☎ 01535 645233.

YAMAHA SY99 Wanted in good condition, would consider part exchange TG77. Please call 0171 485 5478.

Anatek Pocket Products to solve your MIDI headaches!!!

To order, just fill out the Order Coupon at the back of the Mail Order section (remember to add postage for each product) or simply call our Mail Order hotline on 01954 789888.
DON'T DELAY ORDER TODAY!
Please allow up to 28 days delivery on Pocket Products.
Postage: UK £2.50 Europe £4.95 ROW £6.95

At *SOS*, we have regularly found ourselves referring readers to one or other of the Anatek Pocket range of MIDI accessories to solve their all too common MIDI interconnection and transmission problems. Trouble was, Pocket Products were previously hard to find... until now!

POCKET MERGE

• Merges 2 MIDI signals into 1 • Handles System Exclusive • Merges on all 16 MIDI channels • Merges Clock and MIDI Time Code • Merges all controllers • Handles large volumes of data • Stackable for 3 or more inputs

POCKET MERGE is an essential tool for sequencing or live use. Operating as a 2-In, 1-Out MIDI Merger, several Pocket Merges can be stacked to merge more than 2 inputs. Now any controller can be a 'master'. In live setups, POCKET MERGE allows any two controllers (keyboard, drum pads, guitar synth, etc) to share a sampler or sound module. Use one keyboard as a master, while using a favourite pitch bender from another, or combine two keyboards for a multi-tiered, organ-style controller. In the studio, POCKET MERGE is a must for sample dump editors, allowing a keyboard and a computer to be connected to the sampler at the same time. POCKET MERGE handles data very quickly, making buffer overflows a thing of the past.

Order Code: PP007 **£59 inc VAT.**

POCKET FILTER

• Filter on all MIDI channels • Filter controllers, System Exclusive and real-time data • Combine data types/channels • DIP switch selectable filtering • Select channel from any keyboard • Filter all data on selected channels

POCKET FILTER is a vital tool for problematic setups. With MIDI data becoming increasingly complex, POCKET FILTER can unclog the MIDI data stream, sending only the most useful info. Use it to remove unwanted clock messages or System Exclusive data or memory-intensive aftertouch and controller information. POCKET FILTER frees-up unused MIDI Channels from multitimbral synths, making them available for other modules. In addition, it can be used to channelise older synths that only receive in Omni mode.

Order Code: PP008 **£69 inc VAT.**

POCKET CHANNEL

• Remaps Receive channel • Remaps Transmit channel • Sends multiple MIDI channels • Velocity-switch mode • Footswitch controllable

POCKET CHANNEL takes data from any MIDI channel and remaps it on to one, several, or all 16 MIDI channels. Up to 16 different channel assignments are possible. A unique velocity-switch feature allows automatic switching between two different sound modules depending on the key velocity. Use POCKET CHANNEL to organise channel assignments for a multitimbral sound module, or send a controller's output to two or more MIDI channels. With POCKET CHANNEL, for example, two drum machines or two samplers can share the same note assignments and be set to two separate MIDI channels.

Order Code: PP014 **£69 inc VAT.**

POCKET MAC

• Economical Macintosh MIDI interface • No external power supply required • 1 MIDI In, 2 MIDI Outs • LEDs indicate MIDI In/Out data • Uses serial or modem port • High speed CMOS design • Improves signal to minimise data errors.

POCKET MAC opens up a whole new world of MIDI programs for the Macintosh computer user. With many Macintosh programs simultaneously supporting both the serial port and the modem port, one POCKET MAC could be connected to each allowing access to twice as many MIDI devices.

Order Code: PP004 **£39 inc VAT.**

POCKET SYNC

• 'Smart' FSK Tape-to-MIDI synchroniser • Starts anywhere in song • MIDI In to Out merging • Automatic read/write switching • 'Jam Sync' protects against tape dropouts • Records tempo changes • MIDI and FSK status LEDs

POCKET SYNC is the way to expand the capabilities of any multitrack studio. No longer is it necessary to allocate more than one tape track for sequenced parts. Now, shuttling to different points in the song is quick and effortless. POCKET SYNC writes a special FSK sync tone on one track of tape that is converted to MIDI Clock and Song Position Pointer on playback. Merging of data from the MIDI input to the output allows new sequencer tracks to be added while remaining synchronised to tape. Automatic switching between write (recording FSK) and read (playback FSK) cuts downs on confusing switches and buttons. Tape oxide dropouts are no longer a problem with POCKET SYNC's variable dropout protection. The sequencer can continue playing over a dropout for a short time, even if FSK code is completely lost!

Order Code: PP003 **£69 inc VAT.**

POCKET PEDAL

• Sends on multiple MIDI channels • Supports 1 continuous controller • Supports 1 momentary footswitch • Sends pitch-bend, modulation, portamento time, and MIDI Volume • Sends sustain, portamento on/off, sustenuto, and start/stop • Auto pedal/footswitch calibration • Forward/Reverse pedal operation • 3 mode pitch-bend operation • Combine data types

POCKET PEDAL is an indispensible controller for the performing musician. Use it with an ordinary volume pedal and footswitch to send MIDI volume, modulation, and sustain controls on all 16 MIDI channels simultaneously. For owners of multi-effects processors, POCKET PEDAL provides a convenient cost-effective way of providing dynamic control over effects parameters. It is also a handy controller for automated mixdowns, converting any resistive input into MIDI Controller messages for VCAs. Connect a photocell to POCKET PEDAL and control MIDI parameters with a light source!

Order Code: PP009 **£69 inc VAT.**

POCKET TRANSPOSE

• In-line 16 Channel transposer • +/- 5 Octave transpose range • Switch between normal and transposed modes • Separate intervals for each channel • Transpose key signature and octave simultaneously • All non-transposed MIDI data is passed • Harmonisation mode • Footswitch controllable.

POCKET TRANSPOSE is a performance-orientated transposer that supports separate transpose intervals for each MIDI channel. Although many keyboards have a transpose function, it's usually too cumbersome for live use. POCKET TRANSPOSE makes transposing easy. Intervals can be set while playing, and the user can select the normal or the transposed setting from a footswitch. Guitar synth players can use the POCKET TRANSPOSE to set intervals on 6 separate MIDI channels, or use it to transpose all strings by a certain amount. POCKET TRANSPOSE provides an easy way to try different arrangements without altering sequencer data. You can even set it so that the drum machine channel remains intact.

Order Code: PP011 **£69 inc VAT.**

POWER PACK

• 'Phantom' powers all Pocket Products • Functions in-line with MIDI signal • Powered by most AC adaptors • Automatic polarity switching • Fully regulated supply • Passes all MIDI data • Alleviates hook-up problems • Boosts MIDI signal

POWER PACK provides power to Pocket Products in instances where upstream devices from other manufacturers have neglected to meet MIDI specifications, or in any instance where power is unavailable. POWER PACK can be placed anywhere in the MIDI chain and accepts power from a standard AC adaptor (not included). It provides additional power when more than 4 Pocket Products are used in a row or allows POCKET PEDAL and POCKET FILTER to retain their channel settings when the master device is turned off. What's more, POWER PACK can be used to boost the MIDI signal and extend the maximum distance between two devices.

Order Code: PP012 **£29 inc VAT.**

POCKET THRU

• 1-In, 3-Out MIDI Thru box • High-speed CMOS design • Very low power requirements • Buffered outputs clean up data • Handles all MIDI data • Stackable for more outputs

POCKET THRU is an essential building block for any MIDI setup and an excellent companion product for all Pocket Products. POCKET THRU provides 3 buffered outputs from a single MIDI input. Use POCKET THRU to minimise MIDI delays, or expand the outputs of a POCKET MERGE unit. POCKET THRU also allows POCKET FILTER to be placed anywhere in the MIDI chain, when using it to channelise older synths. Up to 4 POCKET THRUs can be combined to provide a total of 9 outputs.

Order Code: PP010 **£35 inc VAT.**

SOS Professional Cables

ALL PRICES INCLUDE VAT

One of the most important, but most often overlooked, pieces of equipment in the signal path are your audio and MIDI cables. Why sacrifice performance quality when you can r ely on Piranha cables — available now from SOS Mail Order.

• Piranha cables are designed for professional use and manufactured to the very highest quality. • Piranha cables use top quality Neutrik connectors, the industry leaders. • Piranha cables are manufactured to combat any external interference. • Piranha cables use braided shields to counteract AC interference while still allowing maximum 'bendability'. • Piranha cables are designed to minimise ground loops. • Piranha cables employ fibre fillers to pack out the jacket, maintaining dimensions and mechanical stability in all studio/stage situations. • Piranha cables are exceptionally soft, whilst offering unsurpassed flexibility and durability. • All Piranha cables come with a lifetime guarantee.

MICROPHONE CABLE - Twin Core oxygen-free copper cable made to the highest specification, using high density spiral braided shield to provide superior performance and rejection of hum and noise. Special supersoft Polymer jacket makes this probably the most flexible cable available, giving the ultimate in protection against mechanical interference noise. Overall cable diameter: 6.5mm.

INSTRUMENT CABLE - Single Core oxygen-free copper cable, as above spec. Overall cable diameter: 6.2mm.QUAD MIC CABLE - Our Piranha supersoft mic cable is now available in a Quad version, offering further protection against susceptibility to outside interference. If you think of your cable as being 'double balanced', it is not difficult to understand the dramatic improvements in noise rejection that this cable affords. Overall cable diameter: 6.7mm.

Postage per cable: UK £1.75 Europe £3.50 R.O.W. £5.25

Please **add** your cable colour code R (red), B (blue), Y (yellow), G (green) or K (Black) at end of *each* Order Code to specify cable colours required when ordering (use coupon at end of Mail Order section). Example: **INS-03JJ-Y** means a *3 metre Jack-to-Jack Instrument cable in Yellow.*

Length / Type	Price	Order Code
MICROPHONE CABLES		
1 metre XLR-to-XLR	£7.95	MIC-01XX
2 metre XLR-to-XLR	£9.50	MIC-02XX
3 metre XLR-to-XLR	£10.50	MIC-03XX
5 metre XLR-to-XLR	£11.75	MIC-05XX
6 metre XLR-to-XLR	£12.75	MIC-06XX
10 metre XLR-to-XLR	£17.50	MIC-10XX
20 metre XLR-to-XLR	£28.00	MIC-20XX
1 metre XLR-to-Jack	£7.95	MIC-01XJ
2 metre XLR-to-Jack	£9.50	MIC-02XJ
3 metre XLR-to-Jack	£10.50	MIC-03XJ
5 metre XLR-to-Jack	£11.75	MIC-05XJ
6 metre XLR-to-Jack	£12.75	MIC-06XJ
10 metre XLR-to-Jack	£17.50	MIC-10XJ
20 metre XLR-to-Jack	£28.00	MIC-20XJ
1 metre XLR-to-Rightangle Jack	£7.95	MIC-01XRJ
2 metre XLR-to-Rightangle Jack	£9.50	MIC-02XRJ
3 metre XLR-to-Rightangle Jack	£10.50	MIC-03XRJ
5 metre XLR-to-Rightangle Jack	£11.75	MIC-05XRJ
6 metre XLR-to-Rightangle Jack	£12.75	MIC-06XRJ
10 metre XLR-to-Rightangle Jack	£17.50	MIC-10XRJ
20 metre XLR-to-Rightangle Jack	£28.00	MIC-20XRJ
QUAD MICROPHONE CABLES		
5 metre Quad XLR-XLR	£14.00	QMIC-05XX
10 metre Quad XLR-XLR	£19.95	QMIC-10XX
20 metre Quad XLR-XLR	£30.00	QMIC-20XX

MIDI CABLES With pro Neutrik 'crush-proof' metal DIN plugs.		
1 metre	£6.50	MID-01
2 metre	£7.50	MID-02
3 metre	£8.50	MID-03
5 metre	£9.50	MID-05
INSTRUMENT CABLES		
1 metre Jack-to-Jack	£7.95	INS-01JJ
2 metre Jack-to-Jack	£9.50	INS-02JJ
3 metre Jack-to-Jack	£10.50	INS-03JJ
5 metre Jack-to-Jack	£11.75	INS-05JJ
6 metre Jack-to-Jack	£12.75	INS-06JJ
10 metre Jack-to-Jack	£17.50	INS-10JJ
20 metre Jack-to-Jack	£28.00	INS-20JJ
1 metre Jack-to-Rightangle Jack	£7.95	INS-01JRJ
2 metre Jack-to-Rightangle Jack	£9.50	INS-02JRJ
3 metre Jack-to-Rightangle Jack	£10.50	INS-03JRJ
5 metre Jack-to-Rightangle Jack	£11.75	INS-05JRJ
6 metre Jack-to-Rightangle Jack	£12.75	INS-06JRJ
10 metre Jack-to-Rightangle Jack	£17.50	INS-10JRJ
20 metre Jack-to-Rightangle Jack	£28.00	INS-20JRJ
SPEAKER CABLES		
3 metre Jack-to-Jack	£10.00	SPK-03JJ
6 metre Jack-to-Jack	£12.75	SPK-06JJ
10 metre Jack-to-Jack	£17.50	SPK-10JJ
3 metre Speakon-to-Jack	£11.75	SPK-03SJ
3 metre Speakon-to-XLR	£11.75	SPK-03SX
6 metre Speakon-to-Jack	£14.00	SPK-06SJ
6 metre Speakon-to-XLR	£14.00	SPK-06SX
10 metre Speakon-to-Jack	£18.75	SPK-10SJ
10 metre Speakon-to-XLR	£18.75	SPK-10SX
3 metre Speakon-to-Speakon (2.5mm)	£19.95	SPK-03SS
6 metre Speakon-to-Speakon (2.5mm)	£28.00	SPK-06SS
10 metre Speakon-to-Speakon (2.5mm)	£38.75	SPK-10SS

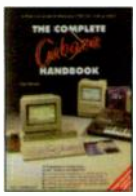
SOS SOS
SOS SOS Mail Order 01954 789888

SUBSCRIBE AND GET 10% OFF ALL BOOKS

SOS Book Shop

BEST SELLERS

THE COMPLETE CUBASE HANDBOOK
3rd Edition



by Udo Weyers

After a short break, the definitive Steinberg Cubase Hanbook is back in print. This *new edition* is once again filled with real world applications and down to earth explanations of how to use all the powerful features offered by Cubase in all its many forms. *The book is now relevant to all three platforms (Atari, Mac and PC)*, and the main attraction of the revised text is its focus on Cubase Score. The Complete Cubase Handbook is a not-to-be-missed purchase for users of Steinberg's highly popular software.

CODE B195 **£29.95**
Postage UK £4.50, Europe £7.50, R.O.W. £14.50

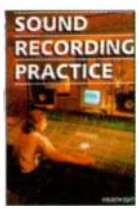
RECORDING & PRODUCTION TECHNIQUES

by Paul White.

This highly informative book by SOS's own Editor demystifies the techniques used by professionals in the recording of contemporary music. It reveals how to make full creative use of all manner of studio effects and signal processors. These techniques can be utilised both in the home and commercial studio. The book concludes with an invaluable section on master tape formats and an overview of the various processes and vinyl records.

CODE B200 **£12.99**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

SOUND RECORDING PRACTICE (4th Edition)
NOW IN PAPERBACK!



by John Borwick

This now classic text reaches its Fourth Edition, and has been *enlarged and revised* to bring it up to date developments in the recording field. The comprehensive 500+ page book is divided to suit readers such a specialist sufficient to satisfy the very serious recordist, whether amateur, semi-pro or professional should have a copy of this book.

TEMPORARILY OUT OF STOCK

CODE B107 **£19.99**
Postage. UK £4.50, Europe £7.50, R.O.W. £14.50

RECOMMENDED READING

MULTI-EFFECTS FOR MUSICIANS

by Craig Anderton

Occasional SOS contributor Craig Anderton adds to his long list of music technology-based books with this comprehensive look at multi-effects units. The book helps you with what to look for when buying a new unit, how to use it when you've got it home, and provides a collection of tips to help you get the most out of your device. 137 Pages.

CODE B306 **£10.95**
Postage: UK £2.95, Europe £5.50, R.O.W. £8.50

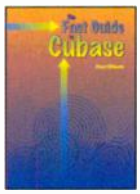
TECH TERMS - A Practical Dictionary for Audio and Music Production

by George Petersen and Steve Oppenheimer

This is a concise collection of definitions of electronic music and recording terms; 300 words and phrases are given quick accurate definitions in plain English. So if you're new to recording, synths, samplers and MIDI, this book could be a big help in getting your mind into the terminology.

Code B230 **£7.95**
Postage: UK £1.50, Europe £3.75, R.O.W. £4.95

THE FAST GUIDE TO CUBASE

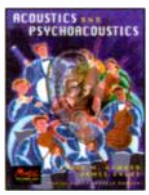


By Simon Millward

This book aims to provide a quick and readable introduction to Cubase, saving you the trouble of wading through the bulky user manual. All platforms are covered — PC, Atari and Mac — with useful tutorials, 'smart moves', glossary and index. There should be something in this book for everyone, whether you're a beginner or established user, and all the program's essential elements are outlined, including the Arrange window, the Inspector, Key, List and Drum Edit, Quantise, Synchronisation, Master Track, the MIDI Effect Processor and special chapters on Score and Logical Edit.

CODE B336 **£10.95**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

AN INTRODUCTION TO ACOUSTICS AND PSYCHOACOUSTICS
NEW



By David Howard & James Angus

This comprehensive book is designed to provide a board-ranging introduction to the subject of acoustics. It is ideal for music technology, sound recording and acoustics, and is geared very much towards those who want a practical understanding of how real musical sounds behave and are perceived in real spaces. It will also help those who need to use acoustic principles in the design of equipment, instruments and rooms, and it will benefit those who make recordings.

CODE B342 **£25.00**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

INTRODUCING DIGITAL AUDIO 2nd Edition

by Ian R Sinclair

Explains digital audio – CD, DAT and sampling – non-mathematically. The updated 2nd edition adds information on oversampling and bitstream techniques, plus a glossary of technical terms.

CODE B274 **£7.95**
Postage. UK £1.95, Europe £4.50, R.O.W. £6.50

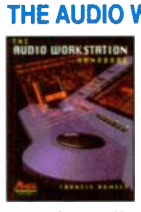
SOUND SYNTHESIS AND SAMPLING
NEW

By Martin Russ

Sound Synthesis and Sampling is all about the principles of electronic musical instruments. It provides a comprehensive introduction to all the common forms of analogue and digital synthesis, as well as many of the less commonly encountered techniques used in research and academia. This book has been written in an almost entirely non-mathematical fashion, and is extensively illustrated with diagrams. A substantial glossary explains a wide range of related terms. Time-lines show key events in the history of synthesis and examples are given of commercial products that employ the technology described

CODE B340 **£25.00**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

THE AUDIO WORKSTATION HANDBOOK
NEW



By Francis Rumsey

This book has been written for all those needing to understand digital audio and the associated technologies used in these workstations. The fields of professional audio and multimedia production are converging, resulting in a need for audio engineers to learn about computer networks, file transfer,MIDI and digital video. Those involved in the computer industry need a greater understanding of high quality audio.

CODE B341 **£19.99**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

Exclusive! SOS Binders

£5.95 each *or*
Special Offer! 2 for only £10*

These high quality, red leather-effect binders will help you organise your copies of the magazine, providing an ideal reference source whilst keeping your favourite hi-tech mags in tip-top condition. Each binder holds 6 current sized *Sound On Sound* magazines but will take up to 12 slimmer editions from earlier years.

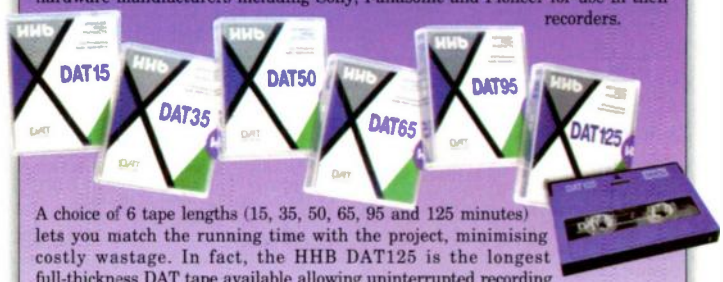
** Postage must be added to each order (see below).*

SINGLE BINDER: CODE BIN01 **£5.95**
Postage: UK £1.50 Europe £3.00 ROW £4.50

2 BINDER OFFER: CODE BIN02 **£10.00**
Postage: UK £3.00 Europe £6.00 ROW £9.00

HHB DAT TAPES

If you value the security of your master recordings, there's really only one DAT tape you should use. In independent testing of 7 leading DAT tape brands, HHB DAT Tape emerged a clear winner with consistently low block error rates and superior long term security. HHB DAT Tape is recommended by most leading hardware manufacturers including Sony, Panasonic and Pioneer for use in their recorders.



A choice of 6 tape lengths (15, 35, 50, 65, 95 and 125 minutes) lets you match the running time with the project, minimising costly wastage. In fact, the HHB DAT125 is the longest full-thickness DAT tape available allowing uninterrupted recording of 4 hours and 10 minutes in Long Play mode. HHB DAT Tape is packaged in reusable, shatterproof polypropylene cases. A 'freshness seal' is used instead of the environmentally damaging shrink-wrapping process, and the J-card has been designed in consultation with leading audio facilities to ensure that it is appropriate across a range of professional audio applications. Furthermore, the tape label sheets conform to official APRS / SPARS standards.

CODE	DAT15	15 mins	£4.99	CODE	DAT65	65 mins	£6.87
CODE	DAT35	35 mins	£5.52	CODE	DAT95	95 mins	£8.22
CODE	DAT50	50 mins	£6.05	CODE	DAT125	125 mins	£9.10

Please add Postage (per order): UK £1.00, Europe £2.75, R.O.W. £4.00

GOOD VIBRATIONS

by Mark Cunningham

Good Vibrations — A History of Record Production features a foreward by BRIT award-winning Best Producer of 1996, Brian Eno. The book chronicles the development of recording techniques and music technology, from the invention of sound-on-sound (multitrack) tape recording in 1949, to the current dramatic advances in digital technology. Also highlights the changing role of the producer and engineer, with quotes from George Martin, Brian Wilson, Tony Visconti Trevor Horn, Hugh Padgham and Pete Waterman. Recordings discussed in detail include The Beach Boys' *Pet Sounds*, The Beatles' *Sgt Pepper's Lonely Hearts Club Band*, Pink Floyd's *Dark Side Of The Moon*, Queen's *Bohemian Rhapsody*, David Bowie's *Heroes*, and U2's *Zooropa* Includes around 100 photos and illustrations, many previously unseen, plus extensive reference section.

CODE B331 **£9.99**
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

PROFESSIONAL COMPOSING

CODE B298 **£3.95**
Postage: UK £1.95 Europe £5.50 R.O.W. £8.50

STUDIO MUSICIAN'S JARGONBUSTER

by Godric Wilkie

If the terminology of musical technology and recording leaves you gasping, then this is the book for you! With clear explanations of 1500 terms and concepts, amidst illustrative graphics, the whole work is extensively cross-referenced, and worth its weight in gold.

CODE B343 **£12.95**
Postage: UK £2.95, Europe £6.95, R.O.W £9.50

MUSIC & NEW TECHNOLOGY

by Gabriel Jacobs & Panicos Georghiades

Forward by Vangelis. A thorough guide to creating music with today's music technology. Covers music theory, MIDI and electronics principles, computers, what gear to use in your MIDI studio, and most modern MIDI production techniques. Ideal for beginners and advanced readers alike.

code B156 **£14.95**
Postage: UK £2.50, Europe £5.50, R.O.W £8.50

THE SECRETS OF MUSICAL CONFIDENCE

By Andrew Evans

Written by a musician and psychologist, this is claimed to be a first for musicians: a book aimed at maximising performance potential and increasing confidence. A series of questionnaires and exercises allow you to analyse your abilities and needs and allow you to deal with stress, creativity and career management, amongst other topics.

CODE B240 **£7.99**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

HARD DISK RECORDING FOR MUSICIANS

by David Miles Huber

More of a digital recording overview, this book looks at digital audio in all its forms. Huber discusses the equipment, the techniques and processes of digital audio. Computer-based sound editing, digital audio workstations, digital signal processing techniques, sampling and real-world applications in music, film, video and broadcast environments are covered plus multimedia. The text is designed to be understood by newcomers, while delivering information of value to professionals. *182 pages.*

CODE B307 **£15.95**
Postage. UK £3.95, Europe £5.50, R.O.W. £8.50

PLEASE REMEMBER: POSTAGE IS PAYABLE ON ALL MERCHANDISE

SUBSCRIBE AND GET 10% OFF ALL BOOKS

CREATIVE RECORDING

CREATIVE RECORDING EFFECTS & PROCESSORS

SOLD OUT

Code B315 £9.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

CREATIVE RECORDING TWO MICROPHONES & RECORDING TECHNIQUES

by Paul White
A complete guide to understanding and using microphones in a recording environment. In plain English, it explains how the different types of microphone work, discusses the advantages of the various different types, and shows how they can be used to get the sound you want onto tape.

Code B316 £9.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

CREATIVE RECORDING THREE ACOUSTICS, SOUNDPROOFING & MONITORING

By Paul White
Soundproofing, Acoustics and Monitoring is designed to take the mystery out of studio design, whether you run a bedroom studio or a commercial recording facility. In plain English, it explains how soundproofing works: how you can change your room acoustics to give the optimum monitoring environment and how to choose and use your monitor system.

Code B317 £9.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

RECORDING

PRACTICAL RECORDING TECHNIQUES NEW

by Bruce & Jenny Bartlett
Another recording textbook that offers a mine of information in one volume. Mic placement, recording spoken word, working with MIDI and digital audio are covered, and there are even sections on location recording and recording classical music

CODE B350 £22.95
Postage UK £3.50 Europe £5.50, R.O.W. £8.50

RECORDING TECHNIQUES FOR SMALL STUDIOS

by David Mellor
This well written, user-friendly book is designed to offer accessible and helpful tips on how to get the most out of the equipment in your studio. Chapters cover: mic placement; musical arranging for recording; recording; the mixer, preparing for and running a session, recording drums, recording vocals; integrating MIDI, using effects; signal processing, location recording; and digital recording. The book is rounded off with an "any questions" section, a glossary and a list of recording studios in the UK. As you would expect from a book based on an SOS series, this is a *must have!*

TEMPORARILY OUT OF STOCK

CODE B198 £10.95
Postage UK £2.50, Europe £5.50 R.O.W. £8.50

HOT TIPS FOR THE HOME RECORDING STUDIO

by Hank Linderman
Learn how to lay down music the way you want it to sound, with advice for getting the best from your mixer, multitrack, compressor etc. Discover tricks and what traps to avoid, unlock the mysteries of timecode, prevent noise problems. Packed with sound advice

CODE B326 £12.99
Postage UK £1.95 Europe £5.50, R.O.W. £8.50

HOME RECORDING MADE EASY NEW

by Paul White
All you need to know to make your own recordings is presented here in clear terms with the minimum of jargon. Using the information in this book, you'll be able to make your own professional sounding recordings, no matter how tight your budget.

CODE B352 £11.95
Postage: UK £1.95, Europe £3.95 R.O.W. £3.50

PRACTICAL STUDIO TECHNIQUES

by Tom Misner
This book and audio CD package comes from the School of Audio Engineering's Tom Misner. It's an excellent source of basic recording facts and figures, and if you want concrete examples of the subjects discussed, then listen to the free mixdown demonstration CD.

CODE B301 £15.00
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

THE MUSICIANS GUIDE TO HOME RECORDING

by Peter Mclan & Larry Wichman
(Revised and Updated)
This is the book every serious songwriter, musician, and home recordist needs, with a new chapter on MIDI and the fastest digital recording technologies. A problem-solving guide as well as an instructional text, it is designed to explain in simple terms how professional recording techniques can be applied at home

CODE B314 £16.95
Postage: UK £4.95, Europe £7.50, R.O.W. £14.50

MACKIE COMPACT MIXERS

by Rudy Trubitt
Journey through the design and features of mixers so you can maximise the use of this essential and very flexible audio component. Using Mackie's wildly popular MS1202 and CR1604 mixing desks as a foundation, the book explains general concepts as well as model specific operating tips. Topics include: mixing basics, real world applications, hooking things up, mixing tips, block diagrams and a glossary

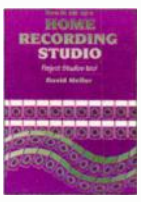
CODE B330 £14.95
Postage: UK £2.95 Europe £6.95, R.O.W. £9.50

TIPS FOR RECORDING MUSICIANS

by John Harris
Today's studio equipment is affordable but sophisticated, and it takes a lot of know-how to use all this technology effectively. This book details the equipment you need - mics, effects, tape machines, etc. It has separate sections on recording of vocals, electric guitar, drums and acoustic instruments, as well as the use of MIDI in the recording process. You will learn how to get the best from delay and reverb, as well as effects like compression and gating. There are some useful tips on using the mixing desk and post production work. All in all it's a handy guide that will improve your recording techniques at a stroke

CODE B309 £8.50
Postage: UK £1.95, Europe £3.95, R.O.W. £3.50

HOW TO SET UP A HOME RECORDING STUDIO



By David Mellor
If you are thinking of setting up a home studio, a project studio or a DJ studio, this book is the place to start. It takes a highly practical 'nuts and bolts' type of approach to help you produce an efficient and productive studio. It covers soundproofing, keeping the sound in and the noise out, acoustics, studio layout, and studio equipment, and advice on the kit you are likely to need. The book ends with an invaluable questions and answers section, a glossary of terms and a list of contacts

CODE B116 £8.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

SAMPLERS

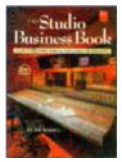
WHAT'S A SAMPLER?

By Freff
Ideal starter book for sampling novices. Whether you are serious about sampling or merely curious, this book is for you.

CODE B104 £4.50
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

MUSIC BUSINESS

THE STUDIO BUSINESS BOOK



by Jim Mandell NEW
This is a rarity: a book dealing solely with the business side of the recording industry. No mic placement or working with MIDI, but simply good sound advice on running your studio as a going concern. While the bias is definitely American, much of the advice and tips can easily be translated into useable techniques on this side of the Atlantic

CODE B351 £24.95
Postage: UK £3.50, Europe £5.50, R.O.W. £8.50

MUSIC PUBLISHING

by Randy Poe
This book demystifies music publishing, explaining what it's all about and what it means to a songwriter. Learn what your publishing options are, from a single song contract to a staff writer to a self publishing operation. By the time you have finished this book you will never make an uninformed decision about publishing your songs that you will later regret

CODE B328 £12.95
Postage: UK £2.95, Europe £6.95, R.O.W. £9.50

WRITING BETTER LYRICS

by Pat Pattison
In depth approach to lyric writing examines 17 songs to discover what makes them so effective. Learn a warm up exercise that will revolutionise your songwriting imagery, how to use a rhyming dictionary to unlock fresh, unexpected rhymes, avoid cliches and create imaginative metaphors and similes

CODE B325 £12.99
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

SHOWCASE INTERNATIONAL MUSIC BOOK 1997

"The Bible of the music industry" all the contacts you need in one handy volume. 544 pages, thoroughly researched and totally updated. This is the book the professionals within the industry use to find studios, producers, manufacturers, record companies, publishers, management, promoters, venues, tour support services, etc UK, plus sections of Europe, Middle East, USA/Canada, Australia, South Africa. Accurate, comprehensive information in a well thought out and easy to use format. Highly recommended

CODE B192 £35.00
Postage: UK £3.50, Europe £6.95, R.O.W. £9.50

SONGWRITERS MARKET 1997

To get your songs published and produced, you must know who the music industry's players are and how to approach them. This directory identifies those seeking the work of songwriters. Lists 2500 lyric and music markets, clubs, associations, contests, workshops and songwriters publications. Includes 'The A & R Roundtable', where pros discuss their role in a songwriter's career, business side of songwriting, music industry trend report, and interviews with music industry professionals

CODE B324 £12.99
Postage: UK £3.50, Europe £6.95, R.O.W. £9.50

CAN YOU SING A HIGH "C" WITHOUT STRAINING

by Thomas Appell
This book features extensive coverage of the vocal cords and explains clearly how to sing high notes without going into falsetto, and without straining. You'll learn how to extend the range of your voice, and why most singers either strain or "break" into falsetto when attempting to sing above their normal range. It comes with 2 CD's jam packed with over 2 hours of vocal examples and exercises that you can practice with. Many singers have increased their range by several notes after the first week of practice. If you can't sing high notes without straining, but would like to know how, then this book is for you. 122 pages

CODE B319 £24.95
Postage: UK £3.50, Europe £5.50, R.O.W. £8.50

SUCCESSFUL LYRIC WRITING

by Sheila Davis
Superb guide to the art of writing words to music. Learn how to create a memorable song title, choose the best music form for each idea, apply writing principles and avoid common pitfalls, write with both sides of your brain, find your voice. Includes songwriter's bibliography and lists over 60 songwriting organisations to help you connect with your chosen marketplace

CODE B327 £12.95
Postage: UK £3.95, Europe £6.95, R.O.W. £9.50

THE COMPOSER'S GUIDE TO MUSIC PUBLISHING (2nd Edition)

Written & compiled by Annie Gunning
This book has been produced by the Association of Professional Composers and examines the business of musical copyright and music publishing from the composer's point of view. It aims to educate composers of all kinds of music in the operation of the music publishing business to help them obtain, negotiate and benefit from publishing agreements and avoid expensive mistakes. Apart from publishing, the book also covers copyright legislation, performing and mechanical rights, the royalty administration societies, music in film, broadcasting, theatre and ballet and commissioning agreements. There is also advice for composers setting up their own publishing companies. An exhaustive and useful book.

CODE B297 £18.95
Postage: UK £3.95 Europe £6.95 R.O.W. £9.50

THE WHITE BOOK INTERNATIONAL PRODUCTION DIRECTORY 1997

This is the latest edition of the essential source of contacts for artists, performers, venues, services and facilities associated with music, concerts, shows, festivals, film, TV, video, conferences, exhibitions and corporate hospitality: there's even a comprehensive international section. The layout is logical and an index makes fact finding an easy task: altogether an indispensable 864 pages. The new edition once again comes with a complimentary copy of The Little White Book, which distils the contents of the larger volume to a pocket sized list of names and phone numbers

CODE B259 £55.00
Postage: UK £5.50, Europe £8.50, R.O.W. £16.95

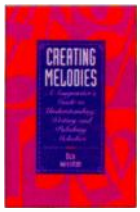
SONGWRITER'S WORKSHOP

Edited by Harvey Rachlin
If you want to work systematically at improving your songwriting skills, then try this book. It's divided into four individual 'lessons', each of which is backed up by audio material on cassette. This allows you to listen in the car or walk around with your personal stereo and still absorb useful information. The four sections are: On Songwriting by Janis Ian (yes, *the* Janis Ian); Making Demos by John Banita, Understanding MIDI by James Becher; and The Art of Pitching Songs by Teri Muench (ex A&R director with RCA and publisher). Also included is an intro, a quick and breezy glossary and an index. Includes two cassettes

CODE B260 £15.95
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

SUBSCRIBE AND GET 10% OFF ALL BOOKS | **OVERNIGHT DELIVERY OPTION: £6.50! See Order Form For Details**

CREATING MELODIES



by Dick Weissman
Learn how to create memorable melodies, from love ballads to film scores and jingles. Using lots of examples of popular songs and styles by top-name musicians, Weissman covers the full range of melody writing. Learn how to marry music to lyrics, relate rhythm to the message of your song, read and write musical notation, write instrumentals for films, TV, commercials and theatre, and put together a demo tape.

CODE B322 **£12.99**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

THE SONGWRITER'S GUIDE TO COLLABORATION

by Walter Carter
This book describes what to expect when entering into a co-writing situation and how to make the arrangement work. Covers the pros and cons, how to find a partner, publishing your songs, who writes what, money matters, sharing success and rejection, growing together or apart plus co producing and pitching.

CODE B323 **£8.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

THE SONGWRITER'S MARKET GUIDE TO SONG & DEMO SUBMISSION FORMATS

From the Editors of Songwriter's Market
If you've got the songs and you've got the contacts, this book will help you to choose a format that will get your demo heard as well as overall packaging and presentation and dealing professionally with publishers, A&R reps and other industry people. Plenty of example documents (lyric sheets and letters) are given, and the book is nicely rounded off with a glossary and index. Hardback.

CODE B258 **£12.95**
Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

BEGINNING SONGWRITER'S ANSWER BOOK

by Paul Zollo
If you're just starting out as a songwriter or haven't progressed very far, perhaps you have questions about the art and business of songwriting that you can't find answers for. Chances are, they're covered in this book. Over 200 of the questions songwriters most often ask are answered in this book. There are 11 chapters, covering subjects such as lyrics, theory, song structure, collaboration, demos, publishing and the music business. Some answers - such as "What makes a professional-sounding demo?" are actually mini articles - and an index allows you to target subjects without wading through the text. A friendly, informative read.

CODE B253 **£10.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

ALL YOU NEED TO KNOW ABOUT THE MUSIC BUSINESS

by Donald S Passman
This book is a must: the author manages a portfolio of high profile clients and teaches music business law at the University of Southern California, and has produced a clear overview of the music business. He starts at the beginning of your career, with advice on choosing a manager, lawyer and agent, and moves through getting a record deal, songwriting and music publishing and finishes with details of copyright, mechanical royalties, songwriter deals, films and more. An exhaustive and entertaining read. 415 Pages.

CODE B302 **£19.99**
Postage: UK £3.50, Europe £5.50, R.O.W. £8.50

88 SONGWRITING WRONGS & HOW TO RIGHT THEM

by Pat & Pete Luboff
This is a real workbook for songwriters, dealing with both the craft and art of songwriting. Song structure, rewriting, matching lyrics to music, collaboration, making the right demo, pitching the final result, and business matters.

CODE B254 **£11.95**
Postage: UK £2.95, Europe £5.50, R.O.W. £8.50

NETWORKING IN THE MUSIC BUSINESS

by Dan Kimpel
Think of this book as a popular psychology course for musicians. If you feel you could benefit from developing a positive attitude to getting ahead in your area of the music business, then *Networking* is for you. There's nothing like it for good, sensible advice: it's often not enough to have talent. To be successful, you'll need to persevere, have good "people skills", and exercise good networking skills. Success depends on what you know, who you know, and perhaps most importantly, who knows you. An essential book, and a snip at £11.95. Hardback.

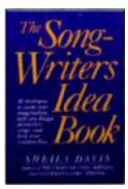
CODE B251 **£11.95**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

THE MUSICIAN'S GUIDE TO READING & WRITING MUSIC

It's an entertaining but practical introduction, well, to reading and writing music. This is as friendly as it comes. Learning to read and write music isn't easy, but at least the process is lightened up with considerable doses of wit.

CODE B224 **£8.99**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

SONGWRITERS IDEA BOOK



by Sheila Davis
If you want a textbook, this is it: 250 pages of serious, intelligent insight into songwriting. Loads of good advice and a friendly tone make this a useful read to anyone, whether beginner or seasoned pro. The focus is firmly on lyrics rather than music, and the prominent references to poetry terminology shouldn't really be a surprise. Use Davis' 40 strategies and you to could soon be "designing distinctive songs". Hardback.

Code B250 **£9.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

SINGING FOR A LIVING

by Marta Woodhull
The title says it all. If you're already a singer, this book gives you everything you need to know in order to exploit your talent further, looking after your voice and voice exercises, business advice and marketing and audience interaction are all covered in this straightforward book.

CODE B252 **£12.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

MIDI INFORMATION

WHAT'S MIDI

NEW

by Jon F Eiche
This slim 62-page book introduces MIDI in very simple terms. If you're a total beginner, then this could be an essential purchase.

CODE B347 **£3.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

PRACTICAL MIDI HANDBOOK (3rd Edition)

by R A Penfold
This book is completely updated, and features a section on General MIDI. It provides a "straightforward, non-mathematical introduction to MIDI", and features a full glossary of MIDI terms.

CODE B273 **£9.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

MIDI SURVIVAL GUIDE

by Vic Lennard
Whether you're a beginner or a seasoned pro, the 'MIDI Survival Guide' shows you the way. No maths, no MIDI theory - just practical advice on starting up, setting up and ending up with a working MIDI system. Contains over 40 cabling diagrams, and how to: connect synths, sound modules, sequencers, drum machines and multitracks; how to budget and buy secondhand; using switch, thru and merger boxes; transfer songs between different sequencers, get the best out of general MIDI, and understand MIDI implementation charts.

CODE B196 **£7.95**
Postage: UK £1.95, Europe £3.95, R.O.W. £5.50

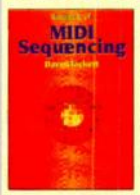
THE MIDI COMPANION

NEW

by Jeffrey Rona
A recently expanded edition of a popular book. The new edition contains a comprehensive rundown of all areas of MIDI, with helpful explanations of System Exclusive, using computers, troubleshooting and new explanations of the General MIDI standard.

CODE B348 **£7.95**
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

HANDBOOK OF MIDI SEQUENCING



by Dave Clackett
Hands On MIDI Software's Dave Clackett has boiled his knowledge into a collection of tips for getting the best out of hardware or software sequencers. Dave covers the hardware and software you need to get sequencing, and introduces the basics of sequencing and notation, with particular emphasis placed on using General MIDI/GX/XG sound sources. Recommended.

CODE B333 **£13.95**
Postage: UK £2.50, Europe £4.95, R.O.W. £7.50

THE MIDI FILES

By Rob Young
This book comes from Prentice Hall and aims to help you get the most out of your MIDI system, by providing loads of tips on programming realistic instrument and rhythm parts, using sequencers to create advanced effects. Basic MIDI concepts are covered, along with advice on setting up a MIDI based home studio. More advanced discussions cover specific types of MIDI messages and what you can achieve with them. All the techniques in the book are illustrated on a supplied floppy disk.

CODE B334 **£19.95**
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

MAKING THE MOST OF MIDI

By Paul Overaa
This is a MIDI book unlike any other.
It explains the fundamentals of MIDI and MIDI sequencing for the beginner, and it goes much further, dealing with issues that will be of help to more established users. Advice on MIDI fault finding, help for musicians using sequencers with live bands, MIDI messages and MIDI files, plus programming material. So if you are a keen first time user or a MIDI veteran, there will be something in this book to interest you.

CODE B321 **£14.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

MIDI FOR THE PROFESSIONAL

by Paul D Lehrman and Tim Tully
Co-written by SOS contributor Paul D Lehrman, this substantial, exhaustive work covers pretty well any aspect of MIDI that you could think of. As an overview of what MIDI is and does in 1994, this 239 page book couldn't be better.

CODE B227 **£12.95**
Postage: UK £4.50, Europe £7.50, R.O.W. £14.50

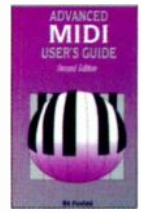
MUSIC TECHNOLOGY REFERENCE BOOK

by Peter Buick & Vic Lennard
Written by Peter Buick and Vic Lennard (author of SOS's Atari Notes column), this book offers information at your fingertips [illegible] indispensable reference [illegible] musician or sound professional [illegible] multimedia, broadcast, live, video, [illegible] post production [illegible] industries. It includes comprehensive MIDI spec, General MIDI, MTC, MMC, SysEx information. It also includes charts, checklists, useful hints, tips, and ideas, plus a glossary, list of contacts and a comprehensive indexed, it is also organised into convenient sections. 150 Pages.

CODE B305 **£12.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

TEMPORARILY OUT OF STOCK

ADVANCED MIDI USER'S GUIDE (2nd Edition)



by R A Penfold
Most MIDI users do no more than scratch the surface of MIDI's potentialities. But dare to dig a bit deeper and you'll find a whole new world of creative possibilities. With the Advanced MIDI User's Guide, you'll learn how to optimise your MIDI system to get the best results from your particular setup, and you'll find out how to use gadgets like switchers and mergers to enhance your system. If you want to incorporate a multitrack tape recorder into your MIDI system there's a section on synchronisers, SMPTE and MIDI time code, and retro freaks will learn how to hook up that dusty old analogue synth to their MIDI systems.

CODE B152 **£10.95**
Postage: UK £1.95, Europe £3.95, R.O.W. £5.50

A BEGINNERS GUIDE TO MIDI

by RA Penfold
The title says it all, all aspects of MIDI are explained, and many common beginner's problems are discussed.

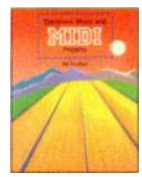
CODE B287 **£4.95**
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

ELECTRONIC PROJECTS

HIGH POWER AUDIO AMPLIFIER CONSTRUCTION

CODE B282 **£3.95**
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

ELECTRONIC MUSIC AND MIDI PROJECTS



by RA Penfold
Want a MIDI THRU box, patchbay or switcher? Well they're all here. And you don't need a degree in electronics either. All the projects are explained in detail, with full instructions on assembly. So if your into MIDI and you want to expand your system without taking out a second mortgage, fear not. Here's the book to help you build up your MIDI system without laying out thousands on hardware.

CODE B203 **£9.95**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

MIDI PROJECTS

CODE B278 **£2.95**
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

PRACTICAL ELECTRONIC MUSIC EFFECTS UNITS

CODE B290 **£4.95**
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

DIGITAL AUDIO PROJECTS

CODE B279 **£2.95**
Postage: UK £1.50, Europe £3.95, R.O.W. £4.50

PRACTICAL ELECTRONIC MUSIC PROJECTS

CODE B289 **£4.95**
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

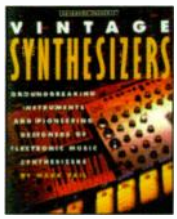
SYNTHESIZERS

KEYFAX 5

by Julian Colbeck
The latest instalment in the intrepid Keyfax series offers potted specifications and concise mini-overviews of digital pianos, home keyboards, General MIDI modules, stage organs and computer sound cards. Look out for company backgrounders, contact details and cross-references to earlier Keyfaxes.

CODE B231 **£12.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

VINTAGE SYNTHESIZERS



By Mark Vail
This well-illustrated, 300 page book covers synth history, interviews with designers and overviews of important instruments. Mark Vail's book could be the most entertaining and useful synth book yet – check out the definitive history of the Minimoog, complete with pre-production designers' sketches. While not strictly a buyers' guide, there is a comprehensive section to sourcing, valuing, upgrading and servicing classic instruments.

CODE B199 **ONLY £16.95**
Postage: UK £3.50, Europe £6.95, R.O.W. £9.50

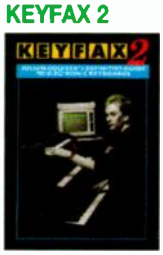
THE A-Z OF ANALOGUE SYNTHS PART ONE: A-M / PART TWO: N-Z

by Peter Forrest
Complete rundown of all the major analogue synths and keyboards ever made, spread across two books. Each is a testament to the massive amount of research and effort put in by the author. Featuring pocket company histories and detailed data on the instruments produced, each book provides a comprehensive overview of the qualities of various instruments; charts and tables assess second hand values and maintenance levels necessary to keep a given instrument playable as well as such intangibles as sound quality, collectability and user interface. Includes colour photos of many classic instruments.

PART ONE: A-M CODE B294 £14.00
Postage: UK £1.95 Europe £5.50 R.O.W. £8.50

PART TWO: N-Z CODE B338 £16.00
Postage: UK £1.95 Europe £5.50 R.O.W. £8.50

KEYFAX 2



by Julian Colbeck
1989 version of Keyfax provides individual summaries and specifications of the last of the great mono synths, digital pianos, and classic polysynths like the Roland JX10 and Prophet VS - forerunner of the SY22 and Wave Station. Early Keyboard and rack-mount samplers are covered in this indispensable guide. Still a great buy.

CODE B096 **ONLY £5.99**
Postage: UK £2.50 Europe £5.50, R.O.W. £8.50

THE MUSEUM OF SYNTHESIZER TECHNOLOGY

by Martin J Newcomb
If you liked our feature on the opening of the Museum of Synthesizer Technology in October, but haven't got the time or the cash to visit in person, then the next best thing has to be the museum's guide book. This 118 book is printed on glossy paper and contains full-colour pictures of a large selection of exhibits from the museum, together with some descriptive text and company backgrounders. The text reads a little like a fanzine, but the hardcore synth fanatic will want this book for the pictures. In these pages you will glimpse instruments that you are unlikely ever to experience in the flesh: an exceedingly large Roland System 100 modular set-up, an EMS Synthi 100, an ARP 2500, a large Emu modular and what must be the comprehensive collection of Moog equipment anywhere.

CODE B291 **£12.95**
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

DRUM MACHINES

DRUM MACHINE RHYTHM DICTIONARY

By Sandy Feldstein.
For use with Roland drum machines or any grid-based pattern system. First 75 pages on programming huge range of rhythms in rock, latin, jazz and funk styles. Remainder analyses styles and patterns of world's top drummers - Phil Collins, Billy Cobham, Steve Gadd, Stewart Copeland, etc. Highly recommended.

CODE B110 **£16.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

RHYTHMICAL GROOVES & PATTERNS

By Siegfried Hoffman.
Looks at how drummers compose rhythm patterns to add emotion, swing or groove. Contains examples for you to programme into your drum machine or sequencer.

CODE B115 **£11.50**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

260 DRUM MACHINE PATTERNS

By Rene-Pierre Bardet.
Even more drum pattern styles (paso doble, charleston, etc)

CODE B019 **£7.95**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

DRUM MACHINE PATTERNS

By Rene-Pierre Bardet.
200 drum patterns and breaks presented in one-measure grid notation. Funk, R'n'B, ballad, pop, reggae, afro-cuban and many other styles.

CODE B018 **£7.95**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

PLAYING TECHNIQUES

SOLID GROOVES

By Dieter Peteret & Herb Quick
128 pages dealing with both bass and drums, the 'heart' of the pop group, together. Although written primarily for drummers and bass players, anyone interested in understanding rhythmical music in popular styles will find this book invaluable.

CODE B172 **£11.50**
Postage: UK £2.50, Europe £4.95, R.O.W. £7.50

CLASSICS IN SEQUENCE

by William Lloyd & Paul Terry
Takes concepts behind Music In Sequence and applies them to all-time favourite classical music scores. Authors show how to make fresh, exciting interpretations of classic scores. Info on reverb and effects, interpreting scores, editing synth voices. Highly creative – an ideal workbook for the music classroom. Covers Medieval, Renaissance dance music, Bach's Toccata in D minor; Vivaldi, Purcell, Handel; opera excerpts from Rossini, Verdi, Borodin; Mozart, Schubert, Tchaikovsky, music from Carmina Burana; Debussy, Satie, Steve Reich's Piano Phase and more. Highly recommended.

CODE B193 **£12.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

MUSIC IN SEQUENCE

by William Lloyd & Paul Terry
Still one of our best-selling books. Easy to follow, practical guide to making real use of your sequencer, written by people who really understand music and how to create it using today's technology. This brilliant, unique book carries the SOS seal of approval

CODE B155 **£12.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

1000 KEYBOARD TIPS

by J Dreksler & Q Harle
The hi-tech musician's guide to the basics of music, scales, chords and harmonies. 256 pages covering chord relationships, improvisation, suggested drum machine patterns, plus comprehensive chord table. Too good to miss!

CODE B113 **£13.95**
Postage: UK £3.50, Europe £6.95, R.O.W. £9.50

ROCK IN SEQUENCE

by William Lloyd & Paul Terry
The latest book from the authors of Music In Sequence and Classics In Sequence is now available: Rock In Sequence offers detailed scores of 17 rock and pop hits from the '50s to the present day, alongside a collection of helpful sequencing tips. Songs are included from the likes of Eurythmics, Blur, The Beatles, Led Zeppelin, Abba and others. 112 pages.

CODE B320 **£14.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

COMPUTER & MUSIC

THE DESKTOP MUSCIAN NEW

By David M Rubin
A comprehensive guide to MIDI and audio on PC and Macintosh computers. Purchasers are provided with a CD-ROM full of MIDI software demos to get them going, and the text – over 400 pages of it – covers all aspects of music and computers, from first concepts to advanced arrangement techniques.

CODE B335 **£27.95**
Postage: UK £3.95, Europe £7.50, R.O.W. £14.50

COMPUTERS AND MUSIC

By P A Penfold
2nd edition. Covers hardware and software applications. Excellent glossary of jargon, and now bang up to date

CODE B098 **£8.95**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

MULTIMEDIA ON THE PC

By Ian R Sinclair
If you want to know what multimedia is and what it can offer you, then this is the book for you. Much of the information is general enough for everybody, but as the title suggests, the book is aimed at PC users. The book explains the installation and use of a CD ROM drive and a sound card and covers all key concepts behind multimedia. As an added incentive, if you buy this book, you can send away for a free copy of *Picturebook*, a multimedia authoring package.

CODE B272 **£11.95**
Postage: UK £2.50, Europe £4.95, R.O.W. £7.50

PC MUSIC HANDBOOK 2nd Edition

by Brian Heywood & Roger Evan
This book will show you how to turn your PC into a creative music making machine. It explains how you can create very sophisticated music on your PC by running sequencing software, how to create your own sounds with a soundcard, how to use your PC as a sound libranan, or a sample editor, or even use it as a hard disk recorder or a sound sampler. All these things are possible with today's sophisticated PC.
The use of sound in multimedia applications is also covered, and there is a chapter on PC hardware with advice on which type of PC is best for your particular needs
There's advice too on getting connected to the Internet, where you can contact other PC music aficionados world wide!

CODE B332 **£10.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

THE COMPLETE SOUND BLASTER

by Howard Massey
Explains in simple, non-technical terms, how to install the Sound Blaster hardware and software for use in both the DOS and Windows environments, the two sound processes used by the card, MIDI, the Sound Blaster's MIDI capabilites, and the many different applications for the Sound Blaster, including the various software utilities provided with the card, and many of the third party support products that enhance its operation.

CODE B313 **£10.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

SEQUENCER SECRETS

by Ian Waugh
Ian's book aims to "go beyond the manual" in telling you how to get the best from your sequencer. The book features 29 hands-on sequencing projects and is suitable for use with all software sequencers. The book hopes to help you optimise your MIDI system and use your sequencer to create all sorts of useful effects. A troubleshooting section helps you track down stuck notes, double notes and so on.

CODE B299 **£7.95**
Postage: UK £1.95, Europe £4.50, R.O.W. £6.50

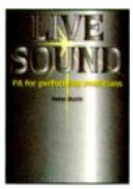
MUSICAL APPLICATIONS OF THE ATARI ST's

by R A Penfold
Includes a general introduction to MIDI, a handful of MIDI add-on circuits (Thru box, MIDI switcher and so on), plus a collection of programs, in Fast BASIC, that allows you to use the ST's internal sound generator and create little MIDI applications.

CODE B280 **£5.95**
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

LIVE SOUND

LIVE SOUND NEW



Peter Buick has produced a book written for live sound engineers and gigging musicians with practical applications and real life scenarios very much in mind. The whole ambit of live sound engineering is addressed, including the equipment used and how to get the most out of it, the problems you will confront and how to fix them, and various other related subjects such as safety, feedback, as well as automation and MIDI in the live sound field.

CODE B337 **£14.95**
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

PUBLIC ADDRESS LOUDSPEAKER SYSTEMS

by V Capel
All aspects of PA speaker systems are covered in this book, including low-impedence matching, 100V systems, transmission lines and how to install inductive hearing aid loops. At the heart of the book is the Line-Source Ceiling Array, a system that is claimed to improve clarity, even coverage and reduce feedback. Full step-by-step construction and installation details are given.

CODE B283 **£3.95**
Postage: UK £1.50, Europe £5.50, R.O.W. £8.50

SOUND REINFORCEMENT HANDBOOK

by Gary Davis and Ralph Jones
From recording to broadcast, fixed installations to touring, this 400 page reference covers live sound setups, equipment, techniques and jargon.

CODE B105 **£27.95**
Postage: UK £4.50, Europe £7.50, R.O.W. £14.50

LOUDSPEAKERS FOR MUSICIANS

CODE B284 **£3.95**
Postage: UK £1.50, Europe £3.95, R.O.W. £4.50

INTRO TO LOUDSPEAKER & ENCLOSURE DESIGN

by V Capel
The book provides both useful background to speakers and enclosures in general, plus practical information on crossovers and full details on constructing the so-called 'Kapellmeister' design of speakers.

CODE B281 **£2.95**
Postage: UK £1.50, Europe £6.95, R.O.W. £9.50

LIVE SOUND MIXING

by Duncan R Fry
This is a hands on, friendly introduction to all aspects of mixing live. It hails from Australia, and is an SOS Bookshop exclusive. The author is an experienced live sound engineer and has packed his book with loads of information, diagrams and hints to take you from basic principles through to trouble shooting when things go wrong.

CODE B256 **£19.95**
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

SOS Mail Order 01954 789888 SOS Mail Order 01954 789895

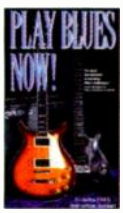
SUBSCRIBE AND GET 10% OFF ALL BOOKS

OVERNIGHT DELIVERY OPTION: £6.50! See Order Form For Details

SOS Videos

GUITARS

PLAY BLUES NOW!



A complete guide to blues guitar playing that shows a variety of blues rhythm and soloing styles — for both beginners and advanced players alike.
Learn the blues style of Eric Clapton, Stevie Ray Vaughan, Peter Green, etc.
The programme not only covers the usual blues shuffles and scales but using 4 complete songs, gives you the resources and techniques to create professional blues parts and solos in a wide variety of blues styles.

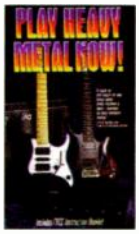
CODE V051 **£12.99**
Running time approx 50 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ACOUSTIC BLUES GUITAR

Presented by Mel Reeves
Whether you can already play fingerstyle guitar, or are simply familiar with basic chords, this programme will show you all of the necessary techniques to play great blues guitar. All of the technical aspects are explained in the clearest possible way before getting down to the real business of learning 5 real blues that are great to listen to and terrific to play.

CODE V058 **12.99**
Running time approx 63 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

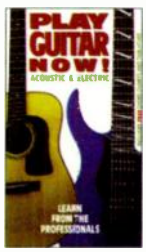
PLAY HEAVY METAL NOW!



A concise, easy to follow video guide to real heavy metal playing for guitarists of all levels.
A guide to hard rock/heavy metal techniques for guitarists of all levels. The programme covers RHYTHM, SOLOING, and TECHNIQUE. All of the techniques, solos, etc are clearly demonstrated
No need to read music. Free booklet contains tab, chord and scale diagrams.

CODE V052 **£12.99**
Running time approx 65 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

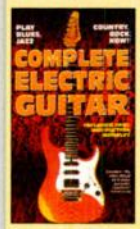
PLAY GUITAR NOW! ACOUSTIC & ELECTRIC



An easy-to-follow video to take you from the basics to a full rock solo. The programme covers TUNING, CHORDS, FINGERSTYLE, 12 BAR BLUES, BARRE CHORDS and ROCK SOLOING for both electric and acoustic guitars. Includes free chord/tab booklet. It is not necessary to be able to read music to learn from this video.

CODE V053 **£12.99**
Running time approx 51 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

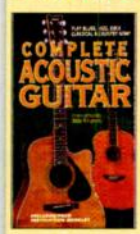
COMPLETE ELECTRIC GUITAR



Presented by Mel Reeves
Learn how to create solos and rhythm parts in any style! The programme covers ROCK 'n' ROLL, BLUES, JAZZ, COUNTRY, ROCK and FUSION and much, much more. Plus the clearest possible guide to chord and scale construction, tonal centres and working out parts for yourself. Includes free construction booklet.

CODE V050 **£12.99**
Running time approx 65 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

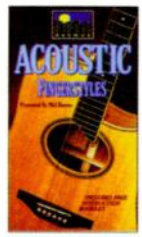
COMPLETE ACOUSTIC GUITAR



Presented by Mel Reeves
Whether you only know a few chords, or are already proficient, this easy-to-follow programme will show you all of the main guitar styles, as performed on the acoustic guitar. As well as learning tips and 'tricks of the trade' Mel Reeves will show you 6 great instruments, step-by-step and take your playing to new heights. Plus, open tuning, the capo, high-strung guitar, reading music and more!
Styles include: Guns 'n' Roses, Bon Jovi, Hendrix Blues, Mississippi Blues, Django Style Jazz, Nuits En Moscow, Classical, Romance, Carter Style, Buffalo Gals and Bottleneck/Slide Style.

CODE V056 **£12.99**
Running time approx 78 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ACOUSTIC FINGERSTYLES



Presented by Mel Reeves
In this video there are 5 major instrumental studies to work through including country, classical and blues. Each style is broken down into small sections allowing you to learn more quickly and efficiently.
Each piece is demanding, but great fun to play. The final section looks at styles and techniques used by players such as R.E.M, The Eagles, Sheryl Crow and Paul Simon, and provides an insight into creating new and interesting fingerstyles of your own.

CODE V059 **12.99**
Running time approx 90 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

PC

WINDOWS 95: WHAT WILL YOU LEARN TODAY?

CODE V065 **£19.99**
Running time: 74 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

EVERYTHING YOU WANTED TO KNOW ABOUT PCs BUT WERE AFRAID TO ASK!

CODE V048 **£19.99**
Running time 91 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

SYNTHESIZERS

KORG PROPHECY VIDEO MANUAL

Written by Phil MacDonald
Korg's new Prophecy Synthesizer now has its own video manual!
The video covers all the major features over 6 sections, with lots of examples of the amazing effects that are available using the 'log' and 'mod' wheels. The video's visual interest is maintained by the extensive use of Chroma Key and multi camera effects. This is a video that is ideal for new owners, and those who want to know more about the Prophecy before they make a purchase.

CODE V049 **£14.99**
Running time: 36 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND GR-1 GUITAR SYNTH

CODE V014 **ONLY £29.99 for 2 videos**
Total Running time: 4 hours Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND MS-1 VIDEO MANUAL

CODE V047 **£24.99**
Run time: 50 minutes (approx) Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

KORG X3

This video offers an easy way in to this powerful workstation. It starts from absolute basics, including audio connections and volume levels, and the clear and helpful script covers all basic facilities of the X3. The video features a sophisticated use of picture in picture, with the X3's display cut into the main image to show you clearly what Phil is actually doing, and main points are reinforced with on screen text and graphics.
The main section headings are:
• *X3 Audio Connections* • *Getting Around the X3* • *Factory Disk* • *Disk Drive Modes* • *Selecting Sounds* • *Global Modes* • *Sequencer Mode* • *Quick Sound Editing* • *Playing MIDI Files on the X3* • *Using the X3 with an external sequencer*
Note that these are loose headings, with each section also containing information on connected subjects in varying amounts of detail. A lot of ground is covered, and we can recommend the tape to any X3 owner.

CODE V018 **£19.99**
Running time: 55 minutes Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND G800

Presented by Roland UK's product demonstrator Sara Reybould, this video covers every essential feature and function of the Roland G800. Sara provides the user with a wealth of knowledge on this sophisticated instrument, with recourse to many practical examples and close-up shots of the LCD screen. The video was produced in association with Roland USA and Roland UK to ensure that the content is accurate and informative.

CODE V060 **£19.99**
Running Time 92 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND GR09

Presented by Roland UK product demonstrator Nick Cooper, this application based tutorial video for the Roland GR09, produced in association with Roland USA, covers every function completely. Covered topics include; the GK2A Synthesizer Driver, pickup sensitivity, use of the tuner, what a patch consists of, use of the pedals, patch edit 1 & 2 (including layering and detune, chromatic function, reverb & chorus, edit target, pitch shift), the use of external midi devices, saving to an external sequencer & more.

CODE V061 **£19.99**
Running Time 57 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND JV-1080 VIDEO MANUAL

Roland's amazing JV-1080 synthesizer module is covered in detail in this informative video. Presented by Tim Walter the video the video guides you through the basics, and leads you painlessly onto the advanced features. The video even shows you how to fit the expansion boards & gives demonstrations of some of the wonderful sounds they contain. Once again this video has been produced in association with Roland UK & USA to ensure that everything it contains is accurate, and relevant to the new and more experienced users alike.

CODE V046 **£19.99**
Running time: 80 minutes Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

GETTING THE MOST OUT OF THE KORG M1

Written and presented by Julian Colbeck
The Korg M1 is a classic instrument. The range and quality of its sounds has made it one of the most successful synthesizers of all time. But because the M1 is so immediate, it's too easy just to scratch the surface, leaving many of its exciting capabilities undiscovered.
This highly informative video enables M1 owners to unleash the full creative potential of this enormously powerful workstation.
With plenty of musical examples, tips and inside information, the video offers clear, concise explanations of the instruments features and operating procedures, helping you to greatly expand your dexterity and creativity across he whole range of this world-beating instrument.

CODE V002 **£24.95**
Running time: 1 hour 10 minutes Format: VHS

ANALOGUE HEAVEN

Remember our feature on the opening day of the Museum of Synthesizer Technology which we ran back in October 1994? Wish you'd actually been able to attend?
Well, now you can have the next best thing: the museum has released a fascinating 50 minute promo video that features footage shot on the day as well as a lightning tour of the facility. The programme is hosted by SOS contributor Julian Colbeck. The tape opens with synth pioneer Bob Moog making the inaugural speech and officially opening the museum, followed by a nostalgic run through one of his old modular systems. Analogue Heaven makes diverting viewing for anyone interested in vintage synths, represents good value, and offers the perfect companion to the Museum's guide book, also available from the SOS Bookshop.

CODE V026 **£12.95**
Running time: 50 minutes Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

KORG X5 SYNTH

Korg's new X5 synthesizer, reviewed in SOS' January 1995 issue, now has its own video manual. Presented by Tim Walter in an entertaining and lighthearted manner, and explains all basic aspects of Korg's highly affordable instrument in very clear terms. If you're in any way daunted by your new purchase, or want to get a feel for the instument before laying out your cash, this is the video for you.

CODE V027 **£19.99**
Running time 55 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND XP-50

This XP 50 video owners manual is produced by Roland Corporation US and covers all the major features of the instrument in detail. This is an application based video that provides many examples of how your new found knowledge can be applied. Just a few of the 30 separate topic areas covered are: Effects, Choosing Sounds, Loading a Song, Loop Recording, Copying a Track to Pattern, Making an RPS Set, Track Editing, Multitrack Recording, Patch Editing, Creating Splits & Layers in a Patch.

CODE V063 **£24.99**
Running time: 63 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND JV-90 SYNTH

Roland's JV 90 synthesizer gets the treatment in this informative Labyrinth production. Virtually every facet of the JV 90 is covered, from the basic functions to more advanced programming. Chris Allen guides you through the powerful features this instrument has to offer. Produced in association with Roland UK & USA to ensure that everything it contains is accurate, and relevant to new and more experienced users alike.

CODE V044 **£19.99**
Running time 70 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

PLEASE REMEMBER: POSTAGE IS PAYABLE ON ALL MERCHANDISE

SUBSCRIBE AND GET 10% OFF ALL BOOKS

SOS SOS SOS SOS Mail Order 01954 789888 SOS SOS SOS SOS Mail Order 01954 789895

SUBSCRIBE AND GET 10% OFF ALL BOOKS

OVERNIGHT DELIVERY OPTION: £6.50! See Order Form For Details

RECORDING

MACKIE 8•BUS VIDEO MANUAL

Almost 60 minutes of fun-packed, detailed explanation of the various features of Mackie's popular range of 8 buss mixing consoles (16•8, 24•8, 32•8, 24•8) and how best to utilise them. On-screen numbers allow quick searching to desired topics.

CODE V068 £9.95

Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

MACKIE ULTRA MIX VIDEO GUIDE

This highly informative video for the Ultramix automation system, clearly demonstrates how to set up and use Ultramix's many time-saving features to get the best from your system. The cost of this video may be redeemed against the purchase price of an Ultramix system, making the video a good way to try before you buy!

CODE V066 £9.99

Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

START HOME RECORDING NOW!

This is the ideal volume one guide to the use of home recording equipment. From the set up of basic 4-track cassette machines to sub-mixing. Mel Reeves uses straight-forward language to talk to fellow musicians about the methods used to get the sounds in their heads onto tape. Includes free instruction booklet.

CODE V055 £12.99

Running time approx 55 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

KEYBOARDS

YAMAHA PSR6000 KEYBOARD VIDEO MANUAL

Yamaha's PSR6000 is a home keyboard with a difference, and offers many professional features plus excellent sound quality. Tim Walter starts at the beginning and makes the instrument look easy and fun. His enthusiasm is catching, and, yes, the PSR6000 is a very capable instrument. The tape runs to 75 minutes, which makes for excellent value.

CODE V029 £19.99

Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

PLAY KEYBOARDS NOW!

Presented by Mel Reeves

An up-to-date video/booklet that gets to the heart of modern keyboard playing with no need to read music!

All you need to be able to create pop, rock and even jazz chord accompaniments using major, minor, seventh, sus 4th and added 9th chords. Learn arpeggios, random arpeggios, chord 'splitting', crushed tones, boogie blues, inversions and much more.

Free instruction booklet and stickers included.

CODE V054 £12.99

Running time approx 60 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

PLAY KEYBOARDS NOW! MELODIES

Presented by Mel Reeves

This programme will not only teach you note reading, rhythm, rests, ties and how to move up and down the keyboard with ease, but will also teach you 6 complete melodies familiar to lovers of rock, pop and classical music. In addition, there is a further look at improvising, making use of melody and scales combined. Clear computer graphics and the booklet enclosed will mean you won't miss a thing.

CODE V057 12.99

Running time approx 55 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

HOW TO GET THE MOST OUT OF HOME RECORDING

3 TOP CLASS VIDEOS

A superbly presented set of videos which no home recordist should be without. Have you got your set yet?!

LEVEL ONE

This well presented video explains how to set up and operate a simple cassette-based multitrack home studio. It clarifies all the basic terminology and demonstrates the recording of a song from beginning to end, covering how to record guitars, keyboards, vocals and drum machines; which microphones to choose; how to patch in effects units and use them well; what makes a good arrangement; what makes a good mix; plus what to master on to and why. *Full of professional tips and clear examples, this superb video offers the musician with no recording experience a fast route to successful operation of a simple home studio.*

CODE V005 £24.95

Running time: 1 hour 10 minutes
Format: VHS(PAL) HiFi Stereo
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

LEVEL TWO

This is, in our opinion, the best ever guide to the equipment and skills needed to produce high quality results from a home studio. Full of clear examples and graphic information, the video majors on effects and how to use them well. It also covers the do's and don'ts of track bouncing; microphones and mic techniques for different applications; getting the most out of multi effects units; plus an analysis of guitar effects with top session guitarist Milton MacDonald and an enlightening interview with ace producer Alan Parsons. *Writer/ presenter Julian Colbeck packs the programme with professional tips, allowing musicians of all kinds to get the most out of their home studio.*

CODE V006 £24.95

Running time: 1 hour 45 minutes
Format: VHS(PAL) HiFi Stereo
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

LEVEL THREE

This video is packed with information and professional tips on advanced MIDI applications in the home studio, including interfacing with sequencers, which sync code is best for which application and why. Hit producer Martyn Phillips (Erasure, London Beat) discusses modern recording techniques, and top programmer Paul Wilton examines the opportunities and benefits offered by hard disk recording. It offers practical advice on sampling - how to save time and tracks; plus professional tips on advanced arranging and mixing techniques, including spectrum mixing.

CODE V007 £24.95

Running time: 1 hour 30 minutes
Format: VHS(PAL) HiFi Stereo
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

EMAGIC

EMAGIC NOTATOR VIDEO TRAINING MANUAL

This video manual is detailed and helpful, and is presented in a most friendly and approachable manner by session musician Tim Walter, whose tone throughout the video encourages and inspires confidence. If you are new to Notator and are still in awe of its power, this is the video to bring you down to earth. An introduction and 28 tutorials take the user from the absolute basics - including plugging in the dongle - to working with Unitor and SMPTE, and synchronising to video. As well as actual recording of MIDI data and sequencing, comprehensive coverage is given to using the score layout and printing facilities that are so much a part of Notator. Topics covered include; sequencing page, score editing, lyrics and text, graphic arranger mode, hyper edit, the printer page, using the part box.

CODE V012 £19.99

Running time: 2 hours 20 minutes Format: VHS(PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

THE EMAGIC LOGIC TUTORIAL VIDEO

Produced by Emagic themselves, this video once again sees Tim Walter featured on the excellent Notator video in the tutor's chair. There are plans for a series of videos which become ever more detailed and informative, but for now Volume 1 takes you through the first steps of getting the software up and running, and covers virtually all the controls you'll need. This video is valid for all versions of Logic, whether being run on an ST, Mac or PC. Presentation is rather intriguing, with a mobile camera that helps to hold the interest more than the average training video and some interesting graphics that aid comprehension and help to quickly find specific tutorials and bits inside tutorials. Contents as follows:

- Tutorial 1: The Arrange window and basic sequencing
- Tutorial 2: Playback parameters & Toolbox
- Tutorial 3: Controlling MIDI data flow
- Tutorial 4: Manipulating sequence data
- Tutorial 5: Moving around in Logic
- Tutorial 6: Windows and key commands
- Tutorial 7: More sequencing
- Tutorial 8: Score
- Tutorial 9: Looking at the Event List
- Tutorial 10: Editing the Event List
- Tutorial 11: Using the Environment
- Tutorial 12: The best of the rest (HyperEdit, Matrix Editor, Cycle Mode and more).

CODE V023 £29.99

Total running time 70 minutes Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

SEQUENCERS

YAMAHA QY300 VIDEO MANUAL

Complete overview of Yamaha's new QY300 sequencer/sound source. Presented by Joe Ortiz of Heavenly Music, the video offers a hands-on tutorial on what is potentially a very powerful piece of hardware. Starts off with a run-through of QY300 features, followed by a clear, step-by-step tutorial that introduces you to creating your own sequences and styles. As a bonus, the video comes with a free disk loaded with 6 new QY300 styles and 6 demo sequences.

CODE V025 £19.99

Running time 69 minutes Format VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

EFFECTS

KORG AX30G TONEWORKS VIDEO MANUAL

ORDER CODE V028 £19.99

Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND GP100

CODE V062 £19.99

Running Time 45 Minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

CUBASE

STEINBERG CUBASE

This manual is presented by Chris West, Steinberg expert. It's very much a practical, 'get up and running' video, showing the novice user exactly how to install and begin using Cubase, whether they're running the program on an ST, Mac or PC computer — there's even a basic background on using the computers themselves! All of Cubase's controls are shown, explained and demonstrated in depth. Once you're familiar with the basic controls, Chris takes you slowly through recording your first session, followed by overviews of the various edit screens. It's rather like having an expert tutorial that you can run again and again in the comfort of your home, until you can use Cubase like a true pro.

Topics covered include; the main screen, customising names and outputs, copying and pasting between arrangements, MIDI filter, cycle mode recording, the tool box, all edit screens.

CODE V011 £29.99

Run time: 1hour 30 minutes Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

YAMAHA QY20 MUSIC SEQUENCER VIDEO MANUAL

by Tom Robinson

Yamaha's popular QY20 portable sequencer/ sound source is a deceptively simple device to use; if you think you might like some insight into getting that little bit extra out of the device, then look no further. Produced in co-operation with Yamaha, the video features mobile musician Tom Robinson showing you how to get the best from this portable marvel. Tom, who has used the QY20 extensively as a writing tool on the road, says: "I never leave home without it".

CODE V016 £19.99

Running time: 90 minutes Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

BOSS ME-8

Nick Cooper (Roland UK product demonstrator) explains every single feature and function of the ME-8 in detail. The unit is clearly explained in a logical sequence with examples given of how the functions effect the available sounds, a perfect aid to new users of the ME-8 and those who would like to get that little bit more from it. Just some of the main points covered are: What is a Patch?, Selecting a Patch, Copying a Patch, Edit Mode, Using The Effects, Control Effects, The Tempo Function, Manual Mode, and lots more.

CODE V064 £19.99

Running time: 72minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

DRUM MACHINES

BOSS DR-5 DRUM MACHINE

Presented by Nick Cooper (Roland UK Product Specialist) this video covers all the functions of the DR-5 in a clear and concise manner. Produced in association with Roland UK & USA. By using the information gathered from Roland 'helplines', particular attention has been paid to the areas that many users find most difficulty in. This makes it of interest to beginners and experienced users alike. Nick imparts the information with ease and a professional manner, making it enjoyable and entertaining.

CODE V043 £19.99

Running time 57 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND TDE-7K DRUM SYSTEM

CODE V045 £19.99

Running time 65 minutes
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

PLEASE REMEMBER: POSTAGE IS PAYABLE ON ALL MERCHANDISE

SUBSCRIBE AND GET 10% OFF ALL BOOKS

SOS SOS SOS SOS Mail Order 01954 789888 SOS SOS SOS SOS Mail Order 01954 789895

SUBSCRIBE AND GET 10% OFF ALL BOOKS | **OVERNIGHT DELIVERY OPTION: £6.50! See Order Form For Details**

SOS CDs

SYNTHESIZER TECHNOLOGY ASTRAL AMBIENCE CD

Hours of research and endeavour in the raw timbral archives of the largest collection of analogue synthesizer systems in the world have resulted in the release of the first in a long awaited series of creative resource CDs. The vast psycho-acoustic spectrum of the Museum of Synthesizer Technology has now been opened up to the music-making populace — Over 1500 examples.

Code CD036 £19.95

Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

SOUND CHECK CD II NEW

Recorded & compiled by Stephen Court & Alan Parsons Sound Check has become an international reference for producers, musicians and sound designers. The new version features all the test signals and reference recordings made at Abbey Road Studios of the original - including pink noise bands, 1/3rd octave bands, sine and square wave spot frequencies, sweep tones and SMPTE timecode utility tracks - plus some new operatic vocal and music items, to a total of 99 tracks. The major innovation offered by Sound Check II is that it is available in a special package that features a built in mic and spectrum analyser, for use with the CD's 1/3rd octave tracks. The package is thus a compact and convenient method of measuring frequency response, whenever and wherever you may need to.

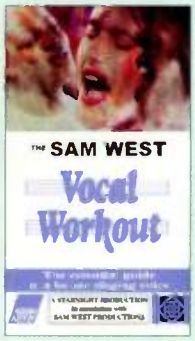
CODE CD038 SOUND CHECK II £28.99

CODE CD038S PLUS SPECTRUM £73.50

Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

VOICE TRAINING

VOCAL WORKOUT Video



by Sam West

Singers of varying abilities will find this video a great aid in assisting their vocal efforts. It begins by explaining the principles of voice production. Breath control exercises plus general vocal techniques are all explained and visually demonstrated. All the exercises are written out in an accompanying booklet, with piano accompaniment.

VIDEO CODE V067 £22.95

Running time approx 59 minutes

Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

VOICE BUILDING Cassette/CD

by Sam West

Although geared towards singers of varying abilities, voices and styles, the contents of this recording are often challenging even to the professional singer! The video (code V067) goes into more technical detail, whereas the CD or Cassette concentrate on more intensive practising. First of all the exercises are sung, in various keys and then with musical accompaniment and melody line, so you can concentrate more on your voice while practising (karaoke style).

Vocal exercises can be boring, but this studio recording has been produced and presented to a very high standard, with interesting musical accompaniments to the exercises.

CASSETTE CODE MC001 £7.95

CD CODE CD037 £10.95

Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

SOS Quality Cables

3M 8-WAY PHONO TO PHONO

CODE CRA803 £27.90

Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

3M 8-WAY PHONO TO JACK

CODE CPR803 £27.90

Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

3M 8-WAY JACK TO JACK

CODE CPP803 £27.90

Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

MIDI FEMALE - MIDI FEMALE ADAPTOR (JOINS TWO MIDI CABLES)

CODE GMD108 £3.49

Postage: UK £1.75, Europe £3.50, R.O.W. £3.75

7M 8-WAY JACK TO JACK

CODE CPP807 £39.00

Postage: UK £5.50, Europe £9.95, R.O.W. £18.95

3FT MIDI CABLE

CODE MID303 £3.30

Postage: UK £1.75, Europe £3.50, R.O.W. £3.75

1.5FT JACK TO JACK PATCH-BAY CABLES, 8 PER PACK

CODE CPP845 £14.70

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

10FT MIDI CABLE

CODE MID310 £4.80

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

20FT MIDI CABLE

CODE MID320 £6.70

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

25FT JACK TO JACK CABLE

CODE GTR425 £9.99

Postage: UK £1.75, Europe £4.50, R.O.W. £6.50

Due to the popularity of our range of affordable eight way cable looms, SOS Mail Order can now offer you even more products in a similar vein. All cable is manufactured to the same high quality as the looms, and prices are once again excellent. Whatever your cable needs, you should find something in our list at a price that's right.

1M INSERT LEADS - STEREO JACK TO TWO MONO JACKS

CODE STP201 £4.50

Postage: UK £1.75, Europe £3.50, R.O.W. £3.75

STEREO JACK TO 2X MONO FEMALE SOCKET ADAPTOR

CODE YPP117 £3.40

Postage: UK £1.75, Europe £3.50, R.O.W. £3.75

MUSICIAN'S HOME STEREO INTERFACE

If economic necessity means that you've got to use your hi-fi system for monitoring, then this affordable little box is for you. It simply matches the output of your mixer or synth to your hi-fi, and features three switchable inputs for maximum flexibility.

CODE AJB128 £39.50

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

☎ Sally Thompson on 01954 789888, 9.00am to 5.30pm to order and give the following details: the order code and quantity you require; your name, address and daytime telephone number; your credit card number, expiry date (and issue number if a SWITCH card). Your credit card will not be charged until each item is sent. Orders are well-packaged and sent promptly. UK readers, to use our new overnight delivery option (£6.50), please ring 01954 789888 before mid-day and ask for an overnight delivery. Depending on stock availability, items will reach you on the next working day (not Saturday/Sunday).

SOS PRIORITY ORDER FORM

Post to:

SOS Publications Ltd,
Media House, Trafalgar Way,
Bar Hill, Cambridge CB3 8SQ.

Please make cheques/postal orders payable to:

'SOS Publications Ltd'.

Overseas payment must be in Pounds Sterling drawn on a British bank.

PLEASE REMEMBER WE CANNOT ACCEPT CREDIT CARD ORDERS UNDER £5.00

To ensure that our pricing policy is as fair as possible, postage is payable on each individual item. Refer to the item details for the amount of postage. *The Postage Calculator system used previously no longer applies.*

SOS Subscribers are only entitled to 10% discount on their book order if they enter their current subscriber number in the boxes provided.

BLOCK LETTERS

Name .....

Address .....

.....

.....

.....

Post Code ..... Tel (Daytime) .....

Do you currently subscribe to SOS? Y ☐ N ☐ Your Subscribers Ref. No. ☐☐☐☐

AMERICAN EXPRESS/ACCESS/VISA/SWITCH accepted.

CARD No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Valid from ☐☐ ☐☐ Expiry date ☐☐ ☐☐ Switch Issue No ☐☐ Signature .....

ORDER CODE	QTY.	DESCRIPTION	PRICE	POSTAGE	SUB-TOTAL

PLEASE DO NOT USE THIS FORM TO ORDER YOUR SUBSCRIPTION SEE SUBS AD ELSEWHERE IN THIS ISSUE

ORDERS ARE DESPATCHED 10-14 DAYS FROM THE TIME WE RECEIVE THE ORDER, DEPENDING ON STOCK LEVELS AND CHEQUE CLEARANCE. **TOTAL**

WRH

CALL US NOW
01202 395135
EXT. 130
THE LARGEST MUSIC STORE IN THE SOUTH

THE LOWEST PRICES ON ALL AUDIO EQUIPMENT

EMM Ltd

EDDIE MOORS MUSIC LTD
679 CHRISTCHURCH ROAD BOSCOMBE
BOURNEMOUTH DORSET BH7 6AE

THE SOUND INVESTMENT

Kurzweil

The K2000 is an industry standard in professional music production. Unlimited sampling and synthesis creative possibilities. All upgrade options in stock. Lowest UK Prices

Kurzweil

The K2500R 192 oscillator 48 note polyphonic synthesizer.32 track sequencer.Digital I\O.Sample option. Expandable to 128 Mb of RAM. **Unbelievable Sound.**

Kurzweil

The PC88MX . 88 note fully wieghted mother keyboard.The legendary Kurzweil Piano sound. 128 GM sounds. Powerful range of MIDI system controllers. **In Stock**

Kurzweil

Our unbeatable **K2000R** deal includes the VX emulator software, giving you the majority of sounds available on the K2 VX worth nearly £300

Roland

New low Price

Roland

Best ever Deal

Boss

Now only £259

Roland

Best UK Price

JP8000

As one of Roland's largest dealers we can always offer you the lowest prices on all Roland Products.We often have exclusive deals on older models and end of line equipment. Call for details.
Let us beat your best quote on A90. A90EX A33. SC88Pro. RD 600. VK7.

Akai SG01p

Pro Sound Piano module
50 stunning different Piano voices including harpsichord and clavinet. 16 channel multi-timbral. 30 digital effects. Computer interface

Akai SG01k

High Spec General MIDI module
32 voice polyphonic. 16 channel multi-timbral. 189 editable sounds.124 percussion types.30 digital effects. Computer interface

Yamaha

The Yamaha CS1X is Totally Awesome!! Full analog type control. Arpeggiator. GM compatible. Amazing sound. **Check our Price!!**

Korg X5

The Korg X5 offers the very best value for a fully programmable pro sound synthesizer .Huge midi spec and sounds like it should cost twice as much. Limited stock at this price.

Studio Logic

The SL161 Features 61 full sizeVelocity sensitive keys with aftertouch. Pitch bend & Mod. 3 Zones for splits. **Under £200**

Fatar 900

88 Fully wieghted piano action master keyboard. Limited stock

Studio Logic

SL880 High performance cost effective master keyboard 88 Fully weighted keys. Pitch bend & Mod.Four Zones

Package Examples

SL880 + Korg X5DR	£949
SL880 + Roland JV1080	£1349
SL161 + Akai SG01K	£375
SL161 + Korg NS5R	£699

Call for more packages!!

Fostex

XR5 *plus* £329

Tascam

414 *plus* £339

Yamaha

MT4X *plus* £429

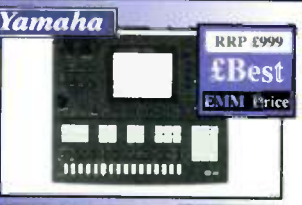
Tascam

424 *plus* £429

XR3

Our 4 track *plus* package has a retail value of *£100* & includes Five Maxell C60 chrome cassettes and a Samson S11 Dynamic Mic.
We can beat your best quote on any 4 track
Yamaha MT50 £289. Fostex XR7 £399

Yamaha



The Yamaha QY700
Compact and fully professional Music Production studio. Features include 48 track sequencer Disc drive. GM & XG compatible sound expander

Alesis

Industy standard pro stereo digital drum machine. 233 drum samples, 50 presets 50 user memories + variations . Midi. Foot pedal controllable.

Hammond

The GM1000 is GM compatible, has 365 sounds including 32 original Hammond drawbar settings. Featuring fast and slow leslie effects the GM1000 is brilliant!!

Hammond

The **Hammond XM1 System** gives you 2.5 Million Original Hammond sounds with full drawbar control. Fully programmable user memory and leslie simulator!! **Get One!!**

Korg Trinity

We have secured a limited quantity of Korg Trinity Plus at under £1699. Order NOW

Let us beat your best quote on N364. N264. Prophecy. Trinity pro. Trinity Prox. NS5R and all Korg equipment

Check out our new low price on Korg expanders.**X5DR & NS5R Best ever Deal!!**
Korg ih harmonizer + S11 Microphone Combined RRP £525 EMM Price £325

ACCESS. VISA. CREDIT FACILITIES. FAST EFFICIENT SERVICE. OVERNIGHT DELIVERY.

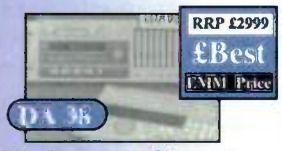
DIGITAL MULTITRACK

ADAT XT EXCLUSIVE New Low Price!!

8 TRACKS OF CD QUALITY RECORDING !!
At this price, NOW is the time to go for your first ADAT or to expand your existing system.

OUR ADAT XT PACKAGES ARE UNBEATABLE

TASCAM DA38



We have secured a limited quantity of **The TASCAM DA38** Digital Multitrack at an unrepeatable price. Don't miss out.

SOUND TRACS EXCLUSIVE

We have just obtained a quantity of **Topaz Project 8 32 and 24 channel 8 Bus Recording Consoles at Massively Reduced Prices**
TheTopaz is a Professional recording console with a huge specification It is sonically transparent and perfect for digital multitracking. The Topaz 24 Features 24 channels. 56 inputs on mixdown. 6 aux sends. 4 stereo returns.4 band eq with sweepable Mid. Mute and solo on main and monitor channels .In line monitor system plus more!!

Price includes Meterbridge, stand and looms

Packeged with Fostex D80 £2799 . Tascam DA38 £3499
Fostex D90 £2999 . Alesis Adat XT £3699 .

Topaz 32 Channel (72 inputs on mixdown) Available at £2299

AKAI SAMPLERS

S3200XL

This new top of the range pro sampler is now fast becoming the industry standard. Loaded with features at an incredibly low price. Call for details.

S2000

The S2000 is a32 note poly-phonic sampler, expandable up to 32Mb .
The basic model costs well under £1000.

CD3000 XL all features of the S3000XL plus a integral quad speed CD ROM, 8 Meg of RAM and over £300 worth of Akai library. **£1799**

S3000XL Best Ever Deal Call Now!!

The S20 is a true stereo 16 -bit sampler. It is easy to use, has a built in disc drive and a sample memory expandable to 17MB. Features include a built in 4 track sequencer, Beat loop function and extensive midi and sync facilities.

Akai S20 Sampler Under £500

MPC 2000
Best UK Price

Outboard

We supply Audio Processors & Effects from all leading manufacturers.
Alesis. Zoom. Behringer. DBX. Digitech. Boss. Focusrite. Lexicon. TL Audio. Eventide.LA Audio. Drawmer. Joe Meek. Aphex Yamaha Plus many more.
Our prices are the lowest you will find. Let us beat your best quote

Microphones

Lowest possible Mic prices
AKG. AUDIO TECHNICA. SHURE. BEYER NEUMANN. RODE.
Akg C1000S C3000s. Sure SM58 SM57. Rode NT1 NT2 Classic. Call us now and save money!!

Emu Systems

Lowest Prices on all Emu products including E6400. E4X.ESI32. Orbit Planett Phat & Carnevel.
Check out our memory and hard drive packages. eg **ESI32 scsi plus 100MB Zip Drive £949**

Software

Our **Software prices** are unbeatable Steinberg. Emagic.Cake walk. Opcode & Turtle Beach. Plus great deals on MOTU & Opcode syncs. **Emagic Audiowerk 8 in stock!!**

DAT RECORDERS

TASCAM DA20

TASCAM DA20 NEW LOW PRICE

TASCAM DAP-1

DAP-1 Pro Spec Portable DAT Recorder

TASCAM DA30MkII

Lowest ever DA30MkII Price
Limited stocks of the UK'S Best selling Pro spec DAT Recorder at an unrepeatable deal!!

Our DAT Prices are The Lowest You Will Find. Call Us for a Quote

PANASONIC

SV-3800. SV-4100

SONY

PCM 2600. PCM - 2800. DTCA 8 . DTCA 9. TCD10 Pro. BEST UK PRICES.

FOSTEX D5

D5. D10. D25. D30. BEST UK PRICES.

Marantz

The **PMD 601** is a **Pro spec** portable DCC digital mastering **recorder**. Features include XLR stereo balanced Mic in. battery pack. Optical in/out. Coax digital in. Mains Adaptor.

Marantz

The Marantz CDR 620 & CDR 615 **CD recorders** offer state of the art A/D and D/A converters,sample rate converter plus fully automatic indexing from DAT, CD & DCC. **Limited Stock at Best UK Price.**

GHOST

SPIRIT STUDIO

Massive reductions on all Spirit 8 bus desks. Now from £899

We offer the very best deals on all Soundcraft mixers and studio equipment.

In Stock Folio FI. Folio SX. Spirit Live. Absolute Zero Let us beat your best quote!!

MACKIE

YAMAHA 02R

Lowest prices on Behringer & Mackie Desks

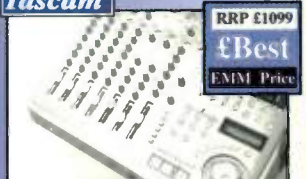
03D NOW IN STOCK!!

Roland

VS-880 V-Xpanded

Our **VS880** Package is unbeatable Package includes VS880 Fx Board. HDD 2 Hard Drive and V2 Software.

Tascam



The **Tascam 564** Pro Digital Disc Multitrack is now available from stock. Call for details and the best possible deal.

Fostex

D90
In Stock

We offer The Lowest UK price on the **Fostex D80**. Call For details!!
D80 + Spirit Studio 16-8-2 £
D80 + Yamaha RM800 24-8-2 £
D80 + Behringer MX8000 £

Fostex

If you are ready to buy a **DMT8 vl** Call us Now. We have just negotiated an Incredible deal. New SCSI option now available

ACCESS. VISA. CREDIT FACILITIES. FAST EFFICIENT SERVICE. OVERNIGHT DELIVERY.

WRH

win

FX Rentals Ltd are the UK & Europe's largest pro audio rental company, with thousands of items of equipment in stock and a 24-hour service. FX supply hire equipment to all areas of the industry, from the top studios down to individual musicians. Hiring from them, to fill out your studio for a particular project, or while your own equipment is being serviced or mended, needn't be expensive — check out FX's web site (http://www.fxrentals.co.uk) for a full rate card, and bear in mind that individual deals can always be negotiated.

FX Rentals will be celebrating their fifth anniversary in business this month, and to mark the occasion, they've teamed up with *Sound On Sound* for this month's competition, offering the great prize of a Sony TCD D8 portable DAT machine. Each month, FX Rentals publish the top ten most popular pieces of rental equipment, calculated by their computer system, in their newsletter. For a chance to win this great prize, worth £600, take a look at the list below. This is the most popular 50 items from FX Rentals' stock of thousands. We'd like you to choose the ten pieces of equipment from the list shown below that you think are most likely to be in the top ten, then put them in the order you think they'd appear. Since this is a tricky one, there's no tie-breaker to complete this month. Just use your skill and judgement. Good luck! Entries must be with us by the closing date of **Friday, 1st August 1997.**

Prize kindly donated by FX Rentals, 0181 746 2121. Email: fx@fxrentals.co.uk.

Sony TCD D8 Portable DAT Recorder

Choose the top ten pieces and prioritise them opposite...

- Akai S3200 sampler
- AKG C12VR valve microphone
- Alesis ADAT 8-track digital recorder
- Ampeg SVT II bass amp head
- Apogee AD1000 A/D converter
- Atari Mega 4 computer
- Beyer DT100 headphones
- BSS MSR604 mic splitter
- Bose 802 speakers
- Clavia Nord Lead keyboard
- DBX 902 de-esser
- Dobro guitar
- Dolby XP24SR noise reduction
- Drawmer 1960 compressor
- Drawmer DL221 compressor
- Emu Vintage Keys sound module
- Eventide H3000 processor
- Fender Precision bass guitar
- Focusrite Red 2 stereo EQ
- Friendchip SRC/AT synchroniser
- Gibson Les Paul electric guitar
- Hammond C3 organ
- Klark Teknik DN360 graphic EQ
- Kurzweil K2000 keyboard
- Lexicon 300 digital processor
- Lexicon 2400 time compressor
- Lexicon PCM70 digital reverb
- Mackie 1604 mixing desk
- Massenburg 8200 2 channel EQ
- Neumann U87 microphone
- Neve 33609 compressor
- Opcode Studio 4 timecode interface
- Otari MTR90 24-track analogue recorder
- Panasonic SV3700 DAT recorder
- Roland JD800 keyboard
- Roland JV1080 sound module
- Shure SM58 microphone
- Sony 7030 time code DAT recorder
- Sony PCM3348 48-track digital recorder
- Sony C800G valve microphone
- Steinberg *Cubase* sequencing software
- Summit DCL200 2-channel compressor
- Takamine 6-string acoustic guitar
- Tascam DA88 8-track digital recorder
- Technics SL 1210 record deck
- TC Electronics M5000 processor
- Timeline Lynx II synchroniser
- Tube Tech LCA2B valve compressor
- Yamaha 9000 drum kit
- Yamaha SPX900 processor
- Yamaha NS10M speakers

the small print

1. Only one entry per person is permitted. 2. Employees of SOS Publications Ltd, FX Rentals, and their immediate families, are ineligible for entry. 3. No cash alternative is available in lieu of the stated prize. 4. The competition organisers reserve the right to change the specification of the prize offered. 5. The judges' decision is final and legally binding, and no correspondence will be entered into. 6. No other correspondence is to be included with competition entries. 7. Please ensure that you give your DAYTIME telephone number on your entry form. 8. Prizewinners must be prepared to make themselves available in the event that the competition organisers wish to make a personal presentation.

WRH

My FX Rentals Top Ten is:

1. .....
2. .....
3. .....
4. .....
5. .....
6. .....
7. .....
8. .....
9. .....
10. .....

Name .....

Address .....

.....

.....

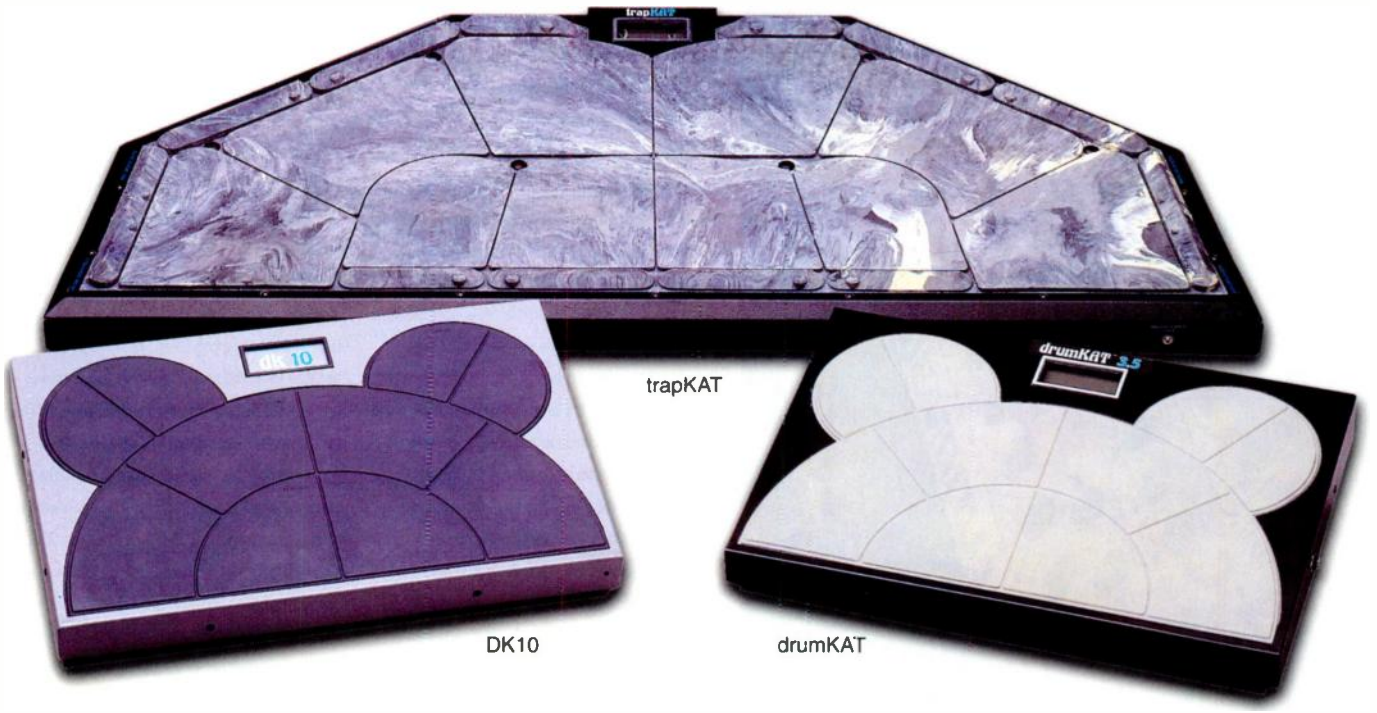
.....

Daytime telephone number .....

Post your entry to: SOS FX Rentals Competition, *Sound On Sound*, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ.

Now available from E-mu Systems

America's ultimate MIDI drum controller



E-mu Systems® is now the exclusive worldwide distributor for the legendary KAT family of electronic percussion controllers. Only KAT controllers feature ultra-sensitive Force Sensing Resistor (FSR) technology which makes them the first choice among studios and performing artists alike. Teamed up with E-mu® samplers and sound modules, KAT controllers are brilliant.

trapKAT – The ultimate one-piece drum kit. The trapKAT is amazingly comfortable for drummers to play, and offers great feel and dynamic response. With ten large "flat" pads, 14 raised edge "rim" pads, and kick and hi-hat footpedal inputs, the trapKAT gives you a 26-piece drum kit in one package. It's all you need.

dk10 – KAT performance that is simple and affordable. The dk10 delivers the same great playability and response as all of the KAT controllers. It features a 10-pad playing surface in a compact package with kick and hi-hat footpedal inputs. The dk10 is the perfect way to tap the world of MIDI without taxing your brain or your budget.

drumKAT – Uncompromised power and flexibility. The famous drumKAT offers a 10-pad playing surface with nine additional trigger inputs for acoustic or electronic pad triggering. The drumKAT is our flagship controller and represents years of software development. It has no equal in terms of musical expression. The creative possibilities are endless.

For more information call:
+44 131 653 6556

E-MU
E-mu Systems, Inc.

For information, contact us at:
P.O. Box 660015, Scotts Valley, CA, USA, 95067-0015 • Tel. (408) 438-1921
United Kingdom Offices: Suite 6, Adam Ferguson House, Eskmills Industrial Park, Musselburgh, UK EH21 7PQ Tel. +44 131 653 6556
Visit us at our web site at http://www.emu.com

© 1997 E-mu Systems, Inc. E-mu Systems, E-mu, and the E-mu logo are registered trademarks of E-mu Systems, Inc. KAT is a registered trademark of Alternate Mode, Inc. All other trademarks are property of their respective owners.

WIN Quasimidi Rave-O-Lution 309

If you're among the legions of people who'd love an original Roland TB303, TR808, and TR909 in your setup, but balk at the bank balance-annihilating cost of such acquisitions, you'll no doubt have been heartened by the large number of updated versions of these instruments that have flooded onto the market in the last couple of years, at a cost likely to cause considerably less distress to your current account. Quasimidi's recently released Rave-O-Lution (reviewed with *SOS*'s usual scrupulous attention to detail by Derek Johnson in the May '97 issue) is undeniably one of the best of the bunch of TB/TR emulations: a polyphonic drum module incorporating a monophonic bass/lead line synth and a TR-style, pattern-based sequencer.

The 309 uses the latest in physical modelling and S+S synthesis techniques (called AES, or Analogue Emulation Synthesis by Quasimidi) to recreate authentic-sounding analogue synth timbres and drum voices, and with a 24db/octave resonant filter to further shape the sounds, it doesn't take long to get the 309 squizzing and phzweeeeing to a minimalist, Detroit-style rhythm section. Better still, there's a built-in processing section for instant delay or reverb effects; try getting a TB303 to produce *those*!

Best of all, the 309 doesn't conceal its considerable features behind a parameter-access operating system, but is positively festooned with knobs, making it a powerful tool for real-time studio or live improvisation. If you want to alter the resonance and cutoff of the bass synth as the sequencer is running, for that truly acidulous effect, you just reach out and turn a dedicated knob. The same goes for the synth envelope parameters and drum tunings. Better still (and unlike the TBs and TRs of old) the controls send out MIDI controller data, so your on-the-fly tweaks can be recorded into a connected sequencer for editing later.

If all is going to plan, you should really want one by now (if you didn't already), and if you haven't yet guessed where all this is heading, you must be incapable of reading the word WIN when it's printed large at the top of a page. Yes, thanks to Quasimidi and their UK distributors Turnkey, we're giving away one of these zwurply, bleeplesome rave faves. All you have to do to have a chance of winning the 309 is answer the extremely difficult questions below (here's a clue; they're not *actually* that difficult), complete the tie-breaker in a manner you think likely to set the *SOS* office staff rolling on the floor chortling, guffawing, and generally suffering from split sides all round, and send the entry to the *SOS* office (address at the bottom of the page) to arrive before the closing date: **Friday, August 1st, 1997**).

Prize kindly donated by Quasimidi GmbH and Turnkey (0171 379 5148).

the small print

1. Only one entry per person is permitted. 2. Employees of SOS Publications Ltd, Turnkey, Quasimidi, and their immediate families, are ineligible for entry. 3. No cash alternative is available in lieu of the stated prize. 4. The competition organisers reserve the right to change the specification of the prize offered. 5. The judges' decision is final and legally binding, and no correspondence will be entered into. 6. No other correspondence is to be included with competition entries. 7. Please ensure that you give your DAYTIME telephone number on your entry form. 8. Prizewinners must be prepared to make themselves available in the event that the competition organisers wish to make a personal presentation.

QUESTIONS

1. Why is the Rave-O-Lution also called the 309?

a. 309 is the bus route Quasimidi's designer uses to get to work ☐
b. 309 is the collective age of the Quasimidi design department ☐
c. The 3 from TB**303**, and the 09 from the TR**909**, probably ☐
d. 309 is the price of the Rave-O-Lution in Deutschmarks ☐

2. What kind of filter is included on the 309?

a. 12dB/octave ☐
b. 24dB/octave ☐
c. 24dB/octave, resonant ☐
d. limescale ☐

3. AES is the synthesis method developed by Quasimidi for the 309. What does this stand for?

a. Analogue Emulation Synthesis ☐
b. Analogue Eccentric Synthesis ☐
c. Authentic Estonian Shuttlecocks ☐
d. Arabian Euphonium Society ☐

Post your entry to: *SOS* Quasimidi Rave-O-Lution 309 Competition, *Sound On Sound*, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ.

QUASIMIDI Competition

TIE BREAKER

Who'll be first against the wall when the Rave-O-Lution comes? Please answer in not less than 30 words. (Anyone who says Mick Hucknall or Margaret Thatcher will be disqualified for being too obvious.)

.....

.....

.....

.....

.....

.....

.....

.....

Name .....

Address .....

.....

..... **Daytime tel. no.** .....

WRH

July 1997

MUSIC LAB

The UK's leading professional audio supplier

Demo Days
Steinberg June 10th
Digidesign July 29th

Sony DTC-ZE700 New standard in affordable DAT

The DTC-ZE700 is the latest in a long line of affordable DAT recorders from Sony. With its serious spec list this machine is the logical choice for a budget DAT. Whats more, we have an incredible discount of £200 from Sony's RRP.(All Sony products available from Music Lab are sourced directly from Sony UK)

- 44.1kHz Analogue In
- Opitcal In and Out
- Coaxial input
- Super Bit Mapping
- Full Remote Control
- Rehearsal Function
- 48kHz, 44.1kHz, 32kHz
- Time Display
- Re-number Function
- Absolute Time Display
- AMS

SAVE £200 ON NEW SONY DAT

DTC-ZE700 **£499** inc vat

Time to set your DAT straight

Music Lab has often heard customers complain that although their DAT recorder appears to function perfectly, the tapes just don't sound the same on other machines.

To encourage more users to do something about this worrying situation, we have introduced fixed-price calibration services for DAT machines, starting at **£75 ex vat** (£88.12 incl vat). This will guarantee the recorder meets the Sony DAT

The Yamaha 03D Digital Mixer is here

After the release of the O2R - the world's first really affordable digital multitrack desk - everyone has been wondering what Yamaha could possibly pull out of the hat for an encore.The answer is the 03D, a digital desk based on the 02R but with a more compact control surface and a stunningly attractive price. The new system offers a total of 26 inputs, which include eight digital inputs. Coupled with four bus outputs, six aux sends and eight digital outputs via YGDAI, this makes for a wide variety of mix possibilities. The first eight channels have mic inputs on balanced XLRs and individually switched phantom power. It's also possible to create larger configurations by cascading two or more desks together. Although the 03D is a four bus desk, it has been designed so that it can be used for eight track recording. This is achieved by assigning the four bus outs and auxes to the YGDAI outputs. Automation on the desk is based on 50 scene memories which can be recalled manually, via MIDI or using the internal automix. The settings cover EQ, channel setting, effects and dynamics. There are two effects processors and 40 dynamics processors, as with the 02R and the audio quality is up to the same high standards. The control surface may be more compact than the 02R but it's still easy to use, thanks to the back-lit LCD in the centre of the desk It's also possible to connect a PC for quick navigation and parameter editing. To reserve a 03D call now, as they are selling through as fast as we can get them!

03D **£2999** inc vat

New low price on Pro Mix 01

This feature packed 16 input digital desk is now available at an even lower price.

MUSIC LAB

Hire the best for less

Digital Multitrack

Akai DR16	16 track HD recorder	100
AlesisADAT V4	8 Track S-VHS	50
Alesis ADAT-XT	8 Track S-VHS	60
Alesis AI/1	ADAT digital interface	25
Alesis AI/2	ADAT synchroniser	25
Alesis BRC	Remote/synchroniser	35
RolandVS880	8 Track workstation	50
Tascam DA-88	8 Track Hi-8 incl SY88	75

DAT Recorders

Fostex D20B	Timecode DAT	75
Sony PCM7040	Timecode DAT	90
Panasonic 3800	Studio DAT	40
Sony TCD-D8	Portable DAT	25
Tascam DA-P1	Pro portable DAT	40
Tascam DA30MkII	Studio DAT	40

Mini Disc/CDR

Denon DN990R	Mini disc recorder	50
Marantz CDR620	CD Recorder SCSI	75
Pioneer PDR 05	CD Recorder	50

Analogue Recorders

Fostex R8	8 track 1/4" dolby C	25
Fostex G16C	16 track 1/2" dolby C	75
Otari MTR12H	2 track 1/2"	100
Otari MTR90MkIII	24 track 2"	175
Studer A810	2 track 1/4" time code	60
Studer A820	2 track 1/4"/1/2"	125

Noise Reduction

Dolby XPSR	24x431 cards+XPrack	175
Dolby 24SR cards	24xCAT280 SR cards	175
Dolby 363SR	2xCAT350SR in 363	40

Mixers

Mackie 1202VLZ	12/2 ch	25
Mackie 1604VLZ	16/4 ch	45
Mackie 32/8	32/8 ch	95
Soundcraft Spirit	Studio 24/8/2	60
Yamaha ProMix1	16 ch digital	70

Effects

AMS RMX16	Reverb	75
Digitech Vocalist	Vocal processor	30
EventideH3000SE	Ultraharmonizer	75
[illegible]	Reverb	100

Sega Digital Studio

Client of the month

One of Music Lab's many satisfied customers is the Sega Digital Studio - the production centre that creates sound tracks for some of the world's best selling computer games. Small wonder that computers play a large role in putting the material together.

Sega composer/AV engineer Richard Jacques explains how the London facility came together. "We set up the studio in the summer of 94, and we met Andy Brooks at the APRS show. (An annual pro audio event which used to be held in London). "The first reason we went to Music Lab was that there was no bullshit. We met two other dealers at the show and one in particular wouldn't leave us alone. We had a budget of £200,000. Andy just said, 'If you want something, just give us a call', so we thought we'd go with them. "Obviously they wanted to sell us the gear but they were very relaxed about it." These days, £200,000 goes a long way and the Sega Digital Studio was originally two facilities based around an 8 channel Pro Tools system in each case. These have now been combined into a single facility with a 16 channel Pro Tools - heavily loaded with TDM Plug-ins - on an Apple Quadra 840. Other goodies include a Mackie 32/8/2 desk with Ultramix automation, two Akai S3200 samplers with maximum RAM, a Fostex RD8 eight track recorder, plus an impressive amount of outboard and MIDI sound modules "Steve (Selfe, the famous Dr Bloyd) co-ordinated the installation here. We had a few quirky problems just because we hadn't really used Pro Tools before. They are very good on after sales support, unlike some companies that really don't want to know. "Since then we have bought a few bits and bobs, including the Ultramix automation which Steve installed. That was cool."If we want anything, we just send them an official order and they send the gear as soon as it is in. Accounts sort it out afterwards."

Visit Sega Europe's Website: http://sega-europe.com

Rorke A/V Hard Drives

The Rorke Data series of A/V drives are a professional alternative to standard drives. The range are built to order and use drives that are up to the demands placed on them by audio HD recording. Options include Extra I/Os including SCSI 2 & 3, Ultra, Fast/Wide, Split Bus, Fixed or removable drives and world wide support. Please call our sales team with the spec you need and we will be happy to give you a pro price.

PC multitrack HD recording and CDR Red Book mastering

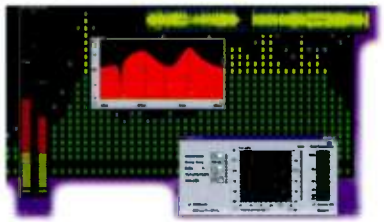
tripleDAT

Following last month's demo sessions at the Labs, more and more of you agree that Creamw@re is a package that turns a P90 PC or above into a Hard Disk workstation, *that works.*

Not only that, it has impressive and powerful software for sound recording editing, mixing and mastering.

For a modest **£1097.88 ex vat** (£1290 incl VAT), this system is probably the only practical HD choice for PC users who want a minimum investment in additional hardware.

For a one-to-one demo, please call to arrange a time.



- 10-16 Tracks on P90, 16Mb
- 14-20 Tracks on P133, 16Mb
- 4 channel in/out (stereo analogue & digital)
- Digital I/O Optical/Coaxial (Optional AES/EBU)
- 18 bit, 128 times oversampling
- 256 virtual tracks
- Sync to MTC
- Full non-destructive editing
- 4 band parametric EQ
- Full dynamics processing
- Room simulator and delays
- CD mastering to Red Book standard
- Time-stretch and pitch control

New Apple Power Macs

The latest generation of desktop machines from Apple offer more power and features for less money than ever before. Check these three machines out:

Power 7300/166

7300/166MHz: 16Mb RAM, 2GB hard disk, 12 x internal CD drive, on-board Ethernet, keyboard and mouse. An ideal machine for Audiowerk8, Pro Tools Project & DTP (used for this flyer)

specification. This is for entry level machines such as the Sony DTC 670, DTC 690 and Tascam DA20. Music Lab also offers two further fixed-cost calibration for users with high-end machines. A intermediate level calibration for machines such as the Sony DTC1000 or Tascam DA30 is available for **£120 ex vat** (£141 incl vat), with fully pro units like Sony PCM7010 and Fostex D20 time-code equipped DAT recorders costing **£200 ex vat** (£235 incl vat).

A full service is also available for *all* machines with prices available on request.

EMU Phatt **£749** inc RRP £869

DA-20 **£649** inc RRP £799

DA-30 Mk2 **£975** inc RRP £1299

Composer **£199** inc RRP £299

Studioquad **£Call**

TLA Comp 2021 **£468** inc RRP £703

TLA EQ 3011 **£233** inc RRP £468

TLA EQ 2012 **£350** inc RRP £703

EZ 230MB **£211** inc

1402Vlz **£475** inc RRP £549

Folio SX **£Call** RRP £623

SM58 **£99** inc RRP £125

C3000 **£239** inc RRP £378

C414ULS **£799** inc RRP £1173

M149 **£2799** inc RRP £3798

Zip Drive **£145** inc

MPC2000 **£1199** inc PLUS16Mb

DMT8-VL **£Call** RRP £999

DA-38 **£1999** inc RRP £2999

ADAT XT **£2150** inc RRP £2699

System 600 **£299** inc RRP £466

Special deal on TCD D8

We are offering TCD-D8 purchasers a chance to buy the mains power supply and optical digital leads, which normally cost £119 , for only an extra £57 incl vat.

TCD-D8 **£549** inc vat

New Sony Mini Disc Recorder

This new Sony MD recorder is ideal for location recording where the quality of DAT is not needed.

MZ-R30 **£299** inc vat

Ex Demo Ex Hire & Used

Absolute 2 Monitors	£150	Roland MPU101 CV/Gate	£100
Audio & Design F760XRS	£500	Roland MDC1	£399
AKG C414	£600	Roland MS1Sampler	£290
AKG C3000	£175	Roland MT32 Module	£150
AKG Tube Valve Mic	£1000	Roland TR707	£150
Alesis ADAT Sys4	£1200	Roland TR505	£100
Alesis ADAT XT	£1950	Roland TR727	£150
Alesis Monitor 1	£230	Roland U220 Module	£300
Alesis S4 Module	£300	Sony DTC60es DAT	£550
Aphex Tubessence	£395	Sony DTC690 DAT	£400
AR18LS Monitors	£400	Soundcraft DMIX 8Ch	£1300
BBE 822	£300	Soundcraft Folio 4	£950
BRC Ex-Demo	£999	Soundcraft Live 24	£1450
BSS DPR502	£599	S/tracs Solo Midi24	£2900
Behringer Multifex	£150	Steinberg Pro 24 Atari	£15
Emu Proteus FX	£250	TAC Bullet 10/4/2	£1200
H/K LS200 Speakers	£75	Tannoy NFM8	£300
Klark Teknik DN716	£675	Tannoy PBM 6.5	£200
KRK6000 monitors	£475	Tascam DA88+ Sy88	£3450
Lexicon LXP1	£250	Teletronix LA2A	£2800
Mackie CR1604	£549	Topaz Meterbridge	£450
MXR 126 Flanger/Doubler	£450	Yamaha GC2020 Comp	£200
Pultec HLF3	£450	Yamaha EMP700	£350
Rane RA27 Analyser	£275	Yamaha REV 7	£600
Revox C274 4 Track	£1150	*Prices include VAT*	

PHONE: 0171 388 5392 FAX: 0171 388 1953 Website: www.musiclab.co.uk
72/74 Eversholt Street, London, NW1 1BY

Roland SDD320	Dimension D	30
Roland SRV330	Reverb 3D	30
Roland SDE330	Delay 3D	30
Yamaha SPX990	Multi effects	30

Dynamic Processors

BSS DPR402	2 ch comp/limi/de-es	40
BSS DPR901	2 ch frequency limiter	40
DBX 902	De-esser module	20
DBX 160RM	2 ch comp/limiter	40
DBX 165A	1 ch comp/limiter	40
Drawmer 1960	2 ch valve comp/limiter	40
Drawmer DS201	2 ch noise gate	20
Dolby 740	2 ch spectral processor	45
Fairchild 670	2 ch valve limiter	100
Neve 33609	2 ch comp/limiter	50
SSL FX G384	2 ch comp/limiter	75
Summit TLA100A	Valve limiter	40
Tubetech CL1A	1 ch valve comp	35
Urei 1176LN	1 ch limiter	30

Equalisers

Drawmer 1961	2 ch valve parametric	50
Focusrite ISA115	2 ch para pre-amp	60
Massenburg 8200	2 ch 5 band parametric	60
Pultec EQP1A/3	1 ch valve parametric	50
Summit PEQ100	1 ch valve parametric	40
Tubetech PE1C	1 ch valve parametric	40

Microphones

AKG C12	50's original valve	75
AKG C414ULS	Condenser microphone	25
AKG C451/CK1	Condenser microphone	15
Neumann TLM170	Condenser microphone	30
Neumann U87i	Condenser microphone	30
Neumann U47	Valve micophone	75
Neumann U67	Valve microphone	75
RCA 77DX	50's ribbon	35
STC 4038	"Classic BBC" ribbon	30

Monitor Speakers

AR18LS	Nearfields	35
Genelec 1029	Powered Monitors	30
Genelec 1032A	Powered Monitors	70
KRK 9000	Nearfields	50
Yamaha NS10M	Nearfields studio	20

Samplers

AKAI S1100	32Mb SCSI, digital I/O	95
AKAI S3000XL	32Mb SCSI, digital I/O	125
AKAI S3200	32Mb SCSI, digital I/O	130

This is a selection of our Hire stock.
If what you want is not here, call!
Prices are ex vat and per day.

Active monitors - more choice than ever

Genelec monitors are respected in the music recording and broadcast communities and rightfully so.

The 1029A brings bi-amplified systems to a new level of affordability. The package can include nearfield monitors, subwoofer, amplifiers and electronic crossovers in one integrated system.

1029 **Call**

Mackie is not the name you would normally think of for powered monitoring, but that is about to change with the HR824 . With a 8.75 inch woofer,and a one inch alloy dome tweeter, , these monitors must be heard. System frequency response is an impressive 39Hz to 22kHz and SPL 121dB.

HR824 **£1063** ex vat £1249 incl vat

Dynaudio's BM15A is a logical progression from the very sucesful passive BM15 (very popular in our hire dept!). A 40Hz to 20kHz frequency resoponce and an SPL of 119dB combined with internal amps delivering 150w LF and 80w HF is awesome. The HF driver is upgraded from the BM15 resulting in increased HRF headroom. Call to arrange a demo.

BMA15A **£1616** ex vat £1899 incl vat

Neumann M149 tube offer

The Neumann M149 Tube, is a microphone which couples the same K49 capsule found in the U47 and M49 with a triode valve and a transformerless output.There are nine switchable polar patterns: omnidirectional, wide angle cardioid. cardioid, hypercardioid, figure-of-eight and intermediate steps.

A seven position slider switch selects a high pass filter in half octave steps.The frequency range is conservatively rated at 20Hz-20kHz, while S/No ratio CCIR 468-3 is quoted as 16dB-A in omni mode.

Music Lab has used its position as a major purchaser of Neumann microphones to obtain a unique offer. As a result, we have a very limited quantity of units available for **£2382 ex vat** (£2799 incl vat), as against the suggested price of **£3233 ex vat** (£3799 incl vat).

7300/166 **£1699** ex vat

Power 8600/200

8600/200MHz: 32Mb RAM, 2Gb AV hard disk, 12 x internal CD drive, L2 cache, internal Zip drive, 6 PCI slots, RAM capacity to 768Mb. Mid range machine for Pro Tools and general use.

8600/200 **£2200** ex vat

Power 9600/233

9600/233Mhz: 32Mb RAM, 4Gb AV hard disk, 12 x CD drive, L2 cache, 4Mb VRAM, 4 drive bays, 6 PCI slots, RAM capacity to 768Mb. Top of the range and great for multiple Pro Tools systems.

9600/233 **£2950** ex vat

Apple PowerBook 3400c

3400/180Mhz: 16Mb RAM, 1.3Gb hard disk, CD, ENet

3400/180 **£3100** ex vat

Billed by MacUser as "the best portable ever", the PowerBook 3400c is actually a series of four dream machines with processor speeds ranging from 180MHz to 240MHz. That's the kind of power that will give a 9600 a good run for its money. Having kitted out a fair percentage of the rock 'n' roll industry with PowerBooks, Music Lab confidently predicts that the 3400s will rapidly become the machine for producers and musicians on the move. Here's a few reasons why.
The "slower" machines come with a 1.3Gb hard drive and 16Mb RAM. The 200MHz machine has a 2GB HD and 32Mb RAM, while the 240MHz unit sports a 3Gb drive and 16Mb RAM, expandable to 32Mb. Three of the four machines have CD drives and the top model has a 12 x, rather than the 6 x speed fitted to the others. The 16-bit sound system includes four speakers with active crossover and enough clout to fill a medium sized room.

Please remember, Music Lab is an authorised Apple Re-seller that supplies only genuine Apple computers. Machines bought from Music Lab benefit from a high level of pre-sales and after-sales support.

Digital 8 Bus

Affordable Mackie Quality

Having created one of the world's favourite analogue desks, Mackie has turned its attention to digital multitrack. The brand new Digital 8-Bus has 48 audio channels and is designed to be as easy to use as an analogue board. The system has high-level features such as 7.1/5.1 surround panning but is aimed price wise to appeal to project studios. The relatively minimal control surface is assignable in two directions but is highly intuitive in operation. The 24 fader strips use a bank switching system. Channels 1-24 are for track laying (12 are equipped with mic preamps). Channels 25-48 are the second bank and are for tape returns or extra line inputs.

Beyond this, there are three banks for automation, utility and bus functions. Almost every function is dynamically automated and the system can be used with an SVGA monitor. Functions such as eq, dynamics and DSP effects are addressed from a single Fat Channel, which is assigned to the channel in question. Eq bands mimic a typical desk but more extreme settings may be created at another level. Rotary controls are a LED indicated system called V-Pots. These enable the correct position to be shown for successive channels/functions. Machine control is also catered for and the desk has a jog/shuttle wheel for precise location. In Help mode, any button on the Digital 8-Bus brings up an explanation of its function on an integral screen. Software updates are possible from floppy but the desk also has a built in modem for *on-line* updates. Call for a demo or quote

Digi8 **£6805** ex vat £7995 incl vat

HUI and cry

Mackie's newest mixer is actually HUI, a Human User Interface for Digidesign's Pro Tools 4. Providing a tactile, assignable work-surface for mixing and editing, HUI also addresses MIDI devices and will soon control Plug-Ins as well. Please call for details.

HUI **£2126** ex vat £2499 incl vat

Mackie mixers always in stock

1202vlz **Call**

1202VLZ

1604vlz **Call**

1604VLZ

32/8+MB **Call**

32/8 + m/bridge

Mackie's new M1400 is at home as either a studio or live power amplifier. With a clean 600 watts into 2 ohms per channel, constant cooling, high pass filter and Mackie sound quality this amp must be considered

M1400 **£510** ex vat £599 incl vat

are all proven in the field and are a serious alternative to DAT. Call our sales team to get the best price we can give you.

Marantz CDR615

CDR615 **Call**

Pioneer PDR05

PDR05 **Call**

For all the latest news from the Lab visit our new Website

www.musiclab.co.uk

Mutator

Mutator **£495** ex vat £581 incl vat

Export Delivery

Music Lab supplies equipment to Europe and worldwide via UPS Express Service or DHL. Delivery is normally within 24-48 hours. Large volume orders are normally shipped via experienced international forwarders.

International enquiries:

Tel 0044 171 388 5392
Fax 0044 171 388 1953
Web www.musiclab.co.uk

Contact: Paul Eastwood

Quotations provided on request

After sales support

Music Lab has many years of practical experience in maintaining and supporting professional audio equipment. All new products and equipment supplied carry a full one year guarantee covering parts and labour. This in no way effects your statutory rights.

The Music Lab Sales Team

Paul Eastwood
Gary Dent
Andy Brooks
Woody Taylor
Steve 'Bloyd' Selfe

"Everyone on the Music Lab sales team has a wealth of knowledge about audio to share. Perhaps more importantly, they are all good guys who make looking after our customers their number one priority." Paul Eastwood, managing director Music Lab.

Vocalist II	468	549
Studio Vocalist	851	999
Drawmer		
DS201XLR	345	405
DS404	525	616
DL441	525	616
DL241XLR	425	499
DL231	475	558
LX20	194	229
1960	995	1169
1961	995	1169
Ensoniq		
DP2	424	499
DP4+	978	1150
Focusrite		
Green 1	698	821
Green 2	798	938
Green 3	848	997
Red 1	1925	2261
Red 2	1995	2344
Red 3	2195	2579
Red 4	1995	2344
Red 6	1425	1674
Red 7	1495	1756

M2000	1394	1639
Finaliser	1750	2056
Yamaha		
GQ2015A	271	319
Q2031B	501	589
GQ1031C	271	319
GC2020C	305	359
PRO R3	898	1056
REV500	339	398
SPX1000	1178	1385
SPX990	723	850

DIGITAL MULTI

Alesis		
ADAT XT	2297	2699
BRC	1105	1298
AI1	807	948
AI2	1020	1198
Sony		
PCM800	3310	3889
Tascam		
DA38	1995	2344
DA88	3743	4399

MPC3000	2382	2799
Alesis		
SR16	225	265
DM5	365	429
EMU		
ESI32	1020	1195
E6400	2143	2518
E4	4085	4800

SEQUENCERS

Steinberg		
VST MAC	285	335
VST Score MAC	361	425
VST Audio XT	574	675
Recycle	148	175
Time Bandit	339	399
E-Magic		
Logic MAC	339	399
LogAudioMac	254	299
Audiowerk8	424	499
AV Ext	64	75
Logic PC	254	299
Logic PC Audio	339	399

MD-801P	1318	2159

DAT RECORDERS

Panasonic		
SV3800	1098	1291
Fostex		
D5	765	899
D15	2495	2931
D25	4185	4929
D30	5795	6809
Sony		
DTCA6	594	699
DTCA8	765	899
DTC-ZE700	595	699
PCM 2600	1250	1468
PCM 2800	1950	2291
PCM 7010	3095	3636
TCDD8	509	599
TCDD10PRO	2750	323
Tascam		
DA20	680	799
DAP1	1275	1499
DA30MK2	1105	1299

Soundcraft		
DC2020/24		POA
DC2020/32		POA
Ghost/24	3700	4347
Ghost/32	4400	5170
GP1/12	1520	1786
LM1/6	1210	1421
Note Pad	126	149
Folio SX	407	479
Folio 12/2	380	446
Power Station	1020	1199
Spirit 8/16	2549	2995
Spirit 8/24	3449	4111
Spirit 8/32	4349	5110
Studio 24	1771	2081
Studio 32	2368	2783
D-Mix	1625	1909
Soundtracs		
Topaz 24	2499	2937
Topaz 32	3300	3877
Yamaha		
Pro Mix 01	1700	1999
02R	5999	7048
03	2552	2999

System 10DMT	1049	1233
System 12NFM	1499	1762
System 15	2850	3349
Yamaha		
NS10M Studio	319	375
NS10 Tweeter	48	56
NS10 Woofer	48	56

CD PLAYERS

Denon		
DCD315	127	149
DCD625	170	199
DCD715	200	234
DN1000F	408	480
DN650F	635	746
DN2000F	850	999
Marantz		
PMD320	325	381
PMD321	395	464
Tascam		
CD401 Mk II	659	775
CD601	999	1174
CD701	1449	1703

M88TG	299	351
MC834	739	868
Groove Tube		
SYS 1	765	899
SYS 2	1105	1299
SYS 3	1425	1675
Neumann		
KLM184	550	647
TLM193	849	998
TLM170R	1777	2089
U87Ai	1777	2089
M149 Tube	2382	2799
Sennheiser		
MD421	287	337
K6	175	205
ME64	129	151
Shure		
SM58	103	121
SM57	103	121
Beta 58A	165	193
Beta 57	135	158
Sony		
ECMS907	81	95
ECM999A	315	370

The prices above are provided for guidance and comparison. Music Lab is pleased to offer concessionary discounts wherever possible. In particular, special discounts are often available to educational and government establishments, musicians and recording studios, record companies and broadcast organisations. Further discounts are also available on packages and complete systems. Call for a personal quotation. Music Lab can quote for virtually any type or brand of audio equipment.

Special offers on equipment hire

DA88 £65 per day ex VAT

Time Code DAT £75 per day ex VAT

DATs from £25 per day ex VAT

ADAT XT £50 per day ex VAT

This is just a tiny proportion of the Music Lab hire stock, please call for a competitive quote on almost any audio item

PHONE: 0171 388 5392 FAX: 0171 388 1953 Website: www.musiclab.co.uk
72/74 Eversholt Street, London, NW1 1BY

Mac-based workstation packages from Music Lab

When you by a Power Mac Hard Disk system from Music Lab you get a professional package that works from day one, and is supported by trained engineers!

Producer's power package

One for the professional on the move, this package brings all the power of a desk top system to an up-market lap-top

Digidesign Pro Tools DAE Power Mix and Apple Power Book 3400C

Digidesign's Pro Tools 4 software with 16 tracks of 16 bit recording, editing, mixing and Audiosuite FX processing. Includes system installation by an engineer.

• Apple Powerbook 3400C/180 16/1.3 CD (Total RAM 32 MB) • Digidesign ProTools 4 DAE Powermix • Kingston RAM16-DIMM 16Mb • Seagate Barracuda Ultra 2Gb ex HD • Flight case £5,100 Ex VAT

Digidesign Hard Disk Systems

Digidesign Project PT and Apple Power Mac 7300CD

Full eight channel I/O, coupled with Digidesign Pro Tools Project Core system. Supplements the Mac with dedicated Digital Signal Processing. 8 tracks of simultaneous recording editing and automated mixing.

• Apple Power Mac 7300CD/166 16/1.2 CD (Total RAM 24 MB) • Apple Mac 1710 multiscan display • Apple Mac keyboard • Digidesign PCI ProTools Project Core System • Digidesign 882 I/O PCI interface • Kingston RAM16-DIMM 16Mb • Seagate Barracuda Ultra 2Gb ex HD £6,236 Ex VAT

Digidesign Pro Tools 4 Core System and Apple 7300/166 CD

The powerful 7300 now has a clock speed of 166Mhz, making it a superb choice for the delivery of real-time digital audio. Package price includes system installation by an engineer.

• Apple Power Mac 7300CD/166 16/1.2 CD (Total RAM 24 MB) • Apple Mac 1705 multiscan display • Apple Mac keyboard • Digidesign PCI ProTools 4 Core system • Digidesign 882 I/O PCI interface • Kingston RAM16-DIMM 16Mb • Seagate Barracuda Ultra 2Gb ex HD £10,350 Ex VAT

Sampler packages

EMU E6400

- *Free* ZIP drive
- 32Mb RAM fitted
- 64 note poyphonic,
- 8 polyphonic outputs
- Pitch transposer over 10 octaves

FREE ZIP DRIVE & ...

£212...

AKAI S3000xl

- *Free* ZIP drive
- 16Mb RAM fitted
- 32 voice polyphony,
- 10 outputs
- SCSI as standard

FREE ZIP DRIVE & ...

Audiowerk8

• Apple Power Mac 7300 166Mz/16/1.2Gb, 12x CD, keyboard and 17" display • 16Mb Kingston DIMMS • Emagic Audiowerks8 PCI I/O 2in/8out with VMR software • Emagic Logic Audio V2.6 • Seagate Barracuda Ultra 2Gb External HD • MOTU Midi Express XT £4,699 Ex VAT

Virtual Studio System

• Apple Power Mac 4400 160Mz/16/1.2Gb CD, keyboard and 15" display • 16Mb EDO Kingston DIMMS • 2nd level cache • Steinberg Cubase 3 VST • Seagate Hawk 1Gb External HD • Midi Interface £2,395 Ex VAT

Great deals on CDR

There has never been a better time to buy a CD recorder. With have some great offers on the Marantz CDR615, CDR620 and

MUSIC LAB *Ordering info*

Business Hours

Our office's are open from 9.30am - 6.00pm Monday to Friday. Plus 9.00am-4.00pm Saturdays, hire dept only. Personal demonstrations by appointment only. Please call to book. We are pleased to accept orders in person, by phone or in writing. Goods may be collected or delivered anywhere in the world, subject to quotation for shipping.

Payment Methods

We accept cash, credit cards, building society cheques, personal cheques (subject to clearance) and UK government and educational orders for immediate collection or despatch. Bank transfers from all UK and foreign clients accepted. Details available on request. All orders shipped on confirmation of cleared funds. Please allow seven working days for clearance of cheques not covered by guarantee card, or ask about Transax clearance.

Mail Order Hot Line
Tel: 0171 388 5392

UK MAINLAND DELIVERY NEXT DAY
£12 including vat

Overnight Nationwide delivery

Fully paid mail orders and credit card sales are normally shipped same day for delivery next working day. All orders are carefully

MUSIC LAB
Price Guide

Buyer's Guide Price Index

Prices excluding 17.5%VAT
Prices including 17.5%VAT

OUTBOARD

Alesis		
3630	191	225
Nanoverb	143	169
Microverb 4	194	229
Midiverb 4	280	329
Quadraverb 2	594	699
MEQ230	228	269
AMS		
SDMX 6.5/6.5	5780	6791
SDMX13/13	6280	7379
RMX16	4920	5781
ART		
FXR	169	199
FXR Elite 2	237	279
Tube MP	142	167
Dual MP	331	389
Behringer		
Autoquad	339	399
Composer	254	299
Intelligate	255	299
Multigate	254	299
Multicom	254	299
Parametric	212	250
Combinator	1265	1487
Dualfex II	126	149
Ultrafex	211	249
Ultra-curve	552	648
BSS		
DPR402	794	934
DPR901	794	934
DPR404	795	934
DPR502	725	851
DPR504	725	851
DPR901	795	934
FDS301	415	487
FDS318	755	887
FDS360	590	693
Dbx		
1066	408	479
160A	382	449
166A	280	329
Digitech		
Studio 400	680	799
Studio Quad	425	499

OUTBOARD

Joemeek		
Compressor	1249	1468
Pro Channel	254	299
Tube Channel	1499	1761
Voice Channel	500	588
Lexicon		
Alex	331	389
Reflex	399	469
MPX1	1020	1199
PCM80	1799	2114
PCM90	2198	2583
Neve		
33609C	1866	2192
SPL		
Vitalizer MK2	499	586
Classic Vitalizer	549	645
Optimizer	899	1056
EQ Magix	899	1056
Tube Vitalizer	1999	2348
De-esser	399	468
TL Audio		
CL-EQ1	499	586
CL-EQ2	1295	1521
C1	995	1169
PA1	895	1051
PA2	395	464
V2	395	464
C-2021	399	468
EQ-2011	299	351
PA-2001	299	351
O-2031	599	704
VP-2051	599	704
Roland		
RV70	339	399
SDE330	637	856
SRV330	637	856
SDX330	680	799
RSS10	1871	2199
Sony		
DPSV77	1195	1404
Symetrix		
501	312	366
528E	560	658
601	1870	2197
602	1870	2197

HARD DISK RECORDING

Akai		
DR4vr	935	1099
DR8	2382	2799
DR16	3403	3999
DR16/2Gb	3931	4620
Fostex		
D90	1275	1499
DMT8vl	850	999
Digidesign		
AudioMedia 3	598	703
P/Tools 3 PCI	6069	7131
P/Tools 3 N/B	5308	6238
P/Tools Project	1899	2231
Session 8 PC	1519	1784
888 I/O	2279	2677
882 I/O	759	891
EMU		
Darwin	2552	2999
Darwin + 1GB	2892	3399
Roland		
VS880	1275	1499
Soundscape		
SSHDR1	2212	2600

SYNCHRONISERS

Mark/Unicorn		
Micro Express	254	299
Pocket Express	186	219
MIDI Express	297	349
MTP AV	552	649
JL Cooper		
Datamaster	509	599
DataSync2	234	275
PPS100	339	399
Opcode		
Studio 4	348	410
Studio 5LX	798	938

SAMPLERS/DRUMS

Akai		
S2000	722	849
S3000XL	1531	1799
S3200XL	2977	3499

MIDI MODULES

Akai		
SG01v	254	299
SG01k	254	299
Alesis		
S4 Plus	680	799
QS6	807	949
EMU		
Classic Keys	475	559
Proteus Ultra	1105	1299
Planet Phat	765	899
Morpheus	846	995
Orbit	739	868
Novation		
Drum Station	382	449
Super Bass St	382	449
Roland		
MC303	480	565
JV1080	1017	1195
Waldorf		
Pulse	510	599
Yamaha		
MU5	211	249
MU50	382	449
MU80	509	599

COMPUTERS

Apple		
4400/160 Display	1275	1499
8200/100 8/1.2CD	1540	1809
7300/166 16/1.2CD	1846	2169
7300/200 16/1.2CD	2223	2612
Display 14"	248	291
Display 15"	313	367
Display 17"	558	655
Display 20"	1379	1620

MINI-DISC

Sony		
MZ-R30	255	299
MDS-JE500	255	299
MDS-SB44	1313	1543
MDS-B5	1838	699
Tascam		

CASSETTE DECKS

Denon		
DRM540	135	159
DRM640	169	199
DRS810	254	299
DRW580	170	199
DRW760	212	249
Marantz		
PMD201	275	323
PMD222	355	417
CP430	425	499
PMD502	295	364
PMD510	545	640
Sony		
WMD6C	254	299
Tascam		
102 Mk II	211	249
202 Mk II	297	349
302	424	499
112 Mk II	509	599

MIXERS

Allen & Heath		
GL2	1098	1291
GL3000 16	2198	2583
GL3000 24	2998	3523
Behringer		
Eurodesk	1956	2299
MX2642	637	749
MX2802	552	649
Mackie		
1202 VLZ 12/2	339	399
1402 VLZ 14/2	467	549
1604 VLZ 16/4	807	949
SR24/4 VLZ	1272	1495
SR32/4 VLZ	1527	1795
SR40/8	7659	8995
16/8	2446	2875
24/8	3055	3590
32/8	3740	4395
24E Expander	2339	2749
Samson		
MPL1204 12/4	424	499
MPL1502 15/2	228	269
MPL1640 16/2	458	539

AMPLIFIERS

Alesis		
RA100	297	349
C-Audio		
ST400	595	699
ST600	850	999
RA2001	881	1036
RA3001	1139	1339
Denon		
PMA250 Mk3	136	159
PMA350 II	195	230
PMA450SE	237	279
Mackie		
M-1400	510	599
Mass		
Mass 150	234	275
Mass 250	297	348
Mass 500	339	399
Samson		
Servo 150	195	229
Servo 240	254	299
Servo 500	339	399

MONITORS

Alesis		
Monitor 1	276	325
Monitor 2	595	699
Dynaudio		
BM5	336	395
BM10	506	595
BM15	680	799
M1	1499	1761
M2	3199	3758
Genelec		
1029A	645	757
1030A	1124	1320
1031A	1956	2298
KRK		
K-ROK	297	350
6000	595	699
7000B	995	1169
9000B	1595	1874
Tannoy		
PBM6.5 Mk2	259	305
System 600	254	299

MULTITRACKERS

Fostex		
XR5	322	379
380S	680	799
Tascam		
424	467	549
464	680	799
03	169	199
Yamaha		
MD4	765	899

HEADPHONE AMPS

Behringer		
Powerplay	255	299
Samson		
Q5	127	149
Symetrix		
SX204	265	311

CD-RECORDERS

Marantz		
CD-R 615	1995	2344
CD-R 620	2995	3519
Pioneer		
PDR05	1105	1299
Yamaha		
CDE-400	599	703

MICROPHONES

AKG		
C1000	160	280
C3000	203	239
C12VR	2999	3523
C414ULS	680	799
C747 Comb	379	445
SE300B	149	175
CK91	149	175
WMS50 RadioMic	389	457
Audio Technica		
AT4033 + Sus	424	499
AT4050	787	925
AT822	297	349
Beyer		
	199	

CLASSIFIEDS

☎ 01954 789888 Fax 01954 789895 - Patrick Shelley

DISPLAY BOX
£28.00 + VAT
per single column centimetre
Discounts offered for series.

SITUATIONS VACANT
£32.00 + VAT
per single column centimetre.

LINEAGE
85 pence per word including VAT
(minimum of 12 words).

Classified Dept., Sound On Sound, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ

(3 column page). Spot colour available on request.
Box Numbers available at an additional £30.00 per insert.

The attention of advertisers is drawn to the Business Advertisements (Disclosure) Order of 1977, which requires by law that from the 1st January 1978 all advertisements by persons who seek to sell goods in the course of business must make that fact clear. From the above date, consumers, therfore, should know whether an advertisement relates to a sale by a trader or a private individual.

Index to Advertisers

Artists Wanted	300	Duplication	292-296	Insurance	291	Soft Cases & Covers	291
Clubs	297	Flight Cases	300	Programming	291	Studio Acoustics	300
Computers	301	For Hire	297	Recording Studios	300	Studio For Sale	301
Courses	298-299	For Sale	285-290	Services	296-297	Tuition / Programming	290
Digital Mastering	296	Ideal Mastering	296	Situation Vacant	300-301	Wanted	290

FOR SALE

MULTITRACK SALES CENTRE

AKAI S1000 8MB (dig i/o)	£785
ENSONIQ MR (+World exp + 2MB RAM)	£699
ROLAND DM80 mint + mac interface	£499
DYNAUDIO C3 pair	£OFFERS
ROLAND JV1080 + EXP BOARD	£695
YAMAHA REV 1 + RCR 1 remote control	£899
FOSTEX M80 (new re con head)	£399
FALCON 14 mb/65 int/c.audio/500hd/mon.	£499
ROLAND D50	£299
TASCAM TSR8	£699
FURMAN 6 X H/PHONE AMP	£299
AKAI S2800 16Mg + 650Mg H/D	£799
YAMAHA MT8X (6 hours use as new)	£599
ROLAND SUPER JX10 + f/case	£595
KORG M1	£450
EMU EMAX SE keyboard	£395
DIGITECH VOCALIST II mint	£350
ROLAND JD800	£899
ROLAND JUPITOR 8 (MIDI)	£995

WANTED
ALL STUDIO & MUSIC EQUIPMENT

ARX 6 GATE	£299
E-MAGIC LOGIC AUDIO PC	£199
KORG 01W/FD + F/CASE	£650
S/MASTER DIAMOND CLUB 16:2 (mint)	£250
YAMAHA MV 1602 (rack 4 aux + eq)	£399
STUDIOMASTER PROLINE GOLD 16:8:16	£499
WALDORF MICROWAVE (as new)	£699
TURTLE BEACH TROPEZ PC	£150
E-MU PROTEUS FX (mint)	£350
SONY M7/D7 (mint)	each £499
ALESIS 3630	£139
ROLAND JV1000	£799
ALESIS QUADRASYNTH (76 note as new)	£499
ROLAND RSP 550 (fx + vocoder)	£399
SONY MZ R3 (m/disc walkman as new)	£199
AKAI S2000 10Mb (8 out exp dig i/o)	£799
ROLAND SRV2000	£299
LEXICON REFLEX (LXP1)	each £225
AMPEX 1/2" + 1" 456 USED TAPE	from £10
AKAI CD3000i (as new + sample op)	£OFFERS
YAMAHA SPX900 (boxed)	£299

☎ ASCOT (01344) 891110 or (0831) 882666

PhutureSounds
Tel / Fax 01753 582 221
24hrs. 0378 838 217
E-Mail sales@phuture.co.uk website http://www.phuture.co.uk

MEMORY & IO UPGRADES
SIMMS FOR APPLE / PC'S ALSO AVAILABLE

$950
750Kb Boards £low

$1000/$1100
8Mb Boards £low SCSI Boards £low

$2800/$3000/$3200
Digital IO Boards £low

$2800/$3000/$3200
8Mb Boards £low

$2000/$3000xl/$3200xl
4Mb £low 16Mb £low 32Mb £low

ASR-10/K2000/K2500/ESi-32/E64/EIV
8Mb £low 16Mb £low 32Mb £low

EIVk/EIVx/E6400
16Mb £low 64Mb £low

S-760/DJ-70 Mk II
8Mb £low 16Mb £low

All memory upgrades are brand new. Akai boards are warrantied for 3 years **SIMMS are warrantied for life**

ANALOGUE / FOR SALE

Akai S1100 (10mb, SCSI & Dig IO)	£1,099
Alesis Midiverb 4 (mint & boxed)	£225
Akai S2800 (2mb, SCSI, mint & boxed)	£649
Boss SE-70 (mint & manuals)	£399
Boss SE-60 (mint & manuals)	£245
Korg DW-8000 (orig. manuals + cass)	£299
Moog Source (excellent condition)	£399
Moog Prodigy (mint)	£295
Casio CZ-1000 (mint & manuals)	£139
Novation Drum Station (mint & boxed)	£349
Roland JD-800 (flight cased)	£875
Roland Juno 106 (mint)	£475
Roland Juno 106 (mint & boxed)	£495
Roland MKS-30	£299
Roland PG-200	£199
Roland S-330 (with mouse & monitor)	£399
Roland SDX-330	£495
Roland SH-101	£275
Roland SH-101 (boxed)	£299
Roland TB-303 (mint)	£750
Roland TR-606	£120
Roland MC-202 (boxed & mint)	£295
Sequential Pro-One (unbeleivable mint)	£399
Roland TR-727	£135
Roland TR-909 (mint)	£899
Yamaha REX-50	£125
Yamaha TG-33 (mint & boxed)	£149

WANTED - WANTED
analogue synths & drum machines / all samplers we can pay cash & collect

'Hands On' MIDI Software Ltd

Pre-Season Sale

Buy any 4 MIDI Files Choose Another 1 FREE

ALL MIDI files JUST £5.99 inc

The BEST just got CHEAPER!!!

Buy any 7 MIDI Files Choose Another 3 FREE

Offer must end - 1st July 1997

Superior quality MIDI files - suppliers to I.B.M, Roland, Yamaha and Microsoft

Call for your FREE 40 Page MIDI file Catalogue and 20 Page Product Catalogue - *NOW!*

Latest Releases
Sometimes - *Brand New Heavies*
Old Before I Die - *Robbie Williams*
I Beleive I Can Fly - *R. Kelly*
You Might Need Somebody - *Shola Ama*
Drop Dead Gourgeous - *Republica*
Love Won't Wait - *Gary Barlow*
I'll Be There For You - *The Rembrandts*

All trademarks acknowledged. Prices and specifications are subject to change without notice. E & OE

A.M.P.
"Hands On" Midi Software Ltd., 11 Warfield Avenue, Waterlooville, Hampshire PO7 7JN
Tel: 01705 783100, Fax: 01705 783200, BBS 01705 783400, Dial A Demo: 01705 783500
Compuserve 100316,3542, Internet: http://www.hands-on-midi.com

FOR SALE

MUSIC HOLLY END

BACKING TRACK SPECIALIST

AVAILABLE ON GM/GS/XG MIDI FILE CASSETTE OR CD
ANY SONG YOU REQUIRE, WE CAN DO IT, WITH OUR GUARANTEED BEST PRICED PROGRAMMING SERVICE
PHONE FOR FREE CATALOGUE AND DEMO DISK

YOU CAN SOUND LIVE AT LAST

TEL/FAX: 01892 534676
E-Mail: hollyend@aol.com

BASS BOX

Mixed-mode Sample CD-ROM offering the ultimate in Disco & Dub bass guitar riffs and much more.

£30 inc P+P - cheque with order to:

Small Recordings
PO Box 11636
London SE19 1ZH

Studio Systems

"The home where the Soundtracs roam"

Need to buy a new mixing console?

Why buy new, when there are so many good quality S/hand mixers available? Have you thought about a S/hand Soundtracs? We can provide over 20 different console types from a £500, "16/8/16" to a £10,000 "Quartz 48"
We can deliver, install and guarantee for a year, a Soundtracs console with a much higher quality specification than most new consoles at a similar price.
Maybe you're worried about after-sales service? We're still giving free back-up on sales of over five years ago!!
Come and demo a S/hand Soundtracs in our new purpose built Studio Showroom.
Call Tim Jones at *Studio Systems*, the Soundtracs specialist
WATFORD U.K. 01923 267733
Email: tm@studiosys.demon.co.uk
www.studiosys.demon.co.uk
We're always on the lookout for Soundtracs consoles!

Heavenly Music **MIDI** Software

NEW - AWE CDROM

Great value at £49.99 plus p&p

01255 821039

PO Box 3175 Clacton, Essex CO15 2RP
E-mail: heavenly@ortiz.demon.co.uk
Web site at: http//www.ortiz.demon.co.uk

THE WORDS LARGEST BUILDING BLOCK & MIDI FILE CATALOGUE

AARONSOUND

ROLAND VS880 D/O 8 TRACK RECORDER + F/X + DRIVE	£1249
YAMAHA PROMIX (MINT)	£999
BOSS SE70 £429, ...DS330 GM MODULE	£175
TLA 8 CH VALVE INTERFACE (WARMTH FOR DIGITAL)	£279
AKAI S3000 4MB & SCSI £1099, ...CD3000 XL 18MB	£1499
S1000 8MB SCSI £869, ...S950 £469, ...S900	£329
8MB EXP FOR S1000 £199, ...8MB FOR S3000	£245
YAMAHA SY85 £595, ...SY55 £345, ...TG55	£229
ROLAND MC303 (BOXED) £299, ...XP50 (JV1080 SYNTH)	£799
KORG WORKSTATION EX + 3 CARDS £675, ...M3r	£269
WALDORF WAVE (BEST SYNTH EVER) £4300, ...PULSE	£399
NOVATION BASS STATION KBD £199, ...RACK	£269
OBERHEIM OBXA MIDI (MINT) £795, ...OBXA	£699
ROLAND D50 £349, ..SH09 £229, ..JUNO 106 £475, ..A/JUNO 2	£299
ROLAND MC202 £265, ...MKS7 £249, ...MKS80 + MPG-800	£1599
KORG MONOPOLY (MINT) £389, ...DW8000	£275
KORG MS10 £169, ...EX800 £125, SIGMA	£199
ARP AXXE £179, ...OMNI 2 £229, ...PRO DGX	£195
YAMAHA CS50 £299, ...ALESIS RA100 AMP	£189
RHODES CHROMA £699, ...QUAD 306 P/AMP	£179
ROLAND TB303 (BOX & MANUAL) MINT	£745
MACKIE CR1604 DESK £469, ...TASCAM MM1 (20CH + MIDI)	£329
FOSTEX 812 8 BUS DESK £375, ...FOSTEX 2016 LINE	£169
YAMAHA NS10m MONS £175, ...ALESIS MONITOR 1s	£199
PHILLIPS DCC + TAPES (BOXED)	£159
SONY M.D. WALKMAN + STEREO MIC (COST £549) (PB & RECORD)	£249
DRAWMER DL221 COMP/LIM	£239
ALESIS MIDIVERB 4 £229, ...MICROVERB 3	£120
APHEC C (BIG BOTTOM) £149, ...APHEC C (MKI)	£120
AKG C414 B ULS MIC	£499
TASCAM TSR8 + REMOTE, BOXED LOW HRS	£789

ALL PRICES INC VAT

WANTED

All Gear & Studios for Cash

Overnight delivery — Same Day Collection
We are looking for :- Analogue Synths & Drum Boxes, Outboard + FX, Juno 106, Samplers, JD800, Mixing Desks etc.
WE WILL SELL ALL YOUR EQUIPMENT ON BROKERAGE!

FAX / TEL 0161 442-8616
MOBILE 0831 1066-85

Music World

MUSIC TECHNOLOGY SPECIALISTS

NEW • USED • EX-DEMO – ALL EXCELLENT

Roland MC303 (Instant Groove)	£399	Atari ST + Hi Res Monitor (industry standard)	£[illegible]
TB 303 / TR909 / SH101 / MC202	£PHONE	Korg Poly 6 Analogue (hands on)	£259
Quasimidi 309 (new)	£595	Quasimidi Raven (dance)	£750
MAB 303 (authentic)	£249	Yamaha QY100 Sequenced (absolutely mint)	£450
Drop Bass (CV/MIDI)	£199	Peavey Spectrum Bass	£149
Minitor 1 (monitors)	£245	Roland D550 (classic)	£295
Samson 150 Amp (Awesome)	£199	PG1000 Programmer	£149
Mackie 1202 (great little mixer)	£249	Zimmer Frame 30s	£40
Yamaha Promix 01 Digital (mint)	£1,150	Various Stands / Leads	£PHONE
Emu Orbit v2 S ware (as new)	£595		

Above just a selection. Phone for requirements
UNBEATABLE deals on NEW equipment. Buy/Sell/PX!
SIMM Memory for Samplers/PC's/Mac available
Delivery & Collection Service Available

Phone Now!

WANTED

All music equipment & complete studios
☎/Fax (01252) 522677/0410 948096

ADVANCED SOUNDS LTD

New & Used Equipment Sales
Selection of current used stock
(Telephone for new equipment prices)

Akai S3000XL (5 months)	£1379	Lexicon PCM80 (9 months)	£1599
AKAI CD3000XL + CDs (5 months)	£1599	Lexicon MPX1 (5 months)	£879
AKG 414ULS (new - special offer)	£739	Mackie 24/8/2 (5 months)	£2159
AKG 414ULS (18 months)	£639	Mackie 1202 VLZ (4 months)	£249
AKG C3000 (2 months)	£215	Mackie CR1604 VLZ (4 months)	£695
Alesis Midiverb 4 (2 months)	£249	Roland JP8000 (3 months)	£1199
Alesis ADAT XT (215 hrs)	£1749	Shure SM58 (exc cond-6 months)	£59
Behringer Ultrafex 2 (2months)	£169	Tascam DA20 (4 months)	£589
Behringer Intelligate i2 (2months)	£169	Tascam DA38 (4 months)	£2199
Fostex 3045 (16ch Dolby C for G16Si)	£499	T L Audio Valve Comp (3 months)	£899
Fostex DMT8VL (4 months)	£799	T L Audio 2012 Valve Para EQ	£499
Fostex D50 (4 months)	£999	Yamaha MX124 Mixer (2 months)	£349
Fostex D5 DAT (4 months)	£629	Yamaha REV 500 (2 months)	£349
Korg Trinity Plus (4 months)	£1399	Yamaha MS202 Pow Mons (pair)	£329

* Part exchange and equipment purchased for cash * Licensed credit broker * Multitrack and Keyboard Repairs * Well established co formed in 1983 * We can despatch by courier overnight * Studio and Musical equipment hire dept including home recording packages. Prices include VAT

TEL: 0181 462 6261 (OR 8621)

ROW AUDIO SALES

NEW - USED - EX DEMONSTRATION

AKAI S1000, SAMPLER DIG IN/OUT SCSI 8 MEG	£950
SONY DTC 77ES, 4 HEAD PRO DAT MACHINE, IMMACULATE	£600
AIWA HDS100, PORTABLE DAT BOXED AS NEW	£450
DENNON DTR2000, DAT MACHINE, INC REMOTE	£400
YAMAHA MT8X, PORTASTUDIO	£600
TASCAM 488, PORTASTUDIO	£475
SOUNDTRACS TOPAZ 24/8/2	£1300
SOUNDCRAFT SPIRIT STUDIO 24/8/2 EX HIRE BOX WARRANTY ETC	£1200
FOSTEX 812	£450
LA AUDIO CX8 COMPRESSER	£400
ALESIS QUADRAVERB+	£240
ALESIS QUADRAVERB GT, BOXED AS NEW	£275
ALESIS MEQ 230, GRAPHIC EQ	£180
BBE SONIC MAXIMISER MODEL 322	£150
BEHRINGER COMPOSER, EX HIRE 4 OF, FULL WARRANTY	£175
BEHRINGER AUTO QUAD	£225
BEHRINGER COMPOSER, EX DEMO	£175
FOSTEX PATCHBAY	£40
FRONTLINE X4 CHRS/DEL/FLANGER	£100
ACCESIT REVERB	£80
BBE SONIC MAXIMISER, 362	£150
SESSIONMASTER AWARD PRE AMP	£120
D&R COMPRESSER	£80
BEHRINGER EXCITER TYPE F	£150
DIGITECH STUDIO VOCALIST, ES DEM, FULL WARRANTY	£750
ART ALPHA F/X UNIT	£150
KORG M1	£500
KORG 01W/FD, WORKSTATION, IMMACULATE, MANUALS ETC	£750
YAMAHA SY85, INC MANY EXTRA SOUNDS, BOXED AS NEW	£600
ROLAND D20, INC PG200, PROGRAMMER	£425
YAMAHA DX7 MKI WITH EXTRA ROM SOUNDS	£220
ROLAND D50, PLUS SOUND CARDS	£450
KORG WAVESTATION, MINT COND. INC MANY EXTRA SOUNDS	£625
YAMAHA CS01 POLYSYNTH	£100
NOVATION BASSTATION KEYBOARD	£200
ATARI 1040+144 MON	£250
ALESIS MONITOR 2, BOXED EX DEMO, POWERFULL, MID FIELD	£450
JBL CONTROL 5+ MONITORS	£250
ALESIS SR16, DRUM	£150
YAMAHA RY30, DRUM MACHINE	£250
ROLAND MC303, BOXED EX DEM	£400
ROLAND SUPER SC88 SOUND CANVAS	£450
ROLAND MSQ700	£150
ART DRX, F/X, MULTI FX	£200
KAWAI K1R, SOUND MODULE	£170
ALESIS MIDIVERB 4, EX HIRE	£240
KORG N264 WORKSTATION EX HIRE WARRANTY BOXED ETC	£850
AKAI S2800 SAMPLER (EX HIRE) EMAC	£825

ALL PRICES INC. VAT.

WANTED

ALL USED GEAR. COMPLETE HOME OR PRO STUDIOS. SAME DAY COLLECTION
BEST PRICES PAID. OPEN 7 DAYS

TEL 0161 483 8551 ANYTIME
0468 - 946450 MOBILE

E-mail: labyrinth@airtime.co.uk Web Site: http://www.airtime.co.uk/labyrinth

STANDARD MIDI FILE COMPILATIONS FEATURING LYRIC DISPLAY
Hardware/Software Dependable
£14.99 PER ALBUM!
THESE TITLES NOW AVAILABLE

BEATLES HITS VOL 1 • BEATLES HITS VOL 2 • BEATLES HITS VOL 3
MADNESS CHART HITS • QUEEN GRATEST HITS • ROXETTE ALBUM
SOUL GREATS • CLIFF RICHARD HITS • ABBA SONGS • BIG BAND GREATS
EURYTHMICS • THE 80's MIX • THE 60's MIX • ROCK OF THE 80's
THE JAZZ MIX • GLORIA ESTEFAN & MIAMI SOUND MACHINE
HITS OF 1967 • HITS OF 1969

NOW SUPPLYING MAJOR DISTRIBUTORS WORLDWIDE
More Titles to Follow Shortly
AVERAGE 8 TRACKS PER ALBUM

GET YOUR ACT TOGETHER WITH CAKEWALK PRO V5

Please call us for a free information sheet on any of the Cakewalk range of products

Cakewalk Pro V5 CD/3.5"	£185.00
Cakewalk Home Studio CD/3.5"	£95.00
Cakewalk Pro Audio CD/3.5"	£290.00
Cakewalk Pro Audio Deluxe CD/3.5"	£340.00

All prices include VAT. Please add £5.00 for p&p

Compuserve: 100305, 1751

Labyrinth Product Index

- Extensive SMF A-Z Song Catalogue (Bulk Buying Discount Available)
- DAT, Cassette and Sony Minidisc Formats
- SMF Compilation Albums
- Brand new Korg i-Series style compilations
- Quality sound cards (Turtle Beach, Yamaha etc.)
- PC Publishing range of music books
- PC sequencing software * peripherals (Special Offers on many products)

Please call us to receive a FREE 56 page product catalogue
Overseas enquiries please send £2.50.
Sameday despatch on orders. All major credit cards accepted.
SMF Software suppliers to Roland and BCK Products.

STYLES FOR KORG

New i-series style disks available. Programmed by the team at Labyrinth. These currently available are:

- Rock Styles 1
- New Country Styles 1
- Pop Styles 1
- Big Band Volume 1/2
- Theatre & Swing (All new arrangements)
- Dance/Rave Styles 1
- "E.P. Ballads" Vol 1

"Offer" £5.99 per style disk!

Labyrinth Midi Music, Labyrinth House, 11 Albert Place, Lower Darwen, Blackburn, Lancs. BB3 0QE
Telephone: 01254 678915 Fax: 01254 678917
Licenced In The U.K. by MCPS and EMI.

1815

TRIPLE DAT

DO YOU OWN A PC?

YOU

will get the best advice and prices from us ...

We stock all Turtle Beach products plus Saw, Cakewalk Audio, and much more

STOP PRESS ..... 2 NEW Cards - Call for details

Cubase / Tahiti Bundle

Complete PC music systems available, configured with your choice of Sound Card & Software!! Just switch on & go!

- INTEL P166
- 2GIG EIDE HDD
- 256K PIPELINE CACHE
- VX CHIPSET
- WINDOWS '95
- KEYBOARD/MOUSE
- 8 SPEED CD ROM
- 14" SVGA MONITOR
- £1250 INC VAT
- CALL FOR OTHER SYSTEMS

MUSIC MAKER **01309 676 008** COMPUTERS Phase II

Call John - Weekend and evening calls welcome!

TRIPLE DAT

CASH PAID

FOR MUSICAL INSTRUMENTS, SYNTHS, MODULES, SAMPLERS, DRUM MACHINES, RECORDING, SEQUENCERS.

Collection Available
Please phone for current list of S/H equipment.

SOUNDWORLD

Tel. 01245 353878 *(daytime)*
0370 673271 *(mobile)*

1829

TRACK EXPANSION

For multi-track recorders.
Never run out of tracks!

28 pure audio tracks from a 4 track!
300 tracks from an 8 track!
Without track bouncing!
All tracks can be kept!
Fully descriptive booklet and sync tape.
No other equipment needed.

£49

GUARANTEED TO WORK OR YOUR MONEY BACK.

To order, or for more details, write or phone:-

Spectrum Sound Studios. (Dept. SS 2)
31 Westborough Road, Westcliff, Essex SS0 9DR
01702 354045

877

Twiddly Bits.... The First name in MIDI samples.

We were the first company to provide MIDI performances from 'name' musicians using the corresponding MIDI controllers - Offering you a more flexible alternative to audio samples. **1000's** of hours are spent sourcing, recording and editing performances from some of the worlds finest players from Rio to London & San Francisco.
And with programming tools? Again we are the worlds first: The first to provide the Vol 2 Gate Effects disk, the first to bring you GS/XG Filter templates with Vol 7. And with Vol 8 the first to bring you GS/XG Dual Drum Mode loops.
Perhaps that's why we're the only MIDI Sample company to acheive two seperate Platinum awards in Future Music and a coveted 5 Star *killer* review in Keyboard US magazine.
We've some more firsts planned for this year but in the meanwhile here's something that maybe of interest - Our One World Song Contest, the winner of which will be able to experience in the world music scene in Japan, USA, Australia & Europe.

Twiddly Bits...the ultimate MIDI accessory.

Vol 1 - Gen Insts £19.95
"If you only buy one MIDI File Disk Buy this" The Mix

Vol 2 - Gate Effects £12.95
"Essential" Future Music

Vol 3 - Elec & Ac Guitars £19.95
"It's an essential add on" Future Music." PLATINUM AWARD

Vol 4 - Drum & Perc £19.95
"The playing is first rate." Future Music

Vol 5 - Country £19.95
"It's hard to believe the performance is coming out of a GM Module" SOS

www.gmedia.net/keyfax

Vol 6 - Funk £19.95
"The files themselves are excellent" Future Music

Vol 7 - Programmers Toolkit £19.95
"It's the most essential set of MIDI File tools for dance creators we've seen. Go get it." FM PLATINUM AWARD

Vol 8 - MIDI Breakbeats £19.95
From players & programmers in the UK & US. From D&B to Hip Hop

Bill Bruford Packet of 3 £POA
MIDI, CD Audio & ROM from the legendary drummer. Another 1st!

Rabbits Rock & Country Piano £24.95
Killer piano riffs from the man behind The Who & Bob Marley

Keyfax UK. PO Box 4408, Henley on Thames. Oxon. RG9 1FS Tel: 01491-413938 - 100705.3565@compuserve.com
Keyfax US. PO Box 958 Aptos CA 95001-0958 **Tel: 408-688-4505** - 102045.3065@compuserve.com
Order direct or call for [illegible]

FOR SALE

Band in a Box

Want a better band in your box?
If so - get some Norton Music style disks
Created by a musician, for musicians
Phone for free catalogue
Prestige Music Services - 01527 60033

1831

Atari ST

For all your Atari ST needs
Keychange Music Services. 01925 266120

1768

Stage 1 music

Telephone or write for a FREE Catalogue
MIDI SONG FILES
Tel: 01843 836150
6 Linden Close, Westgate, Kent CT8 8EH
Fax: 01843 836151

796

THE FIRST CHOICE FOR PROFESSIONAL MIDI FILES USERS

What do you want?....We've got...

•60's- Mersey Sound to Flower Power •70's- Glam to Glitter for All the Young Dudes
•80's- Say no more •LINE DANCING- The biggest selection of Country...in the country!
•ROCK & ROLL- C'mon everybody let's be bop a little! •GUITAR LICKS- we pick the best!
•SOUL- we have a commitment
•RAP, RAVE, DANCE, JUNGLE, HIP HOP- Sorry, try somewhere else!

Midi Magic INTERNATIONAL

Representing •BANDTRAX *(Australia)* •G7 Music & Co. *(Italy)*
•Ray Doyle Music *(Australia)* •Midi Link *(New Zealand)*
NOW SUPPORTING MINI DISK & AUDIO CASSETTE
SEE OUR NEW 1997 CATALOGUE FOR VARIOUS 'CUT & PASTE' PRODUCTS FOR DIY TRACKS
20 MYSYDD TERRACE SWANSEA SA1 2PZ UK
Tel/Fax:(01792) 642381 FOR FREE '97 CATALOGUE & DEMO DISK
E-MAIL 100733.555@compuserve.com

ALL PRODUCTS ARE SOLD UNDER LICENSE ONLY, FOR USE ONLY BY THE PURCHASER AND NOT FOR RESALE, EXCHANGE OR DUPLICATION IN ANY FORM

Sound Effects

- Ten CD Library of 1000 SFX
- All digital recordings (DDD)
- Never previously available in the UK
- A complete library of every type of effect

£49.99 For all 10

1712

Info / Credit card orders 0121 434 4000

CUSTOM CABLES TO DIGITAL RECORDING

LOWEST PRICES
River PRO-AUDIO
CALL FOR OUR CATALOGUE
0171 231 4805
LONDONS NO1 PRO AUDIO COMPANY

1891

Studio Sounds!

We stock the latest Turtle Beach, Yamaha, Roland Soundcards and modules, wave editors, Cubase Audio, Cakewalk Audio, SAW, QUAD, Sound Forge, Triple DAT v2.0 and much more.

16-Track digital recording packages for under £400!
Yamaha DB50XG Synth Card.....£139
Evolution MK149 Midi Keyboard.....£149

Also samplers, libraries, memory fast AV hard drives, CD-Writers, PC components and virtually all Pro Audio gear.

Special offers on our 2nd user PC's, Mac and Atari software and hardware.

Call the Digital Audio Specialists.

Symtrex Audio Tel: 0115 956 0999
Fax: 0115 956 0998

1551

DJK MIDIFILES & MUSIC SOFTWARE

A small selection of what we stock:-

- **DJK Midi Songfiles**:- Our own extensive range of over 800 titles/medleys from the 50's to current chart hits in any key with lyrics. Used by live performers worldwide. Available in any key with lyrics. Songs programmed to order. Also available on cassette, DAT, MiniDisc & CD.
- **Roland, Labyrinth, Classical, Backbeat & Vintage Midifile Albums**:- If you gig, you need these disks! - £14.99 per album
- **Tune 1000 Midifiles Albums**:- With vocal harmony data. Ideal for use with the Digitech Midi Vocalist Harmony Processor - £14.99 per album.
- **Midifile Albums With Songbooks**:- Containing melody lines, lyrics and chord symbols of all the songs - from £12.99 per album.
- **Midifiles On CD-ROM** inc. "50 No. 1 Hits" for only £24.95.
- **Educational Midipacks**:- Learn how to improvise over melodies, riffs and chord sequences - from £13.99 per pack.
- **Creative Essentials Audio, WAV, AIFF Sound Sample Collections on CD** - only £19.95 per disk
- **Four oct. mother keyboard + Cakewalk Home Studio only £119.99**
- **Books**:- Fast Guide To Cubase - £10.95, Handbook of Midi Sequencing - £13.95, Cubase Power Users Guide - £11.95, PC Music Handbook - £10.95 + many more.
- **Best Prices for Cakewalk & Cubase Sequencers, Yamaha & Turtle Beach & Soundblaster Soundcards, Zip/Jaz Drives etc.**
- **Piano/Vocal Songbooks.**
- **Twiddly Bits**:- Hundreds of dazzling riffs, runs, patterns, grooves and licks as standard midifiles from £12.99 per disk.
- **Style Disks** for Roland, Korg, Technics and Yamaha keyboards - only £14.99 per disk.
- **Keybags**:- Strong, well padded bags for keyboards and modules. Dustcovers, Leads & Cables also in stock.

Telephone or write for our free midifile demo and catalogue:- DJK Music, Malgrat, Thorpe Road, Tendring, Essex CO16 0BW
Phone: 01255 830185 (9-5); 861949 (eves/weekends); fax 861190 E-mail: djk.music@dial.pipex.com
Fast efficient service. Most major credit cards accepted. Mail order only.

1783

Dolphin Music UK

1300+ MIDI FILE TITLES ...AND RISING

Midifile 'Collections' now available

Country & Western/Abba/Roxette/Queen/Earth Wind & Fire/Soul/ 60's/70's/80's/Gloria Estefan/Eric Clapton/ Beatles Volumes 1,2,3/ Carpenters/Cliff Richard/Annie Lennox/Classical Midifiles/John Williams and more...

Midi collections equivalent to **£1.50** per song ...Unbeatable Value !!

Keyboard Style Disks and Style Cards

Roland/Korg/Solton/Technics ...more coming soon ! **MUSICAL ACCESSORIES** See main catalogue

TranTracks *USA - The Professional Choice
WHAT PRICE ARE THEY ? Midi files from ... £4.95 each (inc. vat)
Arranger Series *USA - A Big Ballsy Feel
Real Tracks *Canada - Masterful Arrangements
(Exclusive to Dolphin Music UK in Europe)

Call for your FREE Catalogue
01573 440559
FAX for your FREE Catalogue
01573 440515
P.O./Cheque

DOLPHIN MUSIC.UK

Existing customers and those who are on our database WILL be automatically mailed

WHAT FORMATS ARE THERE ?
PC/Atari/Alesis Data Disk/Mac(system 7+)
AVAILABLE ON:
3.5" Diskette/Minidisk/Dat tape/Audio Cassette
COMPATABLE WITH ALL EQUIPMENT CARRYING THE
GM/GS/XG Logos

Or snail mail us at
Dolphin Music UK,
Samieston House, Jedburgh,
Roxburghshire TD8 6RR,
Great Britain

Please E-mail us at
ps-dolphinmusic@msn.com
dm uk82865@AOL.com

Dolphin Music UK are EMI & MCPS registered

WRH

EUROPES WIDEST SELECTION OF NEW, SECONDHAND AND VINTAGE SYNTHESIZERS, SEQUENCERS, DRUM MACHINES, SAMPLERS AND RECORDING EQUIPMENT

OVER 10,000 ITEMS

OF SOUGHT AFTER SECONDHAND MUSICAL EQUIPMENT AVAILABLE

Whatever you're after, however elusive, if it exists - we'll find it.

Our unique database lists the whereabouts of over 10,000 items of sought after musical equipment. Whether you're after a Moog Modular System, a mint condition TB303 or a lowly Stylophone we can locate it for you.

A quote is given to you before we source the equipment ! - and if we end up paying less for it than we expected to ... we'll lower the price accordingly !

Prices are worked out from the average of those listed in the secondhand classified ads, So you don't pay for fashionable inflation.

All secondhand equipment is serviced by our qualified service department and guaranteed for 3 months !

We are the only company in Europe that can offer our customers this search facility.

Keyboards

Alesis QS6	£649
Alesis QS8	£1549
Ensoniq ESQ1	£249
Ensoniq SQ2	£449
Fatar 610	£79
Fender Rhodes Stage 73	£529
Goldstar GMK 49	£99
Hammond XB2	£899
Hohner Clavinet	£449
Kawai K4	£349
Korg CX3	£579
Korg DW8000	£299
Korg Lambda	£79
Korg monopoly	£449
Korg MS20	£449
Korg O1wfd	£779
Korg Polysix	£299
Korg Prophecy	£649
Korg Trinity	£1399
Korg Wavestation	£589
korg M1	£499
Kurzweil K1200 Pro	£699
Kurzweil PC88	£1699
Mini Moog	£999
Moog Prodigy	£299
Nord Lead	£999
Oberheim Matrix 12	£call
Oberheim OBXA	£899
OSC Oscar with midi	£899
PPG Wave 2.3 & Waveterm	£1399
Roland A90 EX	£call
Roland D50	£349
Roland D70	£549
Roland JD800	£1199
Roland JP8000	£1499
Roland Juno 106	£499
Roland Jupiter 4	£349
Roland Jupiter 6	£749
Roland Jupiter 8	£1049
Roland JX10	£599
Roland JX8P	£329
Roland MC202	£299
Roland VP330	£899
Roland SH101	£299
Roland XP50	£899
Roland XP80	£1279
Sequential Circuits Prophet 1	£419
Sequential Circuits Prophet V	£1099
Sequential Prophet VS	£849
Wurlitzer EP200	£479
Yamaha AN1x	£899
Yamaha CS1x	£529
Yamaha DX7	£279
Yamaha KX88	£899
Yamaha SY85	£679
Yamaha SY99	£989

Speakers

Alesis Monitor 1	£199
Soundcraft Absolute Two	£239
Soundcraft Absolute Zero	£199
Tannoy System 800	£call
Genelec	£call

Recording

Akai DR8	£2579
Akai DR16	£3499
Alesis ADAT	£1249
Alesis Ai2	£399
Alesis Remote Meter Bridge	£399
Digidesign AD/IN	£349
Digidesign DAT I/O	£349
Digidesign Sound Accelerator	£549
Ensoniq Paris	£call
Fostex D160	£call
Fostex D5	£769
Fostex D80	£1199
Fostex D90	£1499
Fostex R8	£599
Fostex XR7	£429
Roland VS880 Mk II	£1499
Soundscape Version2	£call
Tascam DA 30 mark II	£899
Tascam DA20	£639

Modules

Akai S60 Series	£229
Alesis S4	£349
Control Synthesis Deep Bass Nine	£249
Emu Orbit 2	£749
Emu Planet Phatt	£749
Emu Proteus 1	£269
Emu Proteus 2	£399
Emu Sound Engine	£179
Korg M1R	£399
Nord Lead Rack	£799
Oberheim Matrix GR	£529
Oberheim Matrix 1000	£269
Oberheim Xpander	£call
Organ Enigiser	£499
Peavey Spectrum Bass	£249
Roland JV2080	£1399
Roland D110	£179
Roland D550	£379
Roland JV1080 cards	£199
Roland JV1080	£869
Roland MC303	£499
Roland MKS20	£399
Roland MKS70	£569
Roland PG800 programmer	£299
Roland SVC350	£549
Roland TB303	£799
Roland U110	£149
Roland U220	£239
Yamaha TG77	£579
Yamaha TX816	£699
Yamaha TX81Z	£149

Drum Machines

Akai MPC2000	£1149
Akai MPC60	£999
Emu Sp1200	£call
Roland Octapad II	£229
Roland R8	£249
Roland Tr808	£499
Roland Tr909	£999
Sequential Drumtrax	£179

FX & OUTBOARD

Alesis Midiverb IV	£279
Alesis Quadraverb +	£199
Alesis Quadraverb II	£549
Behringer Composer	£219
DBX 363X	£49
Digitech Studio Quad	£429
Drawmer DF320	£289
Drawmer DL221	£249
Drawmer DL251	£299
Drawmer DS201	£249
Drawmer MX30	£289
Ensoniq DP PRO	£999
Ensoniq DP4+	£call
Focusrite Green Range	£call
Joemeek Compressor	£call
Kenton Pro 2000	£229
Lexicon Alex	£249
Lexicon Reflex	£299
Lexicon MPX1	£1199
Lexicon PCM80	£1899
Yamaha SPX1000	£799
Yamaha SPX90	£239

Mixing Desks

AMEK BIG by Langley	£call
Behringer 2802	£499
Behringer Eurodesk	£call
Korg Soundlink 168RC	£1899
Mackie 24.8.2	£2999
Mackie 1202 VLZ	£call
Mackie 1402 VLZ	£call
Mackie 1604 VLZ	£call
Mackie Digital 8 Buss	£call
Phonic DJ Mixer	£78
Soundcraft Folio F1	£289
Soundcraft Folio SX	£459
Soundcraft Spirit Folio Lite	£239
Soundcraft Spirit Studio 24.8.2	£1469
Soundcraft Spirit Studio 32.8.2	£2599
Soundtracs Topaz 24.8.2	£1899
Yamaha Pro Mix 01	£1399

Samplers

Akai CD3000	£1299
Akai S01	£349
Akai S1000	£899
Akai S2000	£849
Akai S2800	£849
Akai S3000XL	£1619
Akai S900	£378
Akai S950	£589
Casio FZ1	£449
Casio FZ10m	£479
Cheetah SX16	£299
Emu Systems E4XT	£call
Emu Systems E6400	£2449
Ensoniq EPS 16+	£689
Ensoniq ESi32 + SCSI	£899
Kurzweil K2000	£call
Roland S330	£399
Roland W30	£579
Yamaha A3000	£1299

Call us Today !

or email us at:

emma@music-control.co.uk

chris@music-control.co.uk

daz@music-control.co.uk

http://www.demon.co.uk/control

0% FINANCE SUBJECT TO STATUS !

P/X DEALS WELCOME !

Music Control

what the world is looking for

01270 883779

Music Control HQ Chapel Mews, Crewe Road, Alsager, Staffs., ST7 2HA tel: 01270 883779 fax: 01270 883947

Music Control South, 43-44 Hoxton Square, London, N16PB tel: 0171 729 4100 fax: 0171 729 7400

design by The Blue Machine

FOR SALE

Westec Midi-Market

BEAT THE HYPE!!

MIDI Shareware/PD
editors for all makes sequencers etc etc
£3.95 per disk

Professional Backing tracks - GM midifile -
5 for £19.95
10 for £34.95

Atari Mu1 Midi utilities
MU4 studio facilities
MU6sysex handlers
PDS2 quality 16trk sequencer
PDS8 backing track creator

and now P.C
loads of software now available

SEND FOR OUR full list and FREE MIDI GUIDE

4 way Midi Switcher Boxes £12.95

The STM adaptor for the Atari
16 extra midi channels for just - £14.95
works with cubase / creator
Notator /DrT etc

Beware of expensive alternatives

Credit Card orders and HORIZON bulletin board now open E.C.S 01621-778778

Roland LA Essentials for:- D5 D10 D20 D110 MT32 CM32 CM64

GM emulator
convert to GM patches and drum kits - £14.95

Quality Sounds - 64 per disk -
RS11/RS12 replacement presets
RS21/RS22 drum sounds
RS31/RS32 Analog sounds
RS41/RS42 Vintage Keys
RS51/RS52 Guitar Sounds
£7.95 per disk

Get Dumps
- save sounds/ settings in your sequencer -
£12.95

All prices fully inclusive

30 Fish Street · Goldhanger · Maldon · Essex · CM9 8AT
Tel: 01621 - 788466

the HIT SQUAD!

At last! - professional quality Midi Songfiles at the right price. Over 100 Albums are available each containing 8 full songs including melody. Choice includes **Pop Classics, Rock Classics, Sixties, Seventies, Eighties, Nineties, Soul, Dance, Brit Pop, Glam Rock, Disco, New Romantics, Top of the Pops** and many more - **only £9.95 each Album!**

NEW! **PLUS!** NEW!

Our new range of **Recent Chart Hits** - including:
Lovefool - Cardigans
I'll Be There For You - Rembrandts
Love Shine A Light - Katrina And The Waves
I Beleive I Can Fly - R. Kelly
You Might Need Somebody - Shola Ama
Don't Speak - No Doubt
Who Do You Think You Are - Spice Girls
Where Do You Go - No Mercy
A Design For Life - Manic Street Preachers
Mama - Spice Girls
Say What You Want - Texas
One And One - Robert Miles
2 Becomes 1 - Spice Girls
I Love You Always Forever - Donna Lewis
and more! New titles every week.
Only £4.95 per song.

LOWEST PRICES IN THE UK!

SAMPLE CDs from £9.95 | **CD ROMs from £29.95**

The absolutely classic original Fairlight IIx library on audio CD. Officially endorsed by Fairlight of Australia. A definite must-buy!

Over 1100 great samples from 01/W, SY85, WS, JV80, Vintage Keys etc. *"Wonderful samples"* Keyboard Magazine

Analog Collection contains over 650 samples of 24 classic synths inc. ARP Odyssey, OB12, Moog, JP8, MC202 etc.

250 Megs of classic sounds from the incredible Korg Prophecy. Morphing, rich, ambient pads and more!

Many more titles available - call for free brochure.

Sound Master Synth sounds on Atari ST self-loading disk. New sounds for your synth at the lowest prices in the country! **Roland JD800, JV80, D70, D50, SC55, D110, MT32, Yamaha SY55, TG33, TG100, DX7, DX7II, DX100, TX81Z, Proteus, Ensoniq, Korg Wavestation, 01WFD, 03RW, M1, Kawai K4, K1 and more.**
ALL DISKS ONLY £7.95 EACH!

0181 651 0768
CALL FOR YOUR FREE BROCHURE
MIDI MANIA

BTP Big Time Productions

SAMPLES
Massive libraries for S900/1000/2000/3000/SX16, E-mu ESI-32, Avalon/SD/AVR, Yamaha SY85/99/ TX16W, FZ/HS, Ensoniq EPS/ASR/TS, Korg T Series, PC WAV and GUS, Gem S2/S3, K2000/2500.
From £2.50 per disk.

SOFTWARE
Many professional sequencing and recording programs available.- including Cakewalk, Sound2MIDI, Jammer Pro and more.
From £39

BOOKS
Many music/technology books available.
From £6.95

PATCHES
Casio CZ series, Akai AX80, DX&/TX7, Roland MT32, Korg DW8000/EX8000.
From £4

HARDWARE
SOUNDCARDS - Yamaha and Turtle Beach - From £129
PC MIDI interfaces and adaptors - From £4
MIDI switchers - From £13
Wide range of leads and adaptors - From £2.20
8 channel mixer - Only £59.95

CD+CDROM MASTERING
Cassettes/Vinyl/CD/DCC/DATs, etc, to CD
CD ROMS also mastered
From £20 inclusive.

P.O.Box 520, Burslem, Staffs ST6 5UR. Tel: (01782) 810611

PRO-MIDI B.F.P.

CAXTON HOUSE, CAXTON AVE, BLACKPOOL. FY2 9AP
TEL: 01253 345386 DAY. (01253) 591169 EVENINGS FAX: 01253 406899
e-mail pro-midi@blackpool.net web page www.blackpool.net/www/pro-midi

TOP QUALITY MIDIFILES AND BACKING TRACKS

20 SONGS OF YOUR CHOICE FOR £60.00 +pp
50 SONGS OF YOUR CHOICE FOR £100.00 +pp
LOOK AT OUR PRICES!
Minimum Order 4 songs @ £6.00 Each +pp
NO VAT TO PAY
Licenced by MCPS & EMi

SPECIAL OFFERS

STOP PRESS!!
WE CAN SUPPLY ANY SONGS ON CD

LINE DANCING CLASSICS
MALE BALLADS
FEMALE BALLADS
IRISH COLLECTION
WARTIME SONGS

DANCE CLASS
PARTY PACK
SINGALONG
SPECIAL OCCASIONS
BEST OF THE SHADOWS
DINNER DANCE COLLECTION

SONGS PROGRAMMED TO ORDER

STUDIO CLEAROUT - Behringer Eurodesk MX8000. Alesis ADAT v4.03 with EDAC, contector. Alesis Quadraverb. Behringer Composer. Korg Wavestation. SR. Everthing as new, boxed, manuals. Sensible offers. Phone Nick 0121 777 5078

FOSTEX E16. Allen & Heath 24 channel desk. Atari monitor, C-Lab Unitor and software. Alesis D4. Roland Juno 1 £offers. Telephone 01386 48081

2 X FOSTEX CX-8 ADAT machines in SKB flight cases, complete with sync leads, optical links, head cleaning tape and remote control. 1 year old, never gigged, home use only, mint condition £1800 each or £3500 the pair. Call Katherine 0973 641887

AKAI S950 sampler, manual, perfect working order £440 o.n.o. Telephone Rob 01273 555772

WANTED

MUSIC STORE

TUNE INN

WANTED

ANALOGUE & DIGITAL SYNTHS
SAMPLERS - SEQUENCERS
DRUM MACHINES - FX
HI-TECH - COMPUTERS
PA & RECORDING EQUIPMENT

0181 - 698 4446

COMBOS - GUITAR FX - DRUMS
NEW & VINTAGE GUITARS
SAXES - CLARINETS - FLUTES

BUY! SELL! P/EX!

124-126 ST. MILDREDS RD LEE LONDON SE12 ORG
OPEN: MON - SAT 10.00 - 6.30

TUITION / PROGRAMMING

Logic (audio)

One-to-One Tuition
MAC • ATARI • PC
Peter Dudley
Tel/Fax: 0181-923 8989 or Mobile 0958 280054
email: logic.tuition@dial.pipex.com

Cubase

One-to-One Tuition
On-site Support / Diagnostics
Mac ~ PC ~ Atari

Kevin Earley
(ex-Steinberg Technical Support)
01703 320190 (24hr Answerphone)
Mobile 0802 284707

INSIRANCE

MUSICOVER

The complete insurance for all musical instruments, electronic gear, stage props, lighting, amplification etc.
Designed by a musician for musicians.
Covered at home, out and about, at gigs, in vehicles.
Policy underwritten by General Accident and only available from

Golden Valley Insurance

The Olde Shoppe, Ewyas Harold, Hfds., HR2 0ES.
Call 01981-240536 for free info pack , or Fax 01981-240451

Pavilion
Specialised insurance for musical instruments

The best insurance for amps musical instruments & p.a.
from only £39.50 for £2500 cover

INSTANT COVER UP TO £15,000
VINTAGE VALUE OR REPLACEMENT VALUE COVER AS STANDARD
PUBLIC LIABILITY COVER - FROM £10 FOR £1M
Call for cover or quote
01203 697000

Sound Insurance

PHONE BERNADETTE OR ALAN FOR YOUR FREE QUOTATION

HENCILLA CANWORTH
INSURANCE GROUP

0181 686 5050

Insurance House,
27/29 Brighton Road,
Croydon CR2 6EB

PROGRAMMING

KEYBOARDS/Programmer/Vocalist

Client List: Take That, Charles & Eddie, Pasadenas, Giant City, Donna Summer, Bob Marley, Channel 4

Kit List: Pro Tools III (Editing & Recording), Logic Audio, Roland JV1080, Akai S1000 x 2, 9 Gig Sound Library, Juno 106 Classic Techo Synth, Vox Continental 1960's Organ, Hohner Pianet 1970's Elec Piano *Plus Much More*

Reasonable rates - Totally mobile

Phil Ramacon 0171 736 7182

Mike Collins
Music Technology Consultant

• Digital Audio Editing • Audio & Music for Multimedia • MIDI Programming and Sound Design • Studio Consultancy & Design, Setup & Training

Equipment: Yamaha 02R, PowerMac 9500, Pro Tools III and wide range of plug ins, Digital Performer, Studio Vision, Cubase Audio, Logic Audio, Deck II, Sample Cell, Cue Finale, Encore & Overture

Records: • Eurythmics • Chimes • Shamen • Virgin • • Phonogram • Sony • EMI •

Consultancy: • Ryuichi Sakamoto • John Leckie • • BBC On Line •

Multimedia: • Apple Computers • Mercury One-2-One • • Canon • ACT •

Films: "The Little Buddha" "The Young Americans" "Wuthering Heights" "Stick With Me Kid"

Tel: 0181 888 5318
EMail: 100271.2175@compuserve.com

SOFT CASES & COVERS

QUALITY COVERS & SOFT PADDED CASES

ANY MANUFACTURER
ANY MODEL

AKAI, AMPEG, CARLSBRO, E.V., ENSONIQ, FENDER, J.B.L., KAWAI, KORG, KURZWEIL, LANEY, MARSHALL, MESA BOOGIE, PEAVEY, RIVERA, ROLAND, TECHNICS, TRACE ELLIOT, VOX, YAMAHA.

Sample and Brochure from:

CAPITAL MAMBA
PO Box 150, Aldershot GU12 6YP
Tel: 01252 336505

KORG TRINITY home use only v2 software plus extra sound perfect £1400 o.n.o Fostex DMT8 VL plus 1.2 Gig drive £725 o.n.o. Digitech TSR12 £150 o.n.o. Genuine reason for sale. Telephone 0114 231 4157 after 6.30pm

MACKIE 32:8 desk home use, immaculate £3200 o.n.o. ADAT "Black" low hours £1300. Telephone 0121 428 1228 (evenings)

YAMAHA SY85 mint condition, boxed as new, library of extra sounds, RAM card, Quiklok stand, all £800. Telephone 01993 708573

DDA M-SERIES MIXERS 8/4/2 16/8/2 4-band eq, 4 aux XLR in/out £600 £900. Otari MX-5050-3 1/2 inch 8 track remote IEC vgc £1500. 0181 211 7240

TASCAM 38 £490. Seck 12:8:2 desk £250. Midiman SMPTE to MIDI sync £85. Roland JV880 £320. Telephone 0161 476 4026

YAMAHA SY77 AND SY55 plus amplifier, speakers, stand, mixing desk, all vgc with manuals and disks £640. Telephone (evenings 01908 502839)

EMU E64 40Mb memory, 300 Meg H/D external 270Meg H/D + cartridges, v2.5 software CD ROM. Only a few months old £1795. Telephone Julian 0115 914 2432

TASCAM 488 8 track, 12 channel, porta studio, vgc £450 o.n.o. Telephone 01789 773247

ROLAND R8 drum machine with 2 cards, hardly used £350. Telephone 01342 312765

GRAND PIANO - 5.8ft white Yamaha, 7 years old, bargain @ £4995. Telephone 01695 556750 or 01695 731897

PRO MIX 01, little studio use absolutely mint, rack kit £1175 no offers please. Telephone 01275 462762 (Nick)

FOSTEX B16 with 40/50 locator, excellent + 8 tapes £1500 o.n.o. Telephone 01733 702253

KURZWEIL K2500 rack sampler 32 Meg 1 gigabyte Jaz drive, mega spec, mint condition £2300. Phone 0402 302321

AMAZING BARGAINS! Allen Heath GS3-16 Mixer, midi-muting, excellent £1200. Fostex M80 8-track, new head, low use, excellent £400. Roland MKS70 Analogue Synth, brilliant sounds, three cartridges £450. Roland S760, 2mb, CD-rom drive £900. Pete 0161 681 7304

G.M. IMBER LTD.

WHY PAY MORE FOR YOUR INSURANCE THAN YOU NEED?

Our specifically designed schemes for musical instruments and equipment, employers & public liability, non appearance, travel & motor will help cut costs.

G.M. IMBER LIMITED
FREEPOST SE5052 GRANGE HOUSE
GRANGE WALK LONDON SE1 3DT
Tel: 0171 231 5005 Fax: 0171 252 3656

TASCAM 488 8 track porta studio + smart sync £400. Drawmer Compressor £100. Roland PR505 drum machine £50. Yamaha TX7 unit with manuals £50. Telephone 01773 812626

KORG TRINITY £1279. Yamaha MT8X mkII £729. Yamaha Rev 100 £149. Absolute Zeros £169. Technics Amp £99. 3 months old, mint boxed, manuals - All £2350 the lot. Call Marty 0976 159240

WANTED

KORG M1R synth module with manual. Korg or Roland digital piano. Telephone 01299 266702

SESSION 8 882 OR 888 audio interface for Mac/Nubus, must have original cards, disk and manuals, will pay £800 - £1000. Telephone 01636 611899

WANTED

FOR CASH OR EXCHANGE
ALL MUSICAL INSTRUMENTS & EQUIPMENT

STUDIO/RECORDING EQUIPMENT • EFFECTS • KEYBOARDS • SAMPLERS
DRUM MACHINES • PA • BACKLINE & OUTBOARD GEAR • ATARI ST • MIXERS
ACOUSTIC, ELECTRIC & BASS GUITARS • SAXOPHONES • DRUMS • CYMBALS
STANDS • FOLK, ETHNIC & ORCHESTRAL INSTRUMENTS • TUITION VIDEOS
ACCESSORIES • FLIGHT CASES

NOTHING LEGAL REFUSED!
Official ID with address & signature required

MUSIC & VIDEO EXCHANGE
56 Notting Hill Gate, London W11 OPEN 7 DAYS 10am - 8pm ☎ 0171 229 4805
Also at MVE, Manchester Arndale Centre (by High St entrance)
Mon-Sat 9am - 6pm, Sun 11am - 5pm ☎ 0161 839 0677

LARGE SELECTION ON SALE

WE WILL BUY YOUR GEAR FOR CASH

• Synths • Samplers • Sequencers
• Drum Machines
• All recording equipment and effect processors

If you want to turn your gear into cash-fast call Earth Music today on 0181 546 9877

earth music

56 Surbiton Road, Kingston, Surrey
Tel: 0181 546 9877 Fax: 0181 549 9721
Open 7 Days a Week. Late till 8pm Thursdays, 11am-4pm Sundays

DUPLICATION

SAME DAY CASSETTES
FREE SAMPLES!!!

BLANK OR DUPLICATED CASSETTES FROM

	Blank	Duplicated
C10	25p	35p
C20	28p	38p
C30	31p	43p
C40	34p	46p
C60	38p	53p
C90	45p	60p

LABELS, INLAY CARDS, CLEAR CASES, ON-BODY PRINTING & OVERWRAPPING AVAILABLE
WE ALSO DO ONE-OFF CDs (No VAT to pay)
TALK STUDIOS UK 0121 772 5515

Compact Disc Manufacture

One off CD's up to 74 mins £20.00 + VAT

500 CD Singles complete only	£650.00 + VAT
500 CD Albums complete only	£740.00 + VAT
1000 CD Singles complete only	£925.00 + VAT
1000 CD Albums complete only	£1100.00 + VAT

Digital/Post Mastering
Sadie - Focusrite - GML - Neve
Lexicon - TC Electronics - MD2
20 Bit A to D - 32 bit DSP.

Artwork Design & Layout
Drum Scanning - Typesetting
Fine art -Imagesetting
to Film & Bromide.

Tel C.R.S. 01424 444141

SHORT RUN CD ALBUMS
3 CD's £45, 5 CD's £60, 10 CD's £96
to 74 min. inc. vat & Full Colour Labels
No Hidden Extras Just A1 Service
CPS 01929 556224

MUSICIANS RATES!
CD, DAT & EDITING. REAL TIME CASSETTES
ONE OFF CD'S FROM £14.99
Personal Service. Mail Order
STUART GRAHAM
Tel: 01603 713141 Fax: 01603 717474

Panton Music
Audio Cassette & CD Duplication Services including
Blanks · Compilation Editing · Printing etc.
Call Dave Panton 0121 558 8338
between 10am-4pm Mon-Sat

Telephone: 0181 521 2424 • 0181 503 6360 Facsimile: 0181 521 4343
http://www.knowledge.co.uk./xxx/hiltongrove/ Email: hgrove.demon.co.uk

- Compact Discs
- Pro-Mastering
- Digibin Cassettes
- Reprographics
- Print

HILTONGROVE
where sound advice counts

- 32 Bit Technology
- ISDN Lines
- MD2
- 3 Band DSP
- One-off CD's

Alpha Business Centre, 60 South Grove, Walthamstow, London E17 7NX
4 mins walk from Walthamstow Central (Victoria Br), 12 mins M25, 8am - 8pm 7 days. (Tel)

SPECIAL OFFER !!!
TDK CDR's 74 min. only £3.59p
One off CD's £17.50, copies £9.90p

FREE !!!
MakaLabel Software for Windows95 [1]
Catalogue & Sample Cassette

Blank or Duplicated
Precision 5 screw cassettes with rollers and large hard windows, custom wound to any length.

Labels	Inlay Cards
DAT 's	Ampex Reel tapes
Floppy Disks	Video Cassettes
Printing	Technical books

Tel: (01372) 272422
Fax: (01372) 276122
DOWNSOFT LTD
Downsway House, Epsom Road
Ashtead, Surrey KT21 1LD
1. with any purchase.

THE COMPLETE CASSETTE & CD PRODUCTION SERVICE
CASSETTE DUPLICATION & CUSTOM LENGTH BLANKS
COMPACT DISC MASTERING & REPLICATION
DIGITAL EDITING • ONE-OFF CD's
ARTWORK, DESIGN & PRINT
O·C·T·A·G·O·N RECORDS & TAPES
FOR A FREE BROCHURE & ALL THE ADVICE YOU NEED
(0191) 495 2324
(0191) 495 2306 FAX

sound performance
CD pressing, cassette duplication, design and repro, print, booklets, inlays, labels

expect
quality product at excellent rates

need
a supplier that meets delivery dates

want
a company that cares about getting it right with experienced professionals to co-ordinate your work

don't compromise your chance of success, work with the best. call sound performance you'll notice the difference.

tel: 0181 691 2121 *fax:* 0181 691 3144
unit c, 80 blackheath road, greenwich, london se10 8da

DUPLICATION

CD Mastering
CDRs from just £7.50
Real Time Cassette Copying
Copy Masters and Editing
CD Manufacturing
Laser printed labels & inlays
Every copy individually checked
Excellent quality & presentation
Best prices, ultra fast turnaround

RPM
Repeat Performance Mastering
6 Grand Union Centre
West Row
London W10 5AS
Tel. 0181 960 7222
Fax. 0181 968 1378
www.repeat-performance.co.uk

Get it properly mastered!

We've been mastering for over ten years and we guarantee to improve the sound of your recording. In fact we're so confident that you'll love what you hear, we won't charge you if you prefer the original! Call us now or visit our web site. You can't lose out!

No charge if you don't like it!

RPM
Repeat Performance Mastering
6 Grand Union Centre
West Row
London W10 5AS
Tel. 0181 960 7222
Fax. 0181 968 1378
www.repeat-performance.co.uk

ONE OFF CDS
BEST UK PRICES ON CD COPIES OF YOUR DEMO OR MASTER - EXAMPLES:

	1CD	3CDS	5CDS	10CDS
5 MIN CD	12	11	10	8
15 MIN CD	18	16	14	9
25 MIN CD	25	17	15	10
35 MIN CD	25	18	16	11
45 MIN CD	25	22	17	12

Prices are in £'s per CD. No hidden costs. Includes printed label. Send cheque plus £1 p+p or come and see us!. Any format. Chrome cassette copying also available
audiolab WEST STREET, BUCKINGHAM
commercial recording studios *(01280) 822814*

Ground Bass Productions 1830
CD DUPLICATION
DIGITAL MASTERING / EDIT SUITE
CD ROM / WEB AUTHORING
ONE OFF CDS / 24 Hr
Windsor Centre, Windsor Street, The Angel London N1 8 QH
Tel: 0171 288 1833 Fax: 0171 288 1834
email: sales@groundbass.com web: www.groundbass.com

REAL CHEAP REAL TIME!
Realtime from DAT or cassette
Small quantity specialist
Excellent label designs available and more
J B AUDIO/VIDEO
01621 783518 1052

ONE OFF CD'S 1867
Add that professional touch & have your songs put onto CD. We can transfer your recordings from DAT or cassette onto CD.
- *1 CD* £20
- *3 CD's* £45
- *5 CD's* £70
- *10 CD's* £102

Price includes VAT, PQ encoding, printed inlays & labels.
Small order specialists! Mail order welcomed.
Call Paul for a CD info brochure on *01273 572090*

Audio Edits "we are musicians"
POST PRODUCTION
Sell Your Own Music On CD And Make Money!!! We Do!!! Test The Market with a 9 CD Album Special £97.50 All Inc.
FREE - 8 Page Colour Booklets!!!
(On These Album Offers!!! 15 CDs £123.00 30 CDs £199.00 50 CDs £299.00 75 CDs £450.00 100 CDs £567.00 All CDs Jewel Case, Inlay, Inlay Printing and VAT!!!)
Don't Miss This Offer!!! Tel: 01943 604616

low cost duplication
- ONE OFF CD'S LOW PRICE
- REAL TIME CASSETTE DUPLICATION
- DIGITAL MASTERING
- REMASTERING
- DAT TO DAT COPYING
- MUSIC & VOICE OVER PRODUCTION IN OUR OWN 24 TRACK STUDIO
- MIDI PRE PRODUCTION SUITE
- CALL NOW FOR AN IMMEDIATE QUOTATION

TEL 01543 877343
A.D.C. STUDIOS

ONE-OFF CDs,
CD MASTERING
DIGITAL EDITING
SONIC SOLUTIONS
SOUND RESTORATION
CD ROMs

SOUND CUTS LTD.
MASTERING SUITE
0181 964 4091

CD Manufacturing
Cassette Duplication
One-off CDs
CD Mastering
Inlay Print & Artwork

SOUNDS GOOD

SOUNDS GOOD LTD.
Tel: 0118 930 2600
Fax: 0118 930 3181
Check out our web page
www.sounds-good.co.uk
SOUNDS GOOD is a member of PAD, the pressers and duplicators section of the APRS. To join PAD, a company has to meet strict quality standards. Look at the other adverts on this page - notice any other PAD members? No? Thought not!

SOUNDS GOOD leads the way in CD manufacturing with a uniquely competitive package that includes ...
- Free use of our ears and our trusty SADiE system - years of mastering and engineering experience at your disposal, so why not take advantage of it!
- Mastering to Exabyte - now the standard format for glass-mastering - and free CD-R for approval!
- In-house artwork and reprographic facilities!
- Low prices and free advice - phone us now!

A TO Z MUSIC SERVICES
A TO Z MUSIC SERVICES
TEL : 0171 470 2828
FAX : 0171 470 2829
The UK's biggest independent manufacturing broker is now offering its CHEAPEST EVER DEALS on CD CASSETTE & VINYL
All our pressings are manufactured in the UK for high quality and fast turnaround

squealing pig discs
CD Duplication 1 off CD's from £10
5 = £36
10 = £68
20 = £116
30 = £150
40 = £195
50 = £240
100 = £440
(upto 60 mins)
(digital editing available)
why spend pounds on your bands press pack, put it all on a mixed mode Audio CD ROM... Ring for info
All prices are inclusive
Ring 01664 68842 (anytime)
1865

Manufacturing	Post Mastering
Compact Disc	Digital Editing
Vinyl Records	Record Cutting
Audio Cassette	PQ encoding
Design & Print	Digital EQ / Dynamics
Reprographics	One records
Specialist Packaging	One on CD

500 cd singles £700 + VAT
500 cd albums £835 + VAT
Includes mastering 3 colour discs cases
4 page 4+1 book/tray or 4/0 J card
PURE MUSIC MANUFACTURING
0161 953 4230 / 4231

DUPLICATION

CD • CD-ROM • CASSETTE • VINYL • ARTWORK
ARTWORK/DESIGN INC FILMS FROM £180
£660 500 CDs INC 500 PRINT GLASS & CASE
£680 500 CD-ROM INC GLASS MASTER PLASTIC WALLET
£1055 1000 CDs INC PRINT & GLASSMASTER
LOCAL GOVERNMENT ENDORSED
MAKING YOUR PRODUCTION SAFE
SOUND DISCS MANUFACTURING LTD
TEL: 0181 968 7080 FAX: 0181 969 8506

CD Manufacturers for SOUND ON SOUND Magazine
Tel: 01382 205 100 VOYAGER™ Fax: 01382 202 229
Package deals on CDs, Cassettes & Vinyl
In-House Design & Typesetting of artwork
Post Production Mastering; Printing & Packaging
For a free information pack or advice please call us
Email: voyager@sol.co.uk http://www.taynet.co.uk/users/voyager/

Mirror Image
500 CD's Complete Price: £860 !
Cassette Copies (from 50+)
Dat 2 Dat / CD Copies / 1-off CD's
Digital Editing / CD Pre-Mastering
De-Noising / Eq / PQ Encoding
Design / Artwork / Film Production
Tel / Fax: 0161.228.1119
e-mail: Mirrorimage@btinternet.com

TapeLine
CASSETTES & CDs
* BLANKS
* LOOP BIN DUPLICATION
* APEX DIRECT PRINT
* COMPACT DISCS
* ACCESSORIES
* NATIONWIDE DELIVERY
0161 406 8608

RMS cassette copying
DAT to F1 Free colour labels
SADiE editing, precisely PQ'd CD-Rs.
0181 653 4965
(South London)

The Digital Audio Co
CD Mastering & Manufacture
500 Singles £680
500 Albums £750
Call Us On 01756 797100
Price inc mastering (20 min single / 60 min album - over 60 min add £40), discs, cases, 4 page 4 + 1 booklet / traycard from film & packing, ex VAT

FULL COLOUR CASSETTE INLAYS
• Low prices • Specialists in small orders
• No minimum order • Full design service
• Labels • CD Inserts
FREE SAMPLE & DETAILS FROM
MAXIMUM IMPACT
LANE END, CARLISLE ROAD, TILFORD, FARNHAM, SURREY, GU10 2EF
TELEPHONE: 01252 792407
8AM-5PM MONDAY-FRIDAY

SMALL RUNS
Cassette Duplication
● FROM DAT, DCC, CDR, REEL OR CASSETTE
● LABELS & ON BODY PRINTING (MIN. ORDER 50)
● BLANK CASSETTES WOUND TO EXACT LENGTH
● RELIABLE REAL TIME SERVICE (EST. 1983)
● NATIONWIDE DELIVERY SERVICE
PHONE FOR BROCHURE
DUPLITAPE
Tel/Fax: 0161 442 6910
E-MAIL paul@duplitape.nwnet.co.uk

TEL • 0171 700 3060 FAX • 0171 700 5544
PRIME CDS
CONTACT JACQUI or PHIL
CASSETTES VIDEO PQ MASTERING
CDS • CD ROM SOUNDTOOLS DIGITAL EDITING
PACKAGE PRICES ON: 100 • 300 • 500 • 1000 CDs
CASSETTES: REALTIME 1-100 PRODUCTION : 200+
PQ MASTERING from £70 + VAT
FULL DESIGN & PRINT SERVICE
ONE-OFF CDs from £17 inc VAT
EMAIL • 101564.2602 @ compuserve.com

MUSIC MEDIA MANUFACTURERS Ltd
Experts in COMPACT DISCS, CASSETTES, VINYL, PRINTING, TYPESETTING, GRAPHICS, ADVICE ON ARTWORK.
500 CD Singles Complete Package £599 plus VAT = £703.83 1000 CD Singles Complete Package £899 plus VAT = £1056.33
500 CD Albums Complete Package £725 plus VAT = £851.88 1000 CD Albums Complete Package £1075 plus VAT = £1263.13
Don't Be Misled By The Others... Sometimes Their Prices Are Incomplete
Our Prices For The Above Packages Are COMPLETE Including FREE Mastering From DAT, Print Origination from camera ready artwork, Fiims CD's, Jewel Boxes or Slimline Cases, 4 Page Full Colour Booklet (4/1) and Tray Card or "J" Card. (4/0)
104 HARMOOD STREET, LONDON NW1 8DS
TEL: 0171 916 4450 FAX: 0171 916 4456
SIMPLY THE BEST DEAL IN TOWN!

DESIGN - ARTWORK - REPRO - FILMS - PRINT - FULFILMENT - MCPS CLEARANCE
THE ONE STOP SHOP FOR MANUFACTURING
BEST PRICES HELP AND ADVICE
ONE OFF CD'S, DAT, DCC, CD, CASS MASTER OK !
ALL CD'S RECORDED ON THE MARANTZ CDR620
COMPACT DISK MANUFACTURING.
FAST TURN ARAOUND.
DIGITALLY DUPLICATED, LOOP BIN DUPLICATED & REAL TIME COPIED CASSETTES
CUSTOM WOUND BLANK CASSETTES
5 SCREW SHELLS LUGS IN OR OUT
ON-BODY PRINTING, D.A.T TO D.A.T COPYING
COMPUTER DISK DUPLICATION & BLANK/FORMATTED 3.5" DISKS
CASSETTE CASES: SINGLE - DOUBLE - 4 PACK 6 PACK - 8 PACK WE'VE GOT THE LOT!
C.D. CASES - DISK CASES - VIDEO CASES
INLAY CARDS - DISK LABELS - CASSETTE LABELS, VIDEO LABELS - CD LABELS
DESIGN - ARTWORK - REPRO - FILMS - PRINT
CREDIT CARD FACILITIES
ACS LTD, THE STUDIOS, PO BOX 37, NEWBURY, BERKS, RG14 7YW
TEL: 01635 552237 FAX: 01635 34179
MOBILE: 0860 224 202
MULTIMEDIA PRODUCTIONS - PRODUCT LICENSING - SALES - DISTRIBUTION
CONFERENCE RECORDING - PRODUCERS OF AUDIO SALES - TRAINING PROGRAMS - SCRIPT WRITING
CD & CD-ROM REPLICATION - CASSETTE DUPLICATION - DISK DUPLICATION - VIDEO DUPLICATION - COLLATING

THE COMPACT DISC COPYING CO.
24-bit processing
P & Q encoding
On Body Print (Not Labels)
Blank CDR discs available from £3.75
We specialise in short run compact disc duplication at incredible low prices . . . .
5 CDs, On body Printing from £47 + vat
10 CDs, On body Printing from £67 + vat
20 CDs, On body Printing from £111 + vat
30 CDs, On body Printing from £146 + vat
40 CDs, On body Printing from £177 + vat
50 CDs, On body Printing from £213 + vat
One Off CDs with On Body Printing from £15
FREE Colour Inlay Cards with orders up to 10 CD's
CD's Are Now Affordable !
Mail Order Welcome
0171 - 561 0136

FROM THE UK'S LARGEST INDEPENDENT . . .
THE QUALITY ONE-STOP SERVICE FOR ALL YOUR PRESSING AND PRINT NEEDS – AT REASONABLE PRICES. WE CAN HANDLE EVERYTHING FROM MASTERING TO ARTWORK ON SMALL OR LARGE RUNS.
CASSETTES VINYL CD's
FOR ADVICE, QUOTES & INFO PHONE GILES OR MELISSA
MAYKING RECORDS
0171 924 1661
250 YORK ROAD, BATTERSEA, LONDON SW11 3SJ

Make it with us . . .

Sound Recording TECHNOLOGY

MANUFACTURING

- Compact Discs
- Digitally Duplicated Cassettes
- Print And Reprographics

HIGH END MASTERING

- Six Studios
- Latest 32 Bit Technology
- Multiple Mastering Formats
- Super Bit Mapping
- Cedar - Sonic Solutions - No Noise
- 20 Hz Monitoring
- 20 Bit Recording
- 20 Bit Non Linear Editing
- Broadcast Standard Video Editing
- Multi-Media Suite

MARKET LEADERS

☎ 0181 446 3218 London
☎ 0141 550 4640 Glasgow
☎ 01480 461880 Cambridge
☎ 0161 876 7633 Manchester

☎ 0800 00044.1 FREEPHONE CD

DIGITAL MASTERING

DIGITAL EDITING
Noise Reduction
'QSOUND' Processing
£15 pr hr (+VAT)
Also One-Off CD's from £5
MAIL ORDER AVAILABLE
TEL/FAX - BPM - 0181 892 8856
www.burning-petals.com/sd.html

IDEAL MASTERING

SERVICES

DUPLICATION

REAL TIME CASSETTE DUPLICATING
LABEL & INLAY PRINTING.
BLANK CASSETTE SALES.
DAT & AMPEX REEL TAPES.
FRIENDLY, PROFESSIONAL SERVICE
TEL: 01252 794253 FAX: 01252 792642
Keynote CASSETTES

DDRS
DIGITAL DOMAIN RECORDING SERVICES
1-OFF PQ ENCODED
COMPACT DISCS
MAIL ORDER: FROM £10
!! NO VAT OR DELIVERY CHARGES !!
PUT YOUR MUSIC ONTO CD
IDEAL FOR 1ST GENERATION CASSETTE COPIES, BACKING TRACKS FOR GIGS & CLUB BANDS
COMING SOON...
DIGITAL AUDIO EDITING
CALL NOW: 01203 637922

DIGITAL EDITING

Pro Tools
Sonic Solutions
Editing & Mastering
Tel: Chris 0171 483 3506

SERVICES

ELECTROFIX
Why pay London Rates for your repairs ?
(EVEN IF YOU LIVE IN LONDON)
We are the LARGEST Independent Service Centre in the South West !
Free collection from anywhere in the UK !
AKAI AUTHORISED SERVICE CENTRE
TEAC - TASCAM Authorised Service Centre
YAMAHA / ROLAND / STUDIOMASTER APPROVED
Servicing & Repairs for the Music Industry since 1985
TEL : 0117 923 9119 FAX : 0117 946 6343
EMAIL : electro.fix @ virgin.com

in-sync
in-sync service limited
Unit 6, 43 Carol Street, Camden Town,
London NW1 OHT
Specialists in servicing Tape Machines & Mixers,
Fostex, Tascam, Revox, Soundcraft,
Allen & Heath, Studiomaster etc.
0171 485 3447

The Studio Doctor
Analogue • Digital • MIDI • Macs
Installations • Patchbays
Wiring • Debugging • Training
PHONE IAN ON
0956 - 580332

ADVANCED SOUNDS LTD
(Service & Repairs)
SERVICE FOR:
★ Most tape Machines ★ Most keyboards ★ Hire & Sales division
LOW RATES / GOOD SERVICE
0181 462 6261 or 8621

SYNTHESISER
SERVICE
CENTRE
Phone:
0171 586 0357
UNIT 3, 6 ERSKINE ROAD
LONDON NW3 3AJ
Priority service available
8.30am-6.30pm – Mon-Fri
SERVICING WITH A WEALTH OF EXPERIENCE
SYNTHESISERS : SAMPLERS : FX UNITS : VINTAGE KEYBOARDS
We're here when you need us!
Approved warranty service by major manufacturers

REPAIRS • REPAIRS • REPAIRS • REPAIRS
CENTRAL SOUNDS
THE FRIENDLIEST REPAIR & SERVICE CENTRE IN THE UK
FREE
5 STAR SERVICE
Years of Sound Experience
Amps, Keyboards, Samplers, FX Units, Mixers, Guitars, Drum Machines,
DAT's, Expanders, Tape Machine, Sequencers, PC, Atari's, Drums & Hi-Fi's
E-MU
Main Service Centres
AKAI
The Only UK's Official Roland Owners Service centre
- Collection from Home or Office
- Location of faults
- Equipment test
- Estimates of repairs
- 3 months warranty and labour

JUST GIVE US A RING
ON 01203 665665
OR FAX US
ON 01203 666669
7 DAYS A WEEK

SERVICES

Specialists in the service and repair of all brands & more

AKAI AUTHORISED SERVICE CENTRE · Roland · YAMAHA · ALESIS · ZOOM · PEAVEY · TASCAM · JLCooper · E-MU · FOSTEX · KORG · OPCODE SYSTEMS INC · ART · Oberheim

Sick adat ? No Problem

REPAIRS

CIMPLE SOLUTIONS Professional Ltd
Tel • +44 (0)181 904 4141
Fax • +44 (0)181 904 1200
Unit 2-11 Wembley Commercial Centre
80 East Lane North Wembley
Middlesex • HA9 7UR
http://www.cimplesolutions.demon.co.uk
email service@cimplesolutions.demon.co.uk

WHILE-U-WAIT & PRIORITY SERVICE @ NO Extra Charge
FOR ALL OPERATING SYSTEM SOFTWARE UPGRADES, DRIVE REPLACEMENTS and any minor repairs- please ask!

UPGRADES

KURZWEIL
K2000 K2500 Rack Keyb'd Option
Sampling Option
Memory Expansion
Rom1 inc' daughter board
Rom2 " " "
Rom1 no " "
Rom2 " " "
Piano Rom board
Complete option kits available for the above at discounted prices
KURZWEIL PC88
PC88 to PC88MX (Expanded Version)
EMU PROTEUS 1, 2 or 3
Double your sounds to an XR Version
HARD DISKS AND SIMMs MEMORY
Supplied for anything that can take it

All upgrades purchased from us are fitted FREE OF CHARGE by our qualified service team

Alesis ADAT & Tascam DA88 Specialist Service Centre

Expert ADAT & DA88 Repair and Servicing for:
- Reliable and consistent machine operation.
- Record and replay data security.
- Fast and stable machine lock.
- Reduced Error Correction activity.

We deliver:
- Rapid and flexible turn around times.
- Manufacturer's 500 Hour Maintenance Programme.
- Collection and Delivery.
- Professional Quality Control and Service Warranty.

Call Aspen Media Service for details.

01442 399 949

ASPEN MEDIA LIMITED 222 Maylands Avenue, Hemel Hempstead, Herts HP2 7TD 1304

Service, Repairs, Modifications

The Vintage Keyboard Company

Keyboards, Amplifiers, Mixers, Effects

Ampeg · ARP · Crumer · Elka · Farfisa · Fender · Gem · Hammond · Jennings · Laney · Leslie · Marshall · Mellotron · Mesa Boogie · Moog · Selmer · Vox · Watkins · Wurlitzer (plus many others - please call!)

Making classic gear sound

Valve amps a speciality
Rates from £25.00/hour
25 River Street, Islington, London EC1R 1XN
0171 837 2070

FOR HIRE

ADVANCED SOUNDS LTD (Hire & Sales) 143
- Musical & Studio Equipment Hire
- Home Recording Packages Hire
- New & Used Equipment Sales - Part/Ex
- Delivery/Collection – Nationwide

LOW RATES / GOOD SERVICE
0181 462 6261 (or 8621)

ATLANTIC HIRE
Best Prices / Recording Euipment
TEL: 0181-209-1384/0025
(24 Hours) 1541

New PA Hire Service 851
400W to 2K with Foldback
Hughes & Kettner Pro Cabs
Soundcraft, Mackie, H&K desks
Rates from £50 to £250 pd
Dry Hire to Full Production
Call for free info pack!
We offer Pro PA systems for Gigs, Functions and Parties.
tickle 0181 964 3399
The best in Pro-Audio Hire and Sales

Audiohire
Hire of virtually any recording and backline equipment
Tel: 0181-960 4466 961

STUDIOHIRE LONDON LTD
0171 - 431 - 0212
0171 - 431 - 0212
WE HIRE A HUGE RANGE FROM THE VERY LATEST EQUIPMENT TO VINTAGE AND RARE ITEMS. PLEASE CALL FOR DETAILS.
YOU NAME IT, WE'VE GOT IT
1807

CLUBS

GEM by GENERALMUSIC
Generalmusic Owners Club
Call us now for your FREE copy of our Magazine
Tel: 01227 272500 Fax: 01227 272850
Unit 177, John Wilson Business Park, Chestfield, Whitstable, Kent CT5 3RB

ROC ROLAND OWNERS CLUB
The only International Roland & Boss

Courses for 1996
Courses & Seminars are currently running for Roland synths, samplers etc. designed to help you get the most out of your Gear
Call for further details

Hurry & Join Today!
- Full Technical Support
- Savings on Products & Services
- Club Magazines & News Letters
- Latest News on Roland & Boss Products
- Use of Roland Sample Copying Centre
- Mail Order Sample copying service

Tel: (01733) 233135 10am to 5pm Mon-Fri 1004

COURSES

• **Sound Engineering** City & Guilds Parts 1&2
• **MIDI & Multitrack Recording**
Courses taught within a new 24 track digital recording studio complex

COOMBESHEAD COLLEGE
Newton Abbot, Devon, TQ12 1PT
RING NOW FOR DETAILS: 01626 334401
1883

KNOWLEDGE IS POWER!
"Learn about hard disk recording!!
Everything you need to know about digital sound & MIDI Programming!!
Want to learn about animation for music & multimedia?
Or learn about graphic/image editing?
How about setting up your own record label?"
Mango Multi Media is a busy, vibey, music/multimedia company offering **unique courses** within a working environment!!
CALL 0171 377 2722 NOW!!

MIDI & RECORDING SOLUTIONS
Individual tuition and modular courses in:-
• *Sequencing, sampling, synthesis, drum programming*
• *Mixing desks, effects, multitrack recording, engineering*
• *Synchronization, mastering*
Problem solving of existing equipment or studio set-ups
Call outs in the London area
Tel: 0181-520-8827
1216

RIGHT TRACK STUDIOS
Engineering midi and arranging courses in Malvern, beginners to advanced.
Contact David Etheridge on
01684 576896
for details
1880

London College of Music
1-Week practical courses in:
Recording and Music Technology.
Course 1: Intro to MIDI and Recording.
Course 2: Basic MIDI.
Course 3: Basic Recording.
Course 4: Multi-track Recording Technology.
£275/course.
Call 0181 231 2304 for details.
@Thames Valley University
1859

LAE Live Audio Courses
Under real concert environment with bands playing warm-up gigs every day of the course. Lectures cover all aspects of setting up a concert / mixing / EQ / production techniques. Tutorials take place at The Garage & The Forum.
For a prospectus call: 0171 700 3271
or fax your details on: 0171 700 4600

THE RECORDING WORKSHOP
Provides one of the most affordable comprehensive range of exclusive 2-8 months part time day/evening **practical** courses on all aspects of Sound Recording including Multi-tracking, Cubase and Sampling.
Beginners welcome, concessionary rates available.
Established since 1989. working 16 track studio based in West London with easy access and free parking.
653
FOR PROSPECTUS : 0181-743 2645

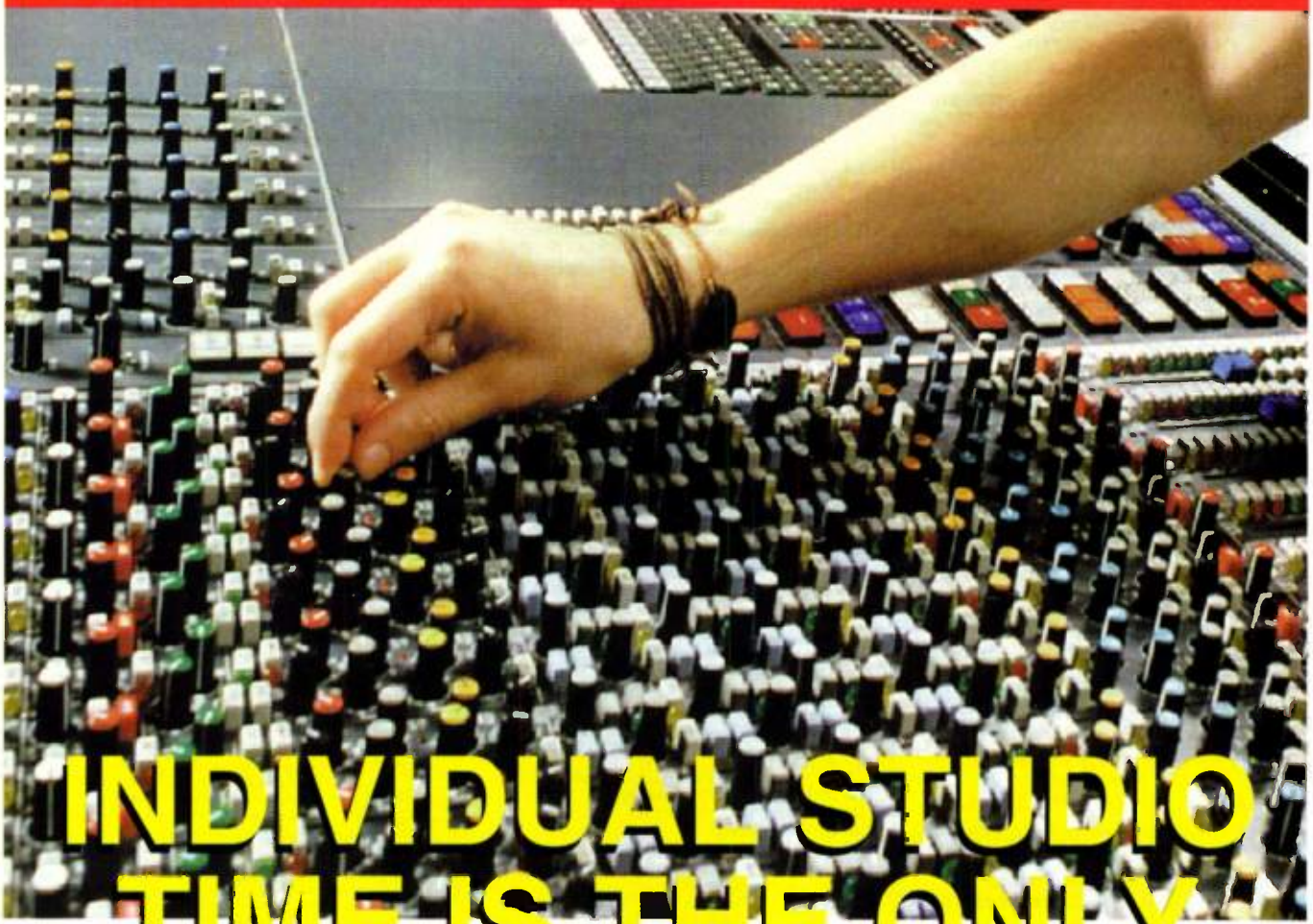
1797
HURRICANE
CITY AND GUILDS COURSES
Our 24-track digital, analogue and MIDI facilities (6 studios) are the UK centre for City and Guilds qualifications 2337 and 2338. Sound Engineering and Music Technology courses start at regular intervals throughout the year.
The certificated course formats are:
1 year on day release
7 week condensed intensive
1 year evening classes (twice weekly)
Phone now for details and a free prospectus
Tel: 0181-691 1900
NVQ Awards & Courses now available

City College Manchester
The Cutting Rooms
Intensive Courses in Sound Engineering.
A programme of short courses in a wide range of sound engineering skills. From beginners to advanced, engineering/production techniques and specialised topics. Please call for a brochure and course dates.
Paul or Mike on +44 (0)161 740 9438
1441

MEDIA PRODUCTION FACILITIES
Bon Marche Building, Ferndale Road, London SW9 8EJ
Tel: 0171 737 7152
RECORDING AND PRODUCTION TRAINING
Constantly updated full-time courses operated in association with the pro-audio industry providing unique access to the latest analogue & digital systems in our 24-track automated studio and digital programming suite:
One year full-time Diploma Course
ADVANCED SOUND RECORDING & PRODUCTION TECHNIQUES
Practically based tuition in small groups with theory from internationally recognised specialists supplemented with new technology from leading manufacturers.
Three months full-time Certificate courses
ANALOGUE SOUND RECORDING & PRODUCTION
DIGITAL SOUND RECORDING & PRODUCTION
One week full-time course
INTRODUCTION TO SOUND RECORDING & MIXING
An entirely practical foundation course (8th/15th September '97)
5 & 10 day full-time course
AUDIO FOR TV/FILM -
Practically based course, including multi-machine synchronisation and full mix-to-picture. (21st July '97)
These comprehensive courses give the necessary skills & experience to gain employment in the audio-visual industries.
COURSES COMMENCE ON 22nd SEPTEMBER 1997
Extensive range of TV/video & Computer Graphics/Animation courses also available
1838

I·M·W
Diploma Courses
in SSL G+/24 Track Engineering and MIDI Programming
For free brochure
Call 0171-608-0231
RSA EXAMINATIONS BOARD
Big concessions for unwaged.

AUDIO ENGINEER
MUSIC PRODUCER
MULTIMEDIA PRODUCER®
STUDIO ASSISTANT



INDIVIDUAL STUDIO TIME IS THE ONLY WAY TO LEARN

CERTIFICATE - DIPLOMA - DEGREE*

In association with 3 leading Universities

CALL FOR A FREE COLOUR BROCHURE AND STUDIO TOUR

sae
TECHNOLOGY COLLEGE

THE SCHOOL OF AUDIO ENGINEERING NETWORK:

England: LONDON (0171) 609 2653 Scotland: GLASGOW (0141) 221 3441 France:PARIS (01) 48 11 96 96
Netherlands: AMSTERDAM (020) 689 4189 Sweden: STOCKHOLM (08) 730 5100 Italy: MILANO (02) 8912 0540
Switzerland: ZURICH (01) 445 2040 Germany: COLOGNE (0221) 954 1220 FRANKFURT (069) 543 262
HAMBURG (040) 23 36 76 BERLIN (030) 456 5137 MUNICH (089) 67 51 67 Austria: VIENNA (01) 330 4133
Singapore:SINGAPORE (65) 741 1257 New Zealand: AUCKLAND (09) 373 4712 Australia: PERTH (09) 3254533
SYDNEY(02) 9211 3711 ADELAIDE (08) 8376 0991 HOBART (03) 6231 5446 MELBOURNE (03) 9534 4403
BRISBANE (07) 3376 0143 Malaysia: KUALA LUMPUR (03) 737 0935

Internet: http://www.saecollege.edu.au Established 1976

STUDIO ACOUSTICS

THE STUDIO WIZARD

Will Design, Supply, Build, Train, Install, Debug and save you money! So if you want a studio that works like magic call me!

0860 666532

FROM A LITTLE ADVICE – TO A COMPLETE CONSTRUCTION PROJECT – AT THE RIGHT PRICE!

Email: studio.wizard@paston.co.uk
Web: www.sworg.demon.co.uk

1569

Studio design & build

We have the expertise and equipment to solve all your isolation and acoustics problems.

* Design only or ..
* Full construction
* Air conditioning
* Audio/video wiring

SM acoustics

Tele:01743 356161 Mob:0385 586079
email: 100714,2673@compuserve.com
http://ourworld.compuserve.com:80/homepages/sm_acoustics

Call us now for a complete solution or just a little advice!

ELECTROACOUSTIC SYSTEM SPECIALISTS

40 Clarendon Rd West, Chorlton, Manchester, M21 0RL

Control Rooms: The Next Generation...

At last, you can have a control room where you hear the same mix everywhere, and can vary the equipment in it without compromising the accuracy of the monitoring.

The Early Sound Scattering room out-performs most LEDE and RFZ rooms like nothing you've ever heard before.

If you're serious about your new control room, you should be talking to

Andrew J Parry
on 0161 861 0857

1779

ARTISTS WANTED

Find Yourself a RECORD DEAL in the Bandit

A & R NEWSLETTER
TRY IT - FREE

This valuable monthly Newsletter will tell you which Labels, Publishers, Managements, etc are looking for new acts. Send and SAE to Bandit for a FREE SAMPLE EDITION

BANDIT (SOS), PO BOX 22, Newport Isle of Wight, PO30 1LZ

Or for immediate 24hrs info on 4 companies looking for talent

Call 0336 411 277

Operated in conjunction with the I.S.A. Calls 50p/min at all times

1824

Sample Feature & info also on www.wightweb.demon.co.uk/bandit/

A & R LIST

OVER 1000 CONTACTS FOR ONLY £6.00

Including

- Contact Name
- Address
- Phone number and Fax
- Style of Music

Also available

- Fanzine lists £4.00, 500 entries
- Recording, rehearsal and venue lists + FREE GIG GUIDE, 800 entries, £5.00
- Musical Services List, 500 entries, £5.00
- The List, 800 entries, a budget priced compilation from all the TMR Lists, £4.50
- The Demo Guide, everything you'll need to know from making to packaging, targeting and follow up, £6.00

Many other services available inc:-

- DAT Duplication / Compilation
- Cassette / Video Duplication
- Demo Targeting
- Recording Studio Fostex G16 S

Please write or fax for details
All lists updated regularly

Payable to Mr. M. Bell
TMR c/o Mr. M. Bell,
PO Box 3775, London SE18 3QR
Tel/Fax: 0181-316-4690

1639

FLIGHT CASES

FLIGHT CASES 19" RACK CABINETS

Standard and custom design for the musician and studio. Large range of accessories also available. For further information and illustrated brochure, contact:

GROVESTREAM ENGINEERING SERVICES
29 Silverdale Road, Tadley, Hants RG26 6JL
PHONE / FAX: 01734 713309

709

CUSTOM MADE CASES HIGHEST QUALITY AT LOWEST PRICES

Ring or Fax us First
R & J Flytes
Tel/Fax: 01933 651706

KH CASES

PROTECT YOUR INVESTMENT!

KH Cases manufacture a full range of cases for guitars, amplifiers, lighting, computers and industrial equipment, custon built to your specification.

The Old Plumbers Shop, Medway Depot, St James Road, Tunbridge Wells, Kent TN1 2HD

Tel: 01892 527200
Fax: 01892 527201

1215

"FAST FLIGHTS"

BY REFLECTIONS
Highest Quality Flight Cases
Made to order or from stock

Phone 01993 775677 or
Fax your spec through on 01993 706243

801

SUPER-TOUGH POLYMER FLIGHT-CASES

Around half the price of a traditional flight case!
And much less weight!
Custom-built for long life!
Rack-cases as well! Ring now...

S.Ashby & Co, 1st Floor, 59 Sibson Rd. Birstall, Leicester LE4 4DX 0116-267-1122

1643

LOOK HEAR!

19" Rack & Flight Cases
• to tour the world
• lightweight expandable EMS, for home and studio.

Standard sizes, off-the-shelf.
* 19" Microphone & Storage Draws
* 19" Keyboard & Lap Top Trays
* 19" Conversion Mounts
* Tour Briefcases

Call: CP Cases
Tel: 0181-568 1881 Fax: 0181-568 1141
Tel: 0161-873 8181 Fax: 0161-876 6599

1372

SITUATIONS VACANT

SOUNDIVISION World of Dance is expanding

Here is an exciting opportunity to join our professional sales team. Currently we are looking for enthusiastic self motivated salespersons to work together within a dynamic team atmosphere. The successful applicant(s) will be knowledgeable and experienced in the world of Dance Music production and ambitious to turn this opportunity into a worthwhile career. Salary will be negotiable and includes a generous commission package.

Please send CV to: John Hulke
c/o SOUNDIVISION Ltd
Adelaide House
383/385 Liverpool Road
Islington
London N1 1NP

1811

RECORDING STUDIOS

N R T STUDIOS

Song Writing / Recording Services
Sound Engineering Courses
Cambridgeshire Village Location
PHONE 01480 406222
FOR FURTHER DETAILS

1861

POLYPHONY RECORDING STUDIO

£12 ph inc engineer/producer. Akai Digital sampling/multitracker. Mackie mixer, Drawmer, TLA valve EQ, AT 4033 mic. Roland JV880, Behringer, Lexicon, Alesis, Cubase/Creator, DAT mastering, projects welcome, dance, pop, reggae etc

Call Joe on 0181 881 2262

1288

WOLF STUDIOS

Superb value 24/48tr recording in a comfortable and creative environment

48tr ADAT, 24tr 2", Amek desk automated, Lexicon, AMS, Focusrite, Tubetech TC2290, Urei, Eventide 4000, AKG C12, Neumann M149, Cubase Audio, Mac/Atari, K2000, S3000/S1000, M1, Prophet 5, PPG Wave, Nord Lead, Vintage Keys, Waldorf Microwave, Vocoder, JV1080, Vocalist, sync to video, remixes, digital editing, Pro Tools. The most comprehensive facility for ADAT recording and mixing. *Prices from £25 p/h + Vat including an engineer/programmer. Access/Visa welcome.* For more information or to view the studio.

call: 0171-733 8088

1773

NEW AGE

FOR ALL FORMS OF DANCE AND AMBIENT

Akai X 2, Roland and SampleCell samplers with huge sound library on optical disk and CD Rom. Synthesisers include analogues [illegible] 02, 30, 808, 106, Minimoog, Oberheim etc and digitals Prophecy, Orbit, JV1080, 990, M1, 01w etc - Atari and Apple Mac computers with Creator / Notator, Logic Audio, Cubase VST, ReCycle, TimeBandit and Sound Designer II for Dat editing. Fostex 16 track tape machine. Soundcraft console, FX Racks, Sony DAT mastering. Professionally designed studio with vokal booth. Creative environment. £15 per hour

Call Alan on **0181 446 3098**

1543

RMS STUDIOS

Studio 2:– A great MIDI Studio. 10meg S3000 with 340meg hard drive, M1, 4 Meg Atari, Lexicon PCM80, REV 5, Quadraverb, 40 input Saber MIDI desk, E16, Tascam DAT, Tannoy and NS10 monitors, XR300, Creator, Cubase, Aphex, DS201 gates, ADR Vocal Stresser and superb mics.

All this in an unusual split-level control room and overdub room for a paltry £7.00 p/h, or £12.00 (+VAT) with engineer/programmer! New SADiE 8-track hard disk recorder for brilliant remixes and edits!

Studio 1:– Ideal for live music – 2 live rooms, sumptuous drum sound, Studer 2" 16-track, extraordinary outboard, and a lovely grand piano all for a mere £15.00 p/h (+VAT).

There's daylight in every room and real coffee, tea and meat-free biscuits in the kitchen. Low-cost CD-Rs and tape copying too.

Please phone for a full info pack...

0181 653 4965

1113

STUDIO THIRTY THREE

S33

1. Amek Rembrandt> 32 inputs, total recall of settings
Genelec 1038-A> 450 watt active monitors
Pro- tools v-4.0> 32 tracks of hard disk recording
Akai 3000XL & E-mu 6400> 32mb of sampling power
Nord Lead, Prophecy, JV-1080 + more> big sounds!

2. Yamaha 02R> fully automated digital console
Genelec 1031-A> active monitors
Audiomedia III> digital hard disk recording
Akai 3000XL & E-mu 6400> 32mb of sampling power
Orbit, Pulse, Raven> more huge sounds!

rates from £20 per hour phone> 0181 968 2345

SITUATIONS VACANT

Music Village Chadwell Heath Require Branch Manager

Professional, Dynamic, Motivated person with proven sales record needed to lead and inspire the team at our busy high tech store in Essex. Previous Retail Management / Administrative experience essential. Excellent package available for the successful applicant.

Digital Village Croydon Require Pro Audio Specialist

Positive, friendly person with previous selling and extensive studio engineering experience needed to complete the line-up at our newly opened digital store. Excellent prospects.

Please send C.V. to Paul Dennis, Music Village, 10 High Road, Chadwell Heath, Romford, Essex, RM6 6PR or Fax on 0181-598-8984

1820

STAFF VACANCIES AT TURNKEY

Services Engineer & Manager
Expansion of service department requires engineer and manager, B-Tech or equivalent, a distinct aptitude for electronics and a willingness to learn. Repair and service of musical instruments and related equipment.

Experienced Telesales People
require for rapidly expanding Mail Order Department of UK's leading hi-tech store - ideally with hi-tech music retailing experience. Telesales experience essential. Excellent performance related pay.

Accessories Assistant
Mature person (not necessarily in age) responsible for maintaining and developing the existing business, stocking, ordering, selling etc... A wide knowledge of recording and MIDI is essential.

Sales Persons / Demonstrators
We require successful applicants to demonstrate a good working knowledge of the current market-place and a full understanding of equipment owned or used. We are particularly looking for knowledge of MIDI keyboard market.

PC Music Specialists
Sales and demonstration on of PC compatible MIDI and digital audio products, phone and shop floor, tech support and staff training. Min 6 months experience with Windows. Good familiarity with at least 1 windows sequencer.

Send your application in writing to 114 Charring Cross Road, London WC2H 0DT, by fax to 0171 379 0093, or e-mail to jobs@turnkey.demon.co.uk. Include phone no & 2 references

As part of Arbiter Group plc, and as the UK's largest outlet for MIDI and Multi-track, we offer first class training, unrivalled salary, good prospects and real job security. We are an equal opportunities employer.

1532

National Sales and Marketing Manager

East-West is the #1 Soundware and Music Software company in the world, with distribution centres in the US, UK and Australasia and is looking for a qualified person to help build and manage its sales channels in the UK. Responsibilities include -

- Expanding East-West's direct sales.
- Expanding the shelf presence of East-West and East-West distributed products in Musical Instrument, Record, Book and Computer stores.
- Expanding East-West's media exposure.
- Installing and managing in-store demonstration equipment.
- Making forecasts, tracking sales, ensuring products are on store shelves, managing co-op programs, blowing away your quota and making East-West the #1 Soundware and Music Software company in the UK.

Applicant must have direct marketing and vendor software sales experience to the retail channel. Music software selling experience a plus. Must be enthusiastic, energetic, self-motivated and ready to challenge the status quo.

Email, mail or fax us a resume and cover letter stating you want the National Sales Manager Position and your salary requirements.

For more details contact: Zennor Ph 01273-736-733 Fax 01273-328-881- email zennor@pavilion.co.uk

1678

STUDIO FOR SALE

FOR SALE

The Solon Corporation Recording Studios. Beautiful office with great views fully digital 32-track studio, 2 live rooms. All fully sound-proofed and air-conditioned. 15 mins from central London. Original investment £145,000. Lock, stock and barrel for £30,000. Great opportunity for new studio/ independent record label.

0171-924-0211

COMPUTERS

OAKWOOD AUDIO

studio computer support

dedicated computer music specialist

leading supplier of 19" rack mountable computer systems

large selection of second user apple systems from powermacs to powerbooks

pro audio pc systems built & configured to your exact specifications

minimise your studio downtime- efficient repairs & upgrades of pc's & apple mac's

0345 023 530

Don't read this ad

7 CHANNEL MIDI TO CV CONVERTER
VOLTS PER OCTAVE AND VOLTS PER HZ
SOFTWARE SELECTABLE PER CHANNEL, THREE ADJUSTABLE MIDI SYNCABLE LFO'S, SYNC 24

PC MIDI INTERFACES
1 IN 4 OUTS
64 MIDI CHANNELS
RUNS UNDER WINDOWS 3.XX™ & WINDOWS 95™

OK so you read it! Now Buy Some!!!

Distributed exclusively in the UK by

CIMPLE SOLUTIONS Professional Ltd

Tel • +44 (0)181 904 4141
Fax • +44 (0)181 904 1200

Unit 2-17 Wembley Commercial Centre
80 East Lane • North Wembley
Middlesex • HA9 7UR

Contact us for your nearest dealer

More dealer enquiries welcomed

ATARI MIDI INTERFACES
3 OUTS
48 EXTRA MIDI CHANNELS
RUNS UNDER CUBASE, NOTATOR, DR T, MASTERTRACKS PRO

OWN BRAND

http://www.cimplesolutions.demon.co.uk email sales@cimplesolutions.demon.co.uk

SOUND DIVISION

WORLD OF DANCE

EUROPE'S No.1 FOR DANCE T

SPECIALISTS IN DANC
FOR SAMPLING, REMIXING, RECORDIN

18/24 MONTHS INTEREST FREE FINANCE AVAILABLE ON ALL PRODUCTS!!*

THE BEST OF DANCE! THE ESSENTIAL COLLECTION

ROLAND JP-8000 — DEPOSIT £295 — 24 MONTHLY PAYMENTS OF £49.00

AKAI MPC2000 — DEPOSIT £239 — 18 MONTHLY PAYMENTS OF £53.00

EMU PLANET PHATT / **EMU ORBIT V.2** — DEPOSIT £179 — 24 MONTHLY PAYMENTS OF £30.00

AKAI S3000 XL — DEPOSIT £359 — 24 MONTHLY PAYMENTS OF £60.00

ROLAND MC303 — DEPOSIT £99 — 18 MONTHLY PAYMENTS OF £25.00

YAMAHA CS1X — DEPOSIT £99 — 18 MONTHLY PAYMENTS OF £26.00

ROLAND JV2080 — DEPOSIT £199 — 24 MONTHLY PAYMENTS OF £50.00

EMU E6400 — DEPOSIT £250 — 24 MONTHLY PAYMENTS OF £94.00

WALDORF PULSE PLUS — DEPOSIT £99 — 18 MONTHLY PAYMENTS OF £33.00

0% ROLAND 0% YAMAHA 0% AKAI 0% EMU 0% KORG 0% ALESIS 0% SOUNDCRAFT

THE BEST OF DANCE! THE STUDIO SELECTION

DATS

SONY DTC-A6 — DEPOSIT £120

TASCAM DA20 — DEPOSIT £120

0% interest 18 MONTHLY PAYMENTS OF £38.00

STUDIO MIXING DESKS

SPIRIT MIXERS — CHEQUE SPREAD

NOW DOWN IN PRICE
FOLIO F1 16CH £349
FOLIO F1 14CH £295
FOLIO SX20/4 16 £479
FOLIO NOTEPAD £149

YAMAHA 03D DIGITAL MIXER — NEW JUST ARRIVED!... DEMO IS A MUST — DEPOSIT £599

0% interest 24 MONTHLY PAYMENTS OF £100.00

HARD DISC RECORDING

ROLAND VS880VX — INC 1.4GIG H/DRIVE & FX — DEPOSIT £330

18 MONTHLY PAYMENTS OF £104.00

FOSTEX D90 / **DMT8VL** — IN STOCK NOW — NOW WITH SCSI

COMPUTER PRODUCTION
CUBASE V.3.0 PC/MAC/ATARI
E-MAGIC LOGIC AUDIO, E-MAGIC AUDIOWERK 8
PLEASE CALL NEIL NOW ON 0171-700-4242 FOR THE BEST ADVICE

MINI DISC

YAMAHA MDMX4 / **SONY MDMX4** — DEPOSIT CALL

0% interest 18 MONTHLY PAYMENTS OF £CALL

MONITORS

SPIRIT ABSOLUTE 4P — DEPOSIT £159 — ALESIS POINT 7 P.O.A. — SEE RIGHT FOR MONITOR PACKAGES

0% interest 18 MONTHLY PAYMENTS OF £35.00

OUTBOARD

• ALESIS • BOSS • DIGITECH • BEHRINGER • LA AUDIO • LEXICON • YAMAHA

0% FOSTEX 0% TASCAM 0% SONY 0% SPIRIT 0% WALDORF 0% VESTAX 0% NOVATION

All prices are inclusive of VAT. E&OE. All offers subject to availability. We reserve the right to price amendments without notice when neccessary.

*All finance agreements subject to status

ADELAIDE HOUSE,
383-385 LIVERPOOL RD,
ISLINGTON, LONDON N1 1NP
E-Mail: 100610.2341@compuserve.com

OUR LOCATION:
NEAREST TUBE STATION
HIGHBURY & ISLINGTON
(Victoria Line) 4 Min Walk

FREE CUSTOMER CAR PARK

Showroom
Opening Times
MONDAY - SATURDAY
10.00am - 6.00pm
(closed Sundays!)

ALL MAJOR CREDIT/DEBIT CARDS WELCOME

HNOLOGY PRODUCTS

MUSIC EQUIPMENT
ND SOUND PRODUCTION!!

CHEQUE SPREAD FINANCE

YES WE TAKE 3 POST DATED CHEQUES ON ANY PURCHASE OVER £200, EXTEND YOUR PAYMENTS OVER SEVERAL MONTHS – SUBJECT TO STATUS - PHONE FOR DETAILS

HOT NEW DANCE PRODUCTS ARRIVING SOON

YAMAHA AN1 X

DEPOSIT £179

0% 18 MONTHLY PAYMENTS OF £40.00

YAMAHA A3000

DEPOSIT £259

0% 18 MONTHLY PAYMENTS OF £57.00

AKAI S20 SAMPLER

DEPOSIT £99

0% 12 MONTHLY PAYMENTS OF £33.00

0% ON THE HORIZON 0% EMU CARNIVAL 0%
0% YAMAHA MOXF 0% NOVATION SUPER BASS STATION 0%

CHEQUE SPREAD SYNTH DEAL SPECIALS

ROLAND XP50

FIRST CHEQUE £366 – 2 POST DATED CHEQUES FOR £366

ALESIS QS6

(INCLUDING DANCE CARD)

FIRST CHEQUE £266 – 2 POST DATED CHEQUES FOR £266

YAMAHA QS300

(INCLUDING DANCE SOUNDS)

FIRST CHEQUE £295 – 2 POST DATED CHEQUES FOR £299

MONITOR PACKAGES

ABSOLUTE ZERO'S + SERVO 150 NOW £329 OR SERVO 240 NOW £399
ABSOLUTE TWO'S + SERVO 150 NOW £399 OR SERVO 240 NOW £449
CHEQUE SPREAD AVAILABLE NOW!

CLEARANCE DEALS

EMU MORPHEUS	~~£1199~~	£849
ROLAND JV1080	~~£1099~~	£750D
FURMAN 4CH EQ	~~£599~~	£299
ROLAND XP80	~~£1299~~	£950D
LEXICON REFLEX	~~£599~~	£299
PEAVEY ANALOG FILTER	~~£599~~	£199
SONY HP5	~~£549~~	£349
ROLAND DI70 MK2	~~£1599~~	£1099
YESTAX HDR6	~~£1749~~	£999
ROLAND JS30	~~£899~~	£449
YAMAHA SU10	~~£299~~	£219D
ROLAND PC200MK2	~~£199~~	£139
YAMAHA YL 70M	~~£599~~	£349
ROLAND PC160	~~£149~~	£99
YAMAHA RY8	~~£299~~	£299
ROLAND SC7	~~£199~~	£139
YAMAHA CSIX	~~£499~~	£350D
ROLAND MS1	~~£399~~	£279

D = DEMO

Free Advice and Expertise

Fully Equipped Showroom and Demo Facilities

Mail Order Specialists

24Hr Worldwide Express Delivery

Friendly and Experienced Staff (relaxed & without attitude problems!!)

Project & Home Studio Systems Design are our Speciality

Educational Discounts Available

Record Company and Production House Discounts Available

Product & Technical Enquiries always welcome

Excellent Customer Care and Service Guaranteed

SALES: 0171-700-4242
LINES: 0171-700-4442
FAX NO: 0171-609-1310

The Advertisers Index

A1 Music	0161 236 0340	249
Academy of Sound / Carlsbro Retail	0345 697037	102-103, 241
Active Sound	01923 246282	258-259
Alchemea School of Recording	0171 359 3986	263
Andertons Music Company	01483 456777	235, 257
Arbiter PLC	0181 202 1199	74-75, 107, 109, 198-199
Audio-Technica	0113 277 1441	39
Axis Audio Systems	0161 474 7626	261
Beyer Dynamic GB	01444 258258	143, 197
Blue Systems UK	01799 584095	160-161
Brandoni Music	0181 908 2323	111
Creative Labs	01734 344332	15
Concert Systems	0161 927 7700	245
DACS	0191 438 5585	37
Dawsons Music	01925 632591	147, 148-149
Digital Village	0181 440 3440	95
Drawmer Distribution	01924 378689	145
E-mu Systems USA	001 408 438 1921	193, 283
East West Sound Warehouse	01273 736733	112-113
Eddie Moors Music	01202 395135	280-281
Emis	0117 956 1855	253
Exclusive Distribution	01462 481148	63
Focusrite Audio Engineering	01628 819456	21
G & N Data Solutions	01236 451452	181
Gateway School of Recording	0181 549 0014	217
Generalmusic Distribution (UK)	01227 742790	67
Gig Sounds	0181 769 6496	211
Harman International Industries (JBL)	0181 207 5050	51
HHB Communications	0181 962 5800	126-127, 133, 135, 137
HW International (Ultimate)	0181 808 2222	45
HW International (Shure)	0181 808 2222	165
Intasound	0500 515256	201
Kenton Electronics	0181 337 0333	159
Key Audio Systems	01245 344001	7, 43, 89, 229
Korg UK	01908 857100	OBC
M Corporation	01425 480569	76-77, 78-79
Marks Music	01473 287872	129
Midiman UK	01205 290680	227
Millennium Music Software	0115 955 2200	140-141
Music Connections	01245 354777	53, 54-55, 56-57, 58-59, 60
Musik Lab	0171 388 5392	Loose Insertion
Music Solutions	01438 750751	204-205
Music Village	0181 598 9506	90-91, 92-93, 94-95
Musical Exchange	0121 236 7544	231
Musictrack	01462 733310	IFC, 101
Natural Audio	0181 207 1717	153
Novation Electronic Music Systems	01628 828888	71
Percy Prior's Music Store	01494 443418	85
Project Audio	0171 428 9700	125
Project Music	0181 570 4444	99, 225
Prosonix	01323 848805	151
Raper & Wayman	0181 800 8288	65
Roland UK	01792 702701	35, 117
SCV Electronics	0171 923 1892	IBC, 83
Shuttlesound	0181 640 9600	97
Sound Business Studio Sales	0181 559 0373	239
Sound Control	0800 525260	174-175
Sound Division	0171 609 3939	69, 302-303
Sound Solutions	01403 732606	219
Sound Technology plc	01462 480000	5, 155
Sound Valley Distribution (Joemeek)	01494 434738	17
Soundcraft Electronics	01707 665000	11
Sounds Live	0191 230 3422	73
Spectre Sound	01274 568843	171
Spirit by Soundcraft	01707 665000	8-9
SRTL	01243 379834	223
Studiomaster	01582 570370	233
Studiospares	0171 482 1692	123
Sutekina Music	0171 836 0127	128-129, 130-131
Swan Publicity	01628 487820	219
Systems Workshop	01691 658550	217
Tascam UK	01923 819630	179
Team mate UK	01206 793355	166-167, 190-191
The Global Distribution Group	01799 584925	41, 139
The Guitar Amp & Keyboard Centre	01273 676835	220-221
The Music Inn	0115 978 4403	255
The Solutions Company (TSC)	0171 258 3454	1
The Way Out West Music Company	0181 744 1040	49, 243
Time & Space (Zero G)	01442 870681	194-195
Tony Larking Audio	01462 490600	203
Turnkey	0171 240 4036	22-23, 24-25, 26-27, 28-29, 30-31, 32-33, 269
Ufonic	01144 868699	187
Wembley Drum Centre	0181 795 4001	217
X - Music	0117 973 4734	182-183
Xpression!	01444 440955	73
Yamaha - Kemble Musik	01908 366700	121, 169, 251

sounding Off

When less-than-satisfactory service from a music store begins to border on the distinctly dodgy, JUDY LEMON asks: how do they think they can get away with it?

Having decided to join the ranks of home-studio owners, I spent months researching different setups and getting quotes. One store (which advertises with this magazine) seemed to have an enticing package, so I visited them in mid-March with two friends. With the exception of two items, I was purchasing everything new, so we're not talking about a small sum of money here.

Problem number one: the two used items were a Roland D50 keyboard, of which I had the choice of two, and a set of monitors. The monitors were in excellent condition; of the keyboards, one was mint and the other was, let's say, well loved. I was told the price was the same for both keyboards, so naturally I chose the one that was in better condition. The prices quoted seemed fair, so I was happy — until I bought my April *SOS*. There were my used items advertised in black and white, but not at the prices I had paid! I immediately phoned the store and asked why they had charged me more than their quotes in a national magazine. The monitors were said to be "a misprint"; as for the D50, I was told that the cheaper price was for the unit that had been well used. As my friends remembered, this was not the case; but, as I had already paid for these items, the shop refused to do anything about it. What really disturbed me, though, was when one of the people working there said: "Oh, we frequently put in fake prices to bring in the punters...".

Problem number two involved a Digitech Studio Vocalist. Again, the shop had this in their ad, at quite an attractive price for a new unit. This time, their in-store quote matched their ad — until I decided to order one, when the price suddenly went up. I argued until I was blue in the face, pointing out that with all the money I had spent in their shop they could at least stick to their original written quote. I ended up ordering one for £899, figuring that for the extra £20 I'd get something in kind or whatever. This is when the real nightmares began.

My friends and I had noticed the salesman making snide remarks about the distributor, which I thought was surprising. But the store told me that an order had been placed, so I waited. And waited. Five weeks after I'd paid for it, the computer side of my system arrived — without the Studio Vocalist. I was told that the distributor did not have them in stock, and could not foresee a delivery date in the near future. This sounded extremely odd to me, and when I started voicing my doubts, I was told that the store had cancelled their order with the supplier, but hey presto — they'd found one in Glasgow! Two more weeks went by ("They're obviously waiting for the cheque to clear. You know how the Scots are..."). I'm not saying that I fell for all this, but they'd had my money for some time and I just wanted the damn unit. Lo and behold, it arrived from the Glasgow store — but wait, there's, uh, kind of a problem, they say. It's not new, it's ex-demo. Well, that was it. Even my ladylike tolerance evaporated. Still the store continued to lie, making it appear that the Scottish store had somehow pulled a fast one. But the worst part was that they actually thought that, having paid for a new unit and waited all this time, I would take an ex-demo — and pay the new price! They also refused to refund my money. As the level and unprintability of my language increased, the story altered again. They were so upset about what this sneaky Glaswegian store had done that they rang and shouted at them. Quaking in its boots, the store had offered to send a new one within the week. In the meantime, my lovely store generously offered to bring me over "the dud" (their words) until the new one arrived. Thank goodness I refused this: I'm convinced that had I accepted it I would never have seen another unit. I gave them a week to deliver the unit, otherwise I would be raising hell. In the meantime, I called the supplier and was told that they could not understand the situation, as they had units in stock and there were no delivery problems. I waited. D-day arrived and no-one called, so I did. By now I had managed to scare away the entire staff except the poor guitar technician — suddenly various people had errands at the bank or the post office. In the end I had to call in some muscle; I managed to get my money back, but I feel I was lucky.

The only explanation I can think of is that, due to bad credit with the supplier, the store could not place the order with them, and never did so. They tried to hold on to my money while they searched for a unit that would make them a profit, like the ex-demo one. They're still advertising these units in *SOS* as if they can get them new, as well as advertising the monitors that I bought at the cheaper price. And how many other stores are doing the same thing? It's false advertising and it shouldn't be allowed.

I had to do most of my dealings with this store by phone; perhaps if I had been able to visit them every day and scream until all the other customers left, the whole thing wouldn't have dragged on for so long. But what about more inexperienced buyers, who don't have the strength (or the alcohol tolerance) to fight?

And what did the store get out of this, in the end? My lost custom for the future, and that of my friends who have much larger studios than I do, and their friends. They've lost an inestimable amount of money trying to gain a few hundred extra out of me. How many other readers have had similar experiences? And can we do anything about this? SOS

If you'd like to air your views in this column, please send your ideas to: Sounding Off, Sound On Sound, Media House, Trafalgar Way, Bar Hill, Cambridge CB3 8SQ. Any comments on the contents of previous columns are also welcome, and should be sent to the Editor at the same address.

THE LA AUDIO GCX2 IS THE LATEST ADDITION TO THE LA AUDIO LINE UP WHICH INCLUDES

CLASSIC COMPRESSOR CLASSIC CHANNEL CLASSIC EQ 4X4 4G 4C C

LA AUDIO PROFESSIONAL TOOLS

Choosing a Gate and Compressor just got a whole lot easier.

AND HERE'S WHY...

A quality built and sonically specified dual channel 1U unit which offers dual mono, or 'master-slave' stereo gating and compression for a measly £189 inc VAT*. At this price you would expect corners to be cut, compromises to be made.
Not a bit of it.
You get 2 stereo-linkable channels of soft knee compression featuring fully variable Threshold, Ratio and Gain controls plus two program dependent Attack and Release modes: slow for music and fast for solo instruments. There's also a side chain insert for frequency conscious compression.
The gates are no less impressive:
2 fully-featured gates with variable Threshold and Release controls, an ultra-fast Attack rate plus a side chain insert for frequency conscious gating.
Yes, choosing a gate and compressor just got a whole lot easier.
It's got to be the new LA Audio GCX2.

LA AUDIO GCX2

- Dual Mono or Stereo (Master-Slave) gating and compression
- Fully controllable, yet easy to use. Soft knee compression
- True RMS level detection and dual channel level sensing in stereo mode
- Side chain insert point for Frequency Conscious Gating or Compression
- Balanced inputs and outputs on both XLR (+4dBu) and TRS jacks (-10dBV)

5 WARRANTY FIVE YEARS

LA AUDIO

SCV LONDON 6 24 SOUTHGATE ROAD LONDON N1 3JJ TEL +44 (0)171 923 1992 FAX +44 (0)171 241 3644

SCV Electronics Limited reserves the right to alter the design specification of its products without prior notice. E&OE. © SCV Electronics / LA Audio 1996. *RRP INC VAT

New standards

Since we invented the Music Workstation with the legendary M1, Korg workstations are the standard foundation of home and professional studios the world over.

Now, we bring you the new standards. Our philosophy with the N364 was simple – add more and more.

We expanded the PCM memory with classic and new samples, the N364 has a massive range of over 900 sounds and true 64 voice polyphony. Then we developed Real Time Pattern Play and Record, to get grooves happening straight away and a programmable full function arpeggiator.

The NS5R 64 voice Module packs a massive 12mb of PCM samples and more sound programs than anything else in its class.

NS5R RRP £549

Add to that a user friendly graphic display plus GM, GS and XG compatibility and you can begin to see why Sound On Sound magazine were moved to say that "the NS5R is a joy to operate".

N Series – the Professional's choice

N364 RRP £999
(N264 76 note version
RRP £1199)

Brochure Line
01908
857150

KORG

Korg UK, 9 Newmarket Court
Kingston, Milton Keynes MK10 0AU
E-mail: info@korg.co.uk